



Submittal #26 05 00-002.C 26 05 00 - Basic Electrical Requirements

Hazen and Sawyer
5775 Peachtree Dunwoody Road, Suite D-520
Atlanta, Georgia 30342
Phone: (404) 459-6363

Project: 32457-011 - CCWA - WJ Hooper WPP Generator
70 Oakdale Drive
Stockbridge, Georgia 30281

Distribution Summary

Distributed on 03/11/2022 by Tyler Chow ()

To: Eddie McCallum (Hazen and Sawyer - Atlanta), Jeff Winston (Clayton County Water Authority), Jordan Tinnell (Crowder Construction Company), Tyler Chow (Hazen and Sawyer - Atlanta), Griffin Ghesquiere (Hazen and Sawyer - Atlanta)

Message: None

Additional Attachments: [26 05 00-002-C Resubmittal Relay Setting.pdf](#)

NAME	RESPONSE	ATTACHMENTS	COMMENT
Nick Meyer (Hazen and Sawyer - Atlanta)	Receipt Acknowledged		No comments, and no action required. This is a record document.

GPC Bulletin 18-23 & Found-As Left Relay Settings For 35MVATS

SPEC SECTION: 26 05 00 - Basic Electrical Requirements	CREATED BY:
	DATE CREATED: 03/08/2022
ISSUE DATE: 03/09/2022	REVISION: C
RESPONSIBLE CONTRACTOR: Crowder Construction Company	RECEIVED FROM: Jordan Tinnell
RECEIVED DATE: 03/08/2022	SUBMIT BY: 09/29/2021
FINAL DUE DATE: 10/06/2021	LOCATION:
TYPE:	COST CODE:
BALL IN COURT:	

DISTRIBUTION: Jeff Winston (Clayton County Water Authority), Jordan Tinnell (Crowder Construction Company), Eddie McCallum (Hazen and Sawyer - Atlanta), Griffin Ghesquiere (Hazen and Sawyer - Atlanta), Tyler Chow (Hazen and Sawyer - Atlanta)

DESCRIPTION: GPC Bulletin 18-23 & "As Found/As Left" Relay Settings – Resubmittal to Address Comments from Version B – Electronic Copy

ATTACHMENTS: [26 05 00-002-C Resubmittal Relay Setting.pdf](#)

BY _____ DATE _____ COPIES TO _____



CROWDER CONSTRUCTION COMPANY

1080 Holcomb Bridge Road
Building 200, Suite 180
Roswell, GA 30076
Phone (770) 761-5578
Fax (770) 761-5971

LETTER OF TRANSMITTAL

To: Hazen & Sawyer
5775 Peachtree Dunwoody Road
Suite 2-520
Atlanta, GA 300342

Attn: Tyler Chow, P.E.

Ph: 404-459-6363
Cell: 626-780-7164

Date: 03/08/2022	Job No.: Hazen: 32457-010 Crowder: 40781
Project: W.J. Hooper WPP Standby Power Generator	
Location: Stockbridge, GA	
Submittal No: 26 05 00-002-C	
Specification Section: 26 05 00	

WE ARE SENDING YOU Attached Under separate cover via _____ the following items:

- Shop drawings Prints Plans Samples Specifications
 Copy of Letter Change order Other

COPIES	NO.	DESCRIPTION
1		GPC Bulletin 18-23 & "As Found/As Left" Relay Settings – Resubmittal to Address Comments from Version B – Electronic Copy

THESE ARE TRANSMITTED as checked below:

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 Submit _____ copies for distribution As requested Returned for corrections
 Return _____ corrected prints For Information Only Other:
 FOR BIDS DUE _____,

TRANSMITTED BY: Jordan Timell DATE: 03/08/2022

W.J. Hooper WPP Standby Generator

70 Oakdale Drive, Stockbridge, GA 30281

Owner: Clayton County Water Authority

Engineer: Hazen & Sawyer

Submittal Prepared by: Crowder Construction Company

Contractor:	Subcontractor:	Supplier:
Crowder Construction Company 1080 Holcomb Bridge Rd Bldg. 200, Suite 180 Roswell, GA 30076	N/A	Electrical Reliability Services Inc 2275 Northwest Parkway SE Suite 180 Marietta, GA 30067

Submittal No:	26 05 00-002-C
Submittal Name:	GPC Bulletin 18-23 & "As Found/As Left" Relay Settings – Resubmittal to Address Comments from Version B
Product Manufacturer:	Electrical Reliability Services (ERS)
Ref. Specification No:	26 05 00
Ref. Specification Title:	Basic Electrical Requirements
Drawing Reference:	N/A
Submittal Date:	03/08/2022

Crowder Construction Submittal Review:

For approval.....

Approved.....

Approved as Noted.....

Revise and Resubmit.....

For Information Only.....

Crowder Construction has reviewed, checked, and approved this submittal for compliance with Contract Documents.

Approval by Crowder Construction Company does not relieve suppliers or subcontractors of responsibility to comply with requirements of plans and specification and/or other contract document under and for which this information is submitted. Nor does our approval establish compliance with the design concept of the project.

By: Jordan Tinnell

Date: 03/08/2022

Crowder Comments:

This is the re-submittal to address the Engineers comments from version B and includes the changes made onsite to 52-G1(3/2/22).



Submittal #26 05 00-002.B 26 05 00 - Basic Electrical Requirements

Hazen and Sawyer
5775 Peachtree Dunwoody Road, Suite D-520
Atlanta, Georgia 30342
Phone: (404) 459-6363

Project: 32457-011 - WJ Hooper WPP Generator - SDC
70 Oakdale Drive
Stockbridge, Georgia 30281

Distribution Summary

Distributed on 10/11/2021 by Tyler Chow ()

To: Eddie McCallum (Hazen and Sawyer - Atlanta), Jeff Winston (Clayton County Water Authority), Jordan Tinnell (Crowder Construction Company), Tyler Chow (Hazen and Sawyer - Atlanta), Griffin Ghesquiere (Hazen and Sawyer - Atlanta)

Message: None

Additional Attachments:

NAME	RESPONSE	ATTACHMENTS	COMMENT
Nick Meyer (Hazen and Sawyer - Atlanta)	Revise and Resubmit		A few of the settings for 52-G1 will be revised in the near future and the as-left relay settings report will need to be updated then.

GPC Bulletin 18-23 & Found-As Left Relay Settings For 35MVATS

SPEC SECTION: 26 05 00 - Basic Electrical Requirements	CREATED BY:
	DATE CREATED: 09/15/2021
ISSUE DATE: 09/15/2021	REVISION: B
RESPONSIBLE CONTRACTOR: Crowder Construction Company	RECEIVED FROM: Jordan Tinnell
RECEIVED DATE: 09/15/2021	SUBMIT BY: 09/29/2021
FINAL DUE DATE: 10/06/2021	LOCATION:
TYPE:	COST CODE:
BALL IN COURT:	
DISTRIBUTION: Jeff Winston (Clayton County Water Authority), Jordan Tinnell (Crowder Construction Company), Eddie McCallum (Hazen and Sawyer - Atlanta), Griffin Ghesquiere (Hazen and Sawyer - Atlanta), Tyler Chow (Hazen and Sawyer - Atlanta)	
DESCRIPTION:	
ATTACHMENTS: 26 05 00-002-B Resubmittal Relay Setting.pdf	

BY _____ DATE _____ COPIES TO _____



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1080 Holcomb Bridge Road
Building 200, Suite 180
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Phone (770) 761-5578
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LETTER OF TRANSMITTAL

To: Hazen & Sawyer
5775 Peachtree Dunwoody Road
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Attn: Tyler Chow, P.E.

Ph: 404-459-6363
Cell: 626-780-7164

Date: 09/15/2021 | Job No.: Hazen: 32457-010
Crowder: 40781
Project: W.J. Hooper WPP Standby Power Generator
Location: Stockbridge, GA
Submittal No: 26 05 00-002-B
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TRANSMITTED BY: Jordan Timnell DATE: 09/15/2021

W.J. Hooper WPP Standby Generator

70 Oakdale Drive, Stockbridge, GA 30281

Owner: Clayton County Water Authority

Engineer: Hazen & Sawyer

Submittal Prepared by: Crowder Construction Company

Contractor:	Subcontractor:	Supplier:
Crowder Construction Company 1080 Holcomb Bridge Rd Bldg. 200, Suite 180 Roswell, GA 30076	N/A	Electrical Reliability Services Inc 2275 Northwest Parkway SE Suite 180 Marietta, GA 30067

Submittal No:	26 05 00-002-B
Submittal Name:	GPC Bulletin 18-23 & "As Found/As Left" Relay Settings – Resubmittal to Address Comments from Version A
Product Manufacturer:	Electrical Reliability Services (ERS)
Ref. Specification No:	26 05 00
Ref. Specification Title:	Basic Electrical Requirements
Drawing Reference:	N/A
Submittal Date:	09/15/2021

Crowder Construction Submittal Review:

- For approval.....
- Approved.....
- Approved as Noted.....
- Revise and Resubmit.....
- For Information Only.....

Crowder Construction has reviewed, checked, and approved this submittal for compliance with Contract Documents.

Approval by Crowder Construction Company does not relieve suppliers or subcontractors of responsibility to comply with requirements of plans and specification and/or other contract document under and for which this information is submitted. Nor does our approval establish compliance with the design concept of the project.

By: Jordan Tinnell

Date: 09/15/2021

Crowder Comments:

This is the re-submittal to address the Engineers comments from version A.

Engineers Comments from Version A:

1. Include the abbreviated report files (approximately 2 pages each) that list only the protective elements that are actually set. Place these reports in front of the longer reports. **These reports are bookmarked within the PDF and can be found on the pages below.**
 - a. 52-F1 – Summary Sheet found on Page 5
 - b. 52-G1 – Summary Sheet found on Page 70
 - c. 52-GM – Summary Sheet found on Page 135
 - d. 52-UM – Summary Sheet found on Page 200
 - e. 52-TB – Summary Sheet found on Page 262

Georgia Power Company - Bin 78611
1453 Highway 120
Lawrenceville, Georgia 30043-5102
Tel 404 654 7563



August 2, 2021

Mr. Philip Beckham
W.J. Hooper Plant Manager
Clayton County Water Authority
1600 BATTLE CREEK RD
Morrow, GA 30260

RE: Open Transition Transfer Inspection and Witness Test Completed on 07/30/2021 at W.J. Hooper Plant located at 70 Oakdale Dr Stockbridge

Dear Mr. Beckham:

Thank you for making arrangements for the testing of the Georgia Power Company's Power Delivery Bulletin 18-23 Interface requirements for your Non-Utility Standby Generator(s) located at 70 Oakdale Dr Stockbridge GA.

The inspection, on 07/30/2021 satisfied the interconnection requirements of Power Delivery Bulletin 18-23 open transition transfer.

W.J. Hooper Water Plant is now free to operate the standby generation system in open transition both from and to Georgia Power Company supply at 70 Oakdale Dr Stockbridge GA.

If you have any questions about the responsibilities in operating this generation, I would be happy to answer them for you. You can reach me at 404-654-7563.

Sincerely,

Eric Mikell
Reliability Engineer
Distribution Reliability

SEL-751 Settings Report

Group	Setting	Range	Default Value	Value	Delta	Description	Comments	Hidden
1	50P1P	Range = 0.25 to 100.00, OFF	10.00	34.50	True	Maximum Phase Overcurrent Trip Pickup (amps sec.)		False
1	50P1D	Range = 0.00 to 400.00, OFF	0.00	0.00	False	Maximum Phase Overcurrent Trip Delay (seconds)		False
1	50G1P	Range = 0.25 to 100.00, OFF	OFF	5.00	True	Residual Overcurrent Trip Pickup (amps sec.)		False
1	50G1D	Range = 0.00 to 400.00, OFF	0.50	0.00	True	Residual Overcurrent Trip Delay (seconds)		False
1	51P1P	Range = 0.25 to 24.00, OFF	6.00	3.00	True	Time Overcurrent Trip Pickup (amps sec.)		False
1	51P1C	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3	U4	True	TOC Curve Selection		False
1	51P1TD	Range = 0.50 to 15.00	3.00	1.59	True	TOC Time Dial		False
1	51G1P	Range = 0.25 to 24.00, OFF	0.50	2.50	True	Time Overcurrent Trip Pickup (amps sec.)		False
1	51G1C	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3	U3	False	TOC Curve Selection		False
1	51G1TD	Range = 0.50 to 15.00	1.50	1.50	False	TOC Time Dial		False
1	TR	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	ORED50T OR ORED51T OR ORED81T OR REMTRIP OR OC OR SV04T	50P1T OR 51P1T	True	Trip (SELogic)		False

Ⓜ (Group = 1) and ((Setting = 50P1D) or (Setting = 50P1P) or (Setting = 50G1D) or (Setting = 50G1P) or (Setting = 51G1C) or (Setting = 51G1P) or (Setting = 51G1TD) or (Setting = 51P1C) or (Setting = 51P1P) o...

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Report Date: July 29, 2021 07:49:43 am

Database: C:\Users\Kevin.myrick\OneDrive - Vertiv Co\Documents\Jobs\WJ Hooper WPP\WJ-Hooper.rdb

Device Information (Current)

Settings: 52-F1 AF (Current)

Device: 751 008

Part#: 751202CCCBC70851D10

FID: SEL-751-R300-V3-Z008004-D20210104

BFID: SLBT7XX-R600-V0-Z000000-D20200331

Device Information (Other)

Settings: 52-F1 AL 7-26-21 (Other)

Device: 751 008

Part#: 751202CCCBC70851D10

FID: SEL-751-R300-V3-Z008004-D20210104

BFID: SLBT-751-RXXX-V0-Z007003-DXXXXXXXXX

Hidden (H): 0/6313

Changed: 7/7

Unchanged: 0/7566

Missing: 0/0

Invalid (I): 0/0

Designer (D): 0/0

Group 1

Compared Settings

Setting	52-F1 AF (Current)	52-F1 AL 7-26-21 (Other)
50PIP	10.00	34.50
51PIP	6.00	3.00
51PIC	U3	U4
51P1TD	3.00	1.59
TR	50P1T OR 50G1T OR 50N1T OR 51P1T OR 51G1T OR 51N1T OR SV08T	50P1T OR 5 1P 1 T

Front Panel

Compared Settings

Setting	52-F1 AF (Current)	52-F1 AL 7-26-21 (Other)
DP03	IN101, BREAKER, OPEN, CLOSED	IN101, BREAKER, CLOSED, OPEN
DP05	1, "RELAY NOT IN SERVICE"	0

SEL-751 Settings Report

Overview Information

File Name	52-F1 AL 7-26-21
RDB	WJ-Hooper.rdb
Device	SEL-751
Setting Version Number	008
Part Number	751202CCCBC70851D10
Firmware ID	SEL-751-R300-V3-Z008004-D20210104
SELBoot Firmware ID	SLBT7XX-R600-V0-Z000000-D20200331

Settings

[Global](#)

[Group 1](#)

[Group 2](#)

[Group 3](#)

[Group 4](#)

[Logic 1](#)

[Logic 2](#)

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[Front Panel](#)

[Report](#)

[Port F](#)

[Port 1](#)

[Port 2](#)

[Port 3](#)

[Modbus User Map](#)

Settings Legend

Visible Setting

Hidden Setting

Invalid Setting

Global			
			Top
Setting	Description	Range	Value
PHROT	Phase Rotation	Select: ABC, ACB	ABC
FNOM	Rated Frequency (Hz)	Select: 50, 60	60
DATE_F	Date Format	Select: MDY, YMD, DMY	MDY
METHRES	Meter Cutoff Threshold	Select: Y, N	Y
FAULT	Fault Condition (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50G1P OR 50N1P OR 51P1P OR 51QP OR 50Q1P OR TRIP
EMP	Messenger Points Enable	Range = 1 to 32, N	N
TGR	Group Change Delay (seconds)	Range = 0 to 400	3
SS1	Select Settings Group1 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
SS2	Select Settings Group2 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SS3	Select Settings Group3 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SS4	Select Settings Group4 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
EPMU	Enable Synchronized Phasor Measurement	Select: Y, N	N
IRIGC	IRIG-B Control Bits Definition	Select: NONE, C37.118	NONE
UTC_OFF	Offset From UTC (hours, in 0.25 hour increments)	Range = -24.00 to 24.00	0.00
DST_BEGM	Month To Begin DST	Range = 1 to 12, OFF	OFF
52ABF	52A Interlock in BF Logic	Select: Y, N	N
50BFP	Breaker-Failure Current Detector Pickup (amps sec.)	Range = 0.10 to 10.00	0.10
BFD	Breaker Failure Delay (seconds)	Range = 0.00 to 2.00	0.50
ATD	Auxiliary Timer Delay (seconds)	Range = 0.00 to 2.00, OFF	OFF
BFI	Breaker Failure Initiate (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG TRIP
BFISID	Breaker Failure Initiate Seal-In Delay (seconds)	Range = 0.00 to 2.00, OFF	0.00
BFRTD	Breaker Retrip Delay (seconds)	Range = 0.00 to 2.00, OFF	0.05
BFTR	Breaker Failure Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
BFULTR	Breaker Failure Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
50PAFP	Arc-Flash Maximum Phase Overcurrent Pickup (amps sec.)	Range = 0.50 to 100.00, OFF	OFF

AOUTSLOT	Select Arc-Flash Output Slot	Select: 101_3, 401_4, 301_4	101_3
AFSENS1	Arc-Flash Input 1 Sensor Type	Select: NONE, POINT, FIBER	NONE
AFSENS2	Arc-Flash Input 2 Sensor Type	Select: NONE, POINT, FIBER	NONE
AFSENS3	Arc-Flash Input 3 Sensor Type	Select: NONE, POINT, FIBER	NONE
AFSENS4	Arc-Flash Input 4 Sensor Type	Select: NONE, POINT, FIBER	NONE
AO401AQ	AO401 Analog Quantity (Off, 1 analog quantity)	Range = Maximum of 1 Analog Elements	OFF
DCLOP	DC Battery LO Voltage Pickup (Vdc)	Range = 20.00 to 300.00, OFF	OFF
DCHIP	DC Battery HI Voltage Pickup (Vdc)	Range = 20.00 to 300.00, OFF	OFF
IN101D	IN101 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN102D	IN102 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN301D	IN301 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN302D	IN302 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN303D	IN303 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN304D	IN304 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN401D	IN401 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN402D	IN402 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN403D	IN403 Debounce (milliseconds)	Range = 0 to 65000, AC	10
EBMON	Enable Breaker Monitor	Select: Y, N	N
RSTTRGT	Reset Targets (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTENRGY	Reset Energy (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTMXMN	Reset Max/Min (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTDEM	Reset Demand (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTPKDEM	Reset Peak Demand (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
DSABLSET	Disable Settings (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
TIME_SRC	IRIG Time Source	Select: IRIG1, IRIG2	IRIG1
89EN2P	Enable Two Position Disconnects	Range = 1 to 8, N	8
89NM2P1	Disconnect 1 Name	Range = ASCII string with a maximum length of 16.	2P1
		Valid range = The legal	

89A2P1	Disconnect 1 N/O Contact (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	0
89B2P1	Disconnect 1 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P1
89A2P1D	Disconnect 1 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P1D	Disconnect 1 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P1D	Disconnect 1 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P1	Disconnect 1 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P1
89CB2P1	Disconnect 1 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P1
89CR2P1	Disconnect 1 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P1 OR 89CS2P1 OR 89AL2P1
89CT2P1	Disconnect 1 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P1
89RO2P1	Disconnect 1 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P1
89OB2P1	Disconnect 1 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P1
89OR2P1	Disconnect 1 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P1 OR 89OS2P1 OR 89AL2P1
89OT2P1	Disconnect 1 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P1
89NM2P2	Disconnect 2 Name	Range = ASCII string with a maximum length of 16.	2P2
89A2P2	Disconnect 2 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P2	Disconnect 2 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P2
89A2P2D	Disconnect 2 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P2D	Disconnect 2 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P2D	Disconnect 2 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P2	Disconnect 2 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P2
89CB2P2	Disconnect 2 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT	89AL2P2

		R_TRIG F_TRIG	
89CR2P2	Disconnect 2 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P2 OR 89CS2P2 OR 89AL2P2
89CT2P2	Disconnect 2 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P2
89RO2P2	Disconnect 2 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P2
89OB2P2	Disconnect 2 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P2
89OR2P2	Disconnect 2 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P2 OR 89OS2P2 OR 89AL2P2
89OT2P2	Disconnect 2 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P2
89NM2P3	Disconnect 3 Name	Range = ASCII string with a maximum length of 16.	2P3
89A2P3	Disconnect 3 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P3	Disconnect 3 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P3
89A2P3D	Disconnect 3 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P3D	Disconnect 3 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P3D	Disconnect 3 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P3	Disconnect 3 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P3
89CB2P3	Disconnect 3 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P3
89CR2P3	Disconnect 3 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P3 OR 89CS2P3 OR 89AL2P3
89CT2P3	Disconnect 3 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P3
89RO2P3	Disconnect 3 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P3
89OB2P3	Disconnect 3 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P3
89OR2P3	Disconnect 3 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P3 OR 89OS2P3 OR 89AL2P3

89OT2P3	Disconnect 3 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P3
89NM2P4	Disconnect 4 Name	Range = ASCII string with a maximum length of 16.	2P4
89A2P4	Disconnect 4 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P4	Disconnect 4 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P4
89A2P4D	Disconnect 4 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P4D	Disconnect 4 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P4D	Disconnect 4 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P4	Disconnect 4 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P4
89CB2P4	Disconnect 4 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P4
89CR2P4	Disconnect 4 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P4 OR 89CS2P4 OR 89AL2P4
89CT2P4	Disconnect 4 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P4
89RO2P4	Disconnect 4 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P4
89OB2P4	Disconnect 4 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P4
89OR2P4	Disconnect 4 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P4 OR 89OS2P4 OR 89AL2P4
89OT2P4	Disconnect 4 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P4
89NM2P5	Disconnect 5 Name	Range = ASCII string with a maximum length of 16.	2P5
89A2P5	Disconnect 5 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P5	Disconnect 5 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P5
89A2P5D	Disconnect 5 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P5D	Disconnect 5 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P5D	Disconnect 5 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00,	0.33

		OFF	
89RC2P5	Disconnect 5 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P5
89CB2P5	Disconnect 5 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P5
89CR2P5	Disconnect 5 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P5 OR 89CS2P5 OR 89AL2P5
89CT2P5	Disconnect 5 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P5
89RO2P5	Disconnect 5 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P5
89OB2P5	Disconnect 5 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P5
89OR2P5	Disconnect 5 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P5 OR 89OS2P5 OR 89AL2P5
89OT2P5	Disconnect 5 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P5
89NM2P6	Disconnect 6 Name	Range = ASCII string with a maximum length of 16.	2P6
89A2P6	Disconnect 6 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P6	Disconnect 6 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P6
89A2P6D	Disconnect 6 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P6D	Disconnect 6 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P6D	Disconnect 6 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P6	Disconnect 6 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P6
89CB2P6	Disconnect 6 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P6
89CR2P6	Disconnect 6 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P6 OR 89CS2P6 OR 89AL2P6
89CT2P6	Disconnect 6 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P6
89RO2P6	Disconnect 6 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P6

89OB2P6	Disconnect 6 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P6
89OR2P6	Disconnect 6 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P6 OR 89OS2P6 OR 89AL2P6
89OT2P6	Disconnect 6 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P6
89NM2P7	Disconnect 7 Name	Range = ASCII string with a maximum length of 16.	2P7
89A2P7	Disconnect 7 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P7	Disconnect 7 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P7
89A2P7D	Disconnect 7 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P7D	Disconnect 7 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P7D	Disconnect 7 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P7	Disconnect 7 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P7
89CB2P7	Disconnect 7 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P7
89CR2P7	Disconnect 7 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P7 OR 89CS2P7 OR 89AL2P7
89CT2P7	Disconnect 7 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P7
89RO2P7	Disconnect 7 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P7
89OB2P7	Disconnect 7 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P7
89OR2P7	Disconnect 7 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P7 OR 89OS2P7 OR 89AL2P7
89OT2P7	Disconnect 7 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P7
89NM2P8	Disconnect 8 Name	Range = ASCII string with a maximum length of 16.	2P8
89A2P8	Disconnect 8 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P8	Disconnect 8 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT	NOT 89A2P8

		R_TRIG F_TRIG	
89A2P8D	Disconnect 8 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P8D	Disconnect 8 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P8D	Disconnect 8 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P8	Disconnect 8 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P8
89CB2P8	Disconnect 8 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P8
89CR2P8	Disconnect 8 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P8 OR 89CS2P8 OR 89AL2P8
89CT2P8	Disconnect 8 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P8
89RO2P8	Disconnect 8 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P8
89OB2P8	Disconnect 8 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P8
89OR2P8	Disconnect 8 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P8 OR 89OS2P8 OR 89AL2P8
89OT2P8	Disconnect 8 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P8
89EN3P	Enable Three Position Disconnects	Range = 1 to 2, N	N
EN_LRC	Enable Local Remote Control	Select: Y, N	N
SC850BM	IEC 61850 Blocked Mode Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SC850TM	IEC 61850 Test Mode Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
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Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	SEL-751
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	52-FEEDER RELAY
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	400
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	400
PTR	PT Ratio	Range = 1.00 to 10000.00	35.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	35.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	Y
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	34.50
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	5.00
50G1D	Residual Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50G1TC	Residual Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
		Range = 0.25 to 100.00,	

50G4P	Residual Overcurrent Trip Pickup (amps sec.)	OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51P1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	3.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U4
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	1.59
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	2.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1

51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	108.00
27PP1D	Phase-Phase Undervoltage Trip Delay (seconds)	Range = 0.00 to 120.00	0.50
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	12.00
27S1D	Channel VS Undervoltage Delay 1 (seconds)	Range = 0.00 to 120.00	0.00
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	132.00
59PP1D	Phase-Phase Overvoltage Trip Delay (seconds)	Range = 0.00 to 120.00	0.00
59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	Y
25VLO	Voltage Window - Low Threshold (volts)	Range = 0.00 to 300.00	108.00
25VHI	Voltage Window - High Threshold (volts)	Range = 0.00 to 300.00	132.00
25RCF	Voltage Ratio Correction Factor	Range = 0.50 to 2.00	1.00
25SF	Maximum Slip Frequency (Hz)	Range = 0.05 to 0.50	0.20
25ANG1	Maximum Angle 1 (degrees)	Range = 0 to 80	15
25ANG2	Maximum Angle 2 (degrees)	Range = 0 to 80	15
SYNCPH	Synchronism Check Phase (VAB,VBC,VCA or deg lag VAB)	Select: 0, 30, 60, 90, 120, 150, 180, 210, 240, 270, 300, 330, VAB, VBC, VCA	VAB
TCLOSD	Breaker Close Time for Angle Compensation (milliseconds)	Range = 1 to 1000, OFF	OFF
BSYNCH	Block Synchronism Check (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	52A

LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	59.00
81D1TD	Frequency1 Trip Delay (seconds)	Range = 0.00 to 400.00	0.00
81D1TC	Frequency1 Torque Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	61.00
81D2TD	Frequency2 Trip Delay (seconds)	Range = 0.00 to 400.00	0.00
81D2TC	Frequency2 Torque Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	1
81RVSUP	Voltage Supervision of Rate-of-Change of Frequency Elements (volts)	Range = 12.5 to 300.0, OFF	96.0
81RISUP	Current Supervision of Rate-of-Change of Frequency Elements (amps)	Range = 0.5 to 10.0, OFF	OFF
81R1TP	Rate-of-Change of Frequency Trip 1 Pickup (Hz/sec)	Range = 0.10 to 15.00, OFF	0.50
81R1TRND	Rate-of-Change of Frequency Trend 1	Select: INC, DEC, ABS	ABS
81R1TD	Rate-of-Change of Frequency Trip 1 Delay (seconds)	Range = 0.10 to 60.00	0.25
81R1DO	Rate-of-Change of Frequency Dropout 1 Delay (seconds)	Range = 0.00 to 60.00	0.00
81R1TC	Rate-of-Change of Frequency Torque Control 1 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00

EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	3P1
3PWR1P	Three Phase Power Element Pickup (VA)	Range = 1.0 to 6500.0, OFF	50.0
PWR1T	Power Element Type	Select: +WATTS, - WATTS, +VARS, -VARS	-WATTS
PWR1D	Power Element Time Delay (seconds)	Range = 0.0 to 240.0	0.0
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	OFF
TR	Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50P1T OR 51P1T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51P1P OR 51G1P OR 51N1P OR 50P1P OR 50G1P OR 50N1P)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	IN101
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
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Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	120
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	120
PTR	PT Ratio	Range = 1.00 to 10000.00	180.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	180.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	N
VNOM	Line Voltage, Nominal Line-to-Line (volts)	Range = 20.00 to 250.00, OFF	120.00
Z1MAG	Pos. Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	2.14
Z1ANG	Pos. Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	68.86
Z0MAG	Zero Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	6.38
Z0ANG	Zero Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	72.47
Z0SMAG	Zero Seq. Source Impedance Magnitude (ohms)	Range = 0.10 to 510.00	0.36
Z0SANG	Zero Seq. Source Impedance Angle (degrees)	Range = 0.00 to 90.00	84.61
LL	Line Length - unitless	Range = 0.10 to 999.00	4.84
EFLOC	Enable Fault Location	Select: Y, N	N
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P2D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P2TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P3D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P3TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
		Range = 0.25 to 100.00,	

50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	OFF	10.00
50P4D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P4TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G4P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51AC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51ATD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51ARS	EM Reset Delay	Select: Y, N	N
51ACT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51AMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51ATC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51BC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3

51BTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51BRS	EM Reset Delay	Select: Y, N	N
51BCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51BMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51BTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51CC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51CTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51CRS	EM Reset Delay	Select: Y, N	N
51CCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51CMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51CTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51PIP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51P2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P2TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51P2RS	EM Reset Delay	Select: Y, N	N
51P2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P2TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51QC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51QTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51QRS	EM Reset Delay	Select: Y, N	N
51QCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51QMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00

51QTC	Negative Seq. Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G2TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G2RS	EM Reset Delay	Select: Y, N	N
51G2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G2TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
ELOAD	Enable Load Encroachment	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	OFF
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59Q1P	Negative-Seq Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF

59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59Q2P	Negative-Seq Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	N
LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
E78VS	Enable Vector Shift	Select: Y, N	N
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	N
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	N
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	1.0
		Valid range = The legal	ORED50T OR ORED51T OR

TR	Trip (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	ORED81T OR REMTRIP OR OC OR SV04T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51PIP OR 51G1P OR 51N1P OR 52A)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T AND LT02 OR CC
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Group 2			
Top			

Group 3			
			Top
Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	120
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	120
PTR	PT Ratio	Range = 1.00 to 10000.00	180.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	180.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	N
VNOM	Line Voltage, Nominal Line-to-Line (volts)	Range = 20.00 to 250.00, OFF	120.00
Z1MAG	Pos. Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	2.14
Z1ANG	Pos. Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	68.86
Z0MAG	Zero Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	6.38
Z0ANG	Zero Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	72.47
Z0SMAG	Zero Seq. Source Impedance Magnitude (ohms)	Range = 0.10 to 510.00	0.36
Z0SANG	Zero Seq. Source Impedance Angle (degrees)	Range = 0.00 to 90.00	84.61
LL	Line Length - unitless	Range = 0.10 to 999.00	4.84
EFLOC	Enable Fault Location	Select: Y, N	N
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P2D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P2TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P3D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P3TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
		Range = 0.25 to 100.00,	

50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	OFF	10.00
50P4D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P4TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G4P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51AC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51ATD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51ARS	EM Reset Delay	Select: Y, N	N
51ACT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51AMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51ATC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51BC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3

51BTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51BRS	EM Reset Delay	Select: Y, N	N
51BCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51BMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51BTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51CC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51CTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51CRS	EM Reset Delay	Select: Y, N	N
51CCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51CMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51CTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51PIP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51P2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P2TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51P2RS	EM Reset Delay	Select: Y, N	N
51P2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P2TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51QC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51QTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51QRS	EM Reset Delay	Select: Y, N	N
51QCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51QMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00

51QTC	Negative Seq. Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G2TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G2RS	EM Reset Delay	Select: Y, N	N
51G2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G2TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
ELOAD	Enable Load Encroachment	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	OFF
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59Q1P	Negative-Seq Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF

59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59Q2P	Negative-Seq Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	N
LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
E78VS	Enable Vector Shift	Select: Y, N	N
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	N
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	N
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	1.0
		Valid range = The legal	ORED50T OR ORED51T OR

TR	Trip (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	ORED81T OR REMTRIP OR OC OR SV04T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51PIP OR 51G1P OR 51N1P OR 52A)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T AND LT02 OR CC
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Group 3			
Top			

Group 4			
			Top
Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	120
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	120
PTR	PT Ratio	Range = 1.00 to 10000.00	180.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	180.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	N
VNOM	Line Voltage, Nominal Line-to-Line (volts)	Range = 20.00 to 250.00, OFF	120.00
Z1MAG	Pos. Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	2.14
Z1ANG	Pos. Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	68.86
Z0MAG	Zero Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	6.38
Z0ANG	Zero Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	72.47
Z0SMAG	Zero Seq. Source Impedance Magnitude (ohms)	Range = 0.10 to 510.00	0.36
Z0SANG	Zero Seq. Source Impedance Angle (degrees)	Range = 0.00 to 90.00	84.61
LL	Line Length - unitless	Range = 0.10 to 999.00	4.84
EFLOC	Enable Fault Location	Select: Y, N	N
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P2D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P2TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P3D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P3TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
		Range = 0.25 to 100.00,	

50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	OFF	10.00
50P4D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P4TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G4P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51AC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51ATD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51ARS	EM Reset Delay	Select: Y, N	N
51ACT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51AMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51ATC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51BC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3

51BTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51BRS	EM Reset Delay	Select: Y, N	N
51BCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51BMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51BTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51CC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51CTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51CRS	EM Reset Delay	Select: Y, N	N
51CCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51CMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51CTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51PIP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51P2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P2TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51P2RS	EM Reset Delay	Select: Y, N	N
51P2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P2TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51QC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51QTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51QRS	EM Reset Delay	Select: Y, N	N
51QCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51QMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00

51QTC	Negative Seq. Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G2TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G2RS	EM Reset Delay	Select: Y, N	N
51G2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G2TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
ELOAD	Enable Load Encroachment	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	OFF
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59Q1P	Negative-Seq Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF

59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59Q2P	Negative-Seq Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	N
LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
E78VS	Enable Vector Shift	Select: Y, N	N
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	N
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	N
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	1.0
		Valid range = The legal	ORED50T OR ORED51T OR

TR	Trip (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	ORED81T OR REMTRIP OR OC OR SV04T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51PIP OR 51G1P OR 51N1P OR 52A)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T AND LT02 OR CC
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Group 4			
Top			

Logic 1			
Top			
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	10
ESV	SELogic Variables/Timers	Range = 1 to 32, N	10
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
SET01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET05	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST05	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET06	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST06	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET07	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST07	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA

SET08	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST08	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET09	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST09	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET10	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST10	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SV01PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV01DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.50
SV01	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50P1T OR 50G1T OR 50N1T OR 51P1T OR 51G1T OR 51N1T OR SV08T #DIRECT TRIP
SV02PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	3.00
SV02DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV02	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0 #UTILITY FAIL
SV03PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.50
SV03DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV03	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	25A1 OR (NOT SV02 AND 27S1) #SYNC CHECK OK
SV04PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV04DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV04	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	HALARM OR SALARM #PROTECTION RELAY FAIL
SV05PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.10
SV05DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV05	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SV06PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV06DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
		Valid range = The legal	

SV06	SV_ Input (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	0
SV07PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV07DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV07	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SV08PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	1.00
SV08DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV08	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0 #REVERSE POWER TRIP
SV09PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV09DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV09	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SV10PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV10DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV10	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT101FS	OUT101 Fail-Safe	Select: Y, N	N
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	TRIP
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT103FS	OUT103 Fail-Safe	Select: Y, N	Y
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV04T #PROTECTIVE RELAY ALARM TO PLC
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT	0

		R_TRIG F_TRIG	
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50P1T OR 50G1T OR 51P1T OR 51G1T OR SV08T #DIRECT TRIP TO PLC
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 1			
			Top

Logic 2			
			Top
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	4
ESV	SELogic Variables/Timers	Range = 1 to 32, N	5
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
SET01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND NOT LT02
RST02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND LT02
SET03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB03_PUL AND LT02 AND NOT 52A
RST03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV03T) AND LT03
SET04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB04_PUL AND 52A
RST04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV04T) AND LT04
SV01PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV01DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV01	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SV02PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	3.00
SV02DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV02	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB02
SV03PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV03DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV03	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT03

SV04PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV04DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV04	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT04
SV05PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.25
SV05DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.25
SV05	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB02 OR LT03 OR LT04) AND NOT SV05T
OUT101FS	OUT101 Fail-Safe	Select: Y, N	Y
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	HALARM OR SALARM OR AFALARM
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	CLOSE
OUT103FS	OUT103 Fail-Safe	Select: Y, N	N
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	TRIP
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0

OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 2			Top

Logic 3			
			Top
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	4
ESV	SELogic Variables/Timers	Range = 1 to 32, N	5
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
SET01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND NOT LT02
RST02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND LT02
SET03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB03_PUL AND LT02 AND NOT 52A
RST03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV03T) AND LT03
SET04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB04_PUL AND 52A
RST04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV04T) AND LT04
SV01PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV01DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV01	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SV02PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	3.00
SV02DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV02	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB02
SV03PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV03DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV03	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT03

SV04PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV04DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV04	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT04
SV05PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.25
SV05DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.25
SV05	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB02 OR LT03 OR LT04) AND NOT SV05T
OUT101FS	OUT101 Fail-Safe	Select: Y, N	Y
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	HALARM OR SALARM OR AFALARM
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	CLOSE
OUT103FS	OUT103 Fail-Safe	Select: Y, N	N
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	TRIP
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0

OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 3			Top

Logic 4			
Top			
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	4
ESV	SELogic Variables/Timers	Range = 1 to 32, N	5
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
SET01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND NOT LT02
RST02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND LT02
SET03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB03_PUL AND LT02 AND NOT 52A
RST03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV03T) AND LT03
SET04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB04_PUL AND 52A
RST04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV04T) AND LT04
SV01PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV01DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV01	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SV02PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	3.00
SV02DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV02	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB02
SV03PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV03DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV03	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT03

SV04PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV04DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV04	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT04
SV05PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.25
SV05DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.25
SV05	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB02 OR LT03 OR LT04) AND NOT SV05T
OUT101FS	OUT101 Fail-Safe	Select: Y, N	Y
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	HALARM OR SALARM OR AFALARM
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	CLOSE
OUT103FS	OUT103 Fail-Safe	Select: Y, N	N
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	TRIP
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0

OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 4			Top

Front Panel			
			Top
Setting	Description	Range	Value
EDP	Display Points Enable	Range = 1 to 32, N	5
ELB	Local Bits Enable	Range = 1 to 32, N	N
FP_TO	Front-Panel Timeout (mins)	Range = 1 to 30, OFF	15
FP_CONT	Front-Panel Contrast	Range = 1 to 16	10
FP_AUTO	Front-Panel Automessages	Select: OVERRIDE, ROTATING	OVERRIDE
RSTLED	Reset Trip-Latched LEDs On Close	Select: Y, N	N
LEDENAC	ENABLED LED Asserted Color	Select: R, G, A	G
LEDTRPC	TRIP LED Asserted Color	Select: R, G, A	R
MAXACC	Maximum Access Level	Select: 1, 2	2
T01LEDL	Trip Latch T_LED	Select: Y, N	Y
T01LEDC	Target T01_LED Asserted Color (R,G,A)	Select: R, G, A	R
T01_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	ORED50T #INSTANT OC
T02LEDL	Trip Latch T_LED	Select: Y, N	Y
T02LEDC	Target T02_LED Asserted Color (R,G,A)	Select: R, G, A	R
T02_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	51AT OR 51BT OR 51CT OR 51P1T OR 51P2T #PHASE OC
T03LEDL	Trip Latch T_LED	Select: Y, N	Y
T03LEDC	Target T03_LED Asserted Color (R,G,A)	Select: R, G, A	R
T03_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	51N1T OR 51G1T OR 51N2T OR 51G2T #GND/NEU OC
T04LEDL	Trip Latch T_LED	Select: Y, N	Y
T04LEDC	Target T04_LED Asserted Color (R,G,A)	Select: R, G, A	R
T04_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	51QT #NEG SEQ OC
T05LEDL	Trip Latch T_LED	Select: Y, N	Y
T05LEDC	Target T05_LED Asserted Color (R,G,A)	Select: R, G, A	R
T05_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	81D1T OR 81D2T OR 81D3T OR 81D4T #OVER/UNDER FREQUENCY
T06LEDL	Trip Latch T_LED	Select: Y, N	N
T06LEDC	Target T06_LED Asserted Color (R,G,A)	Select: R, G, A	R
T06_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT	(BFT OR T06_LED) AND NOT TRGTR

		R_TRIG F_TRIG	#BREAKER FAIL
PB1ALEDC	PB1A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB1A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB1BLEDC	PB1B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB1B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB2ALEDC	PB2A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB2A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB2BLEDC	PB2B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB2B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB3ALEDC	PB3A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB3A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB3BLEDC	PB3B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB3B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB4ALEDC	PB4A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB4A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB4BLEDC	PB4B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB4B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
DP01	Display Point (60 characters)		TID, " {16}"
DP02	Display Point (60 characters)		0
DP03	Display Point (60 characters)		IN101, BREAKER, CLOSED, OPEN

DP04	Display Point (60 characters)		0
DP05	Display Point (60 characters)		0
Front Panel			
Top			

Report			
			Top
Setting	Description	Range	Value
ER	Event Report Trigger (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG 51P1P OR R_TRIG 51G1P OR R_TRIG 51N1P OR R_TRIG 50P1P OR R_TRIG 50G1P OR R_TRIG 50N1P
LER	Length of Event Report (cycles)	Select: 15, 64, 180	15
PRE	Prefault Length (cycles)	Range = 1 to 10	5
ESERDEL	Auto-Removal Enable	Select: Y, N	N
SER1	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	IN101, 51P1T, 51G1T, 51N1T, 50P1P, 50G1T, 50N1T
SER2	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	52A
SER3	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	SV05T, SV02T
SER4	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	SALARM, HALARM
EALIAS	Enable ALIAS Settings	Range = 1 to 20, N	N
FMR1NAM	Fast Message Read Name1 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR1
FMR1	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
FMR2NAM	Fast Message Read Name2 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR2
FMR2	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
FMR3NAM	Fast Message Read Name3 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR3
FMR3	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
FMR4NAM	Fast Message Read Name4 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR4
FMR4	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
RA01TYPE	Remote Analog 01 type	Select: I, F, L	I
RA02TYPE	Remote Analog 02 type	Select: I, F, L	I
RA03TYPE	Remote Analog 03 type	Select: I, F, L	I
RA04TYPE	Remote Analog 04 type	Select: I, F, L	I
RA05TYPE	Remote Analog 05 type	Select: I, F, L	I
RA06TYPE	Remote Analog 06 type	Select: I, F, L	I

RA07TYPE	Remote Analog 07 type	Select: I, F, L	I
RA08TYPE	Remote Analog 08 type	Select: I, F, L	I
RA09TYPE	Remote Analog 09 type	Select: I, F, L	I
RA10TYPE	Remote Analog 10 type	Select: I, F, L	I
RA11TYPE	Remote Analog 11 type	Select: I, F, L	I
RA12TYPE	Remote Analog 12 type	Select: I, F, L	I
RA13TYPE	Remote Analog 13 type	Select: I, F, L	I
RA14TYPE	Remote Analog 14 type	Select: I, F, L	I
RA15TYPE	Remote Analog 15 type	Select: I, F, L	I
RA16TYPE	Remote Analog 16 type	Select: I, F, L	I
RA17TYPE	Remote Analog 17 type	Select: I, F, L	I
RA18TYPE	Remote Analog 18 type	Select: I, F, L	I
RA19TYPE	Remote Analog 19 type	Select: I, F, L	I
RA20TYPE	Remote Analog 20 type	Select: I, F, L	I
RA21TYPE	Remote Analog 21 type	Select: I, F, L	I
RA22TYPE	Remote Analog 22 type	Select: I, F, L	I
RA23TYPE	Remote Analog 23 type	Select: I, F, L	I
RA24TYPE	Remote Analog 24 type	Select: I, F, L	I
RA25TYPE	Remote Analog 25 type	Select: I, F, L	I
RA26TYPE	Remote Analog 26 type	Select: I, F, L	I
RA27TYPE	Remote Analog 27 type	Select: I, F, L	I
RA28TYPE	Remote Analog 28 type	Select: I, F, L	I
RA29TYPE	Remote Analog 29 type	Select: I, F, L	I
RA30TYPE	Remote Analog 30 type	Select: I, F, L	I
RA31TYPE	Remote Analog 31 type	Select: I, F, L	I
RA32TYPE	Remote Analog 32 type	Select: I, F, L	I
LDLIST	Load Profile List (17 Analog Quantities)	Range = Maximum of 17 Analog Elements	NA
LDAR	Load Profile Acquisition Rate (mins)	Select: 5, 10, 15, 30, 60	15
Report			
Top			

Port F			
Top			
Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
PROTO	Protocol	Select: SEL, MOD, EVMSG, PMU	SEL
MAXACC	Maximum Access Level	Select: 1, 2, C	2
SPEED	Data Speed (bps)	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400	9600
BITS	Data Bits (bits)	Select: 7, 8	8
PARITY	Parity	Select: O, E, N	N
STOP	Stop Bits (bits)	Select: 1, 2	1
T_OUT	Port Timeout (mins)	Range = 0 to 30	5
RTSCTS	Hardware Handshaking	Select: Y, N	N
LANG	Language	Select: ENGLISH, SPANISH	ENGLISH
AUTO	Send Auto Messages to Port	Select: Y, N	N
Port F			
Top			

Port 1			
			Top
Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
EETHFWU	Enable Ethernet Firmware Upgrade	Select: Y, N	N
IPADDR	Device IP Address [zzz.yyy.xxx.www]	Range = ASCII string with a maximum length of 15.	192.168.0.154
SUBNETM	Subnet Mask [zzz.yyy.xxx.www]	Range = ASCII string with a maximum length of 15.	255.255.255.0
DEFRTR	Default Router Gateway [zzz.yyy.xxx.www]	Range = ASCII string with a maximum length of 15.	192.168.0.1
ETCPKA	Enable TCP Keep-Alive	Select: Y, N	Y
KAIDLE	TCP Keep-Alive Idle Range (seconds)	Range = 1 to 20	10
KAINTV	TCP Keep-Alive Interval Range (seconds)	Range = 1 to 20	1
KACNT	TCP Keep-Alive Count Range	Range = 1 to 20	6
ETELNET	Enable Telnet	Select: Y, N	Y
MAXACC	Maximum Access Level	Select: 1, 2, C	2
LANG	Language	Select: ENGLISH, SPANISH	ENGLISH
TPORT	Telnet Port	Range = 1025 to 65534, 23	23
TCBAN	Telnet Connect Banner (254 ASCII printable characters)	Range = ASCII string with a maximum length of 254.	TERMINAL SERVER
TIDLE	Telnet Port Timeout (mins)	Range = 1 to 30	15
FASTOP	Fast Operate	Select: Y, N	N
EFTPSERV	Enable FTP	Select: Y, N	Y
FTPACC	FTP Maximum Access Level	Select: 1, 2, C	2
FTPUSER	FTP User Name (20 characters)	Range = ASCII string with a maximum length of 20.	FTPUSER
FTPCBAN	FTP Connect Banner (254 ASCII printable characters)	Range = ASCII string with a maximum length of 254.	FTP SERVER
FTPIDLE	FTP Idle Time (mins)	Range = 5 to 255	5
E61850	Enable IEC 61850 Protocol	Select: Y, N	Y
EGSE	Enable IEC 61850 GOOSE	Select: Y, N	Y
EMMSFS	Enable MMS File Services	Select: Y, N	Y
E850MBC	Enable 61850 Mode/Behavior Control	Select: Y, N	N
EOFFMTX	Enable GOOSE Tx in Off Mode	Select: Y, N	N
EMOD	Enable Modbus Sessions	Select: 0-2	0
EHTTP	Enable HTTP Server	Select: Y, N	Y
HTTPACC	HTTP Maximum Access Level	Select: 1, 2	2
HTTPPORT	HTTP Server TCP/IP Port Number	Range = 1 to 65534	80
HTTPBAN	HTTP Connect Banner (254 ASCII printable characters)	Range = ASCII string with a maximum length of 254.	THIS SYSTEM IS FOR THE USE OF AUTHORIZED PERSONNEL

			ONLY.
HTTPIDLE	HTTP Web Server Timeout (minutes)	Range = 1 to 60	10
ESNTP	Enable SNTP Client	Select: OFF, UNICAST, MANYCAST, BROADCAST	OFF
EPTP	Enable PTP	Select: Y, N	N
Port 1			
Top			

Port 2				Top
Setting	Description	Range	Value	
Port 2				Top

Port 3			
Top			
Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
PROTO	Protocol	Select: SEL, MOD, EVMSG, PMU, MBA, MBB, MB8A, MB8B, MBTA, MBTB	SEL
MAXACC	Maximum Access Level	Select: 1, 2, C	2
SPEED	Data Speed (bps)	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400	9600
BITS	Data Bits (bits)	Select: 7, 8	8
PARITY	Parity	Select: O, E, N	N
STOP	Stop Bits (bits)	Select: 1, 2	1
T_OUT	Port Timeout (mins)	Range = 0 to 30	5
RTSCTS	Hardware Handshaking	Select: Y, N	N
LANG	Language	Select: ENGLISH, SPANISH	ENGLISH
AUTO	Send Auto Messages to Port	Select: Y, N	N
FASTOP	Fast Operate	Select: Y, N	N
Port 3			
Top			

Modbus User Map			
Setting	Description	Range	Value
MOD_001	USER REG#001 (8 characters)	Range = Maximum of 1 Digital Elements	IA_MAG
MOD_002	USER REG#002 (8 characters)	Range = Maximum of 1 Digital Elements	IB_MAG
MOD_003	USER REG#003 (8 characters)	Range = Maximum of 1 Digital Elements	IC_MAG
MOD_004	USER REG#004 (8 characters)	Range = Maximum of 1 Digital Elements	IN_MAG
MOD_005	USER REG#005 (8 characters)	Range = Maximum of 1 Digital Elements	IG_MAG
MOD_006	USER REG#006 (8 characters)	Range = Maximum of 1 Digital Elements	IAV
MOD_007	USER REG#007 (8 characters)	Range = Maximum of 1 Digital Elements	3I2
MOD_008	USER REG#008 (8 characters)	Range = Maximum of 1 Digital Elements	UBI
MOD_009	USER REG#009 (8 characters)	Range = Maximum of 1 Digital Elements	VAVE
MOD_010	USER REG#010 (8 characters)	Range = Maximum of 1 Digital Elements	3V2
MOD_011	USER REG#011 (8 characters)	Range = Maximum of 1 Digital Elements	UBV
MOD_012	USER REG#012 (8 characters)	Range = Maximum of 1 Digital Elements	P
MOD_013	USER REG#013 (8 characters)	Range = Maximum of 1 Digital Elements	Q
MOD_014	USER REG#014 (8 characters)	Range = Maximum of 1 Digital Elements	S
MOD_015	USER REG#015 (8 characters)	Range = Maximum of 1 Digital Elements	PF
MOD_016	USER REG#016 (8 characters)	Range = Maximum of 1 Digital Elements	FREQ
MOD_017	USER REG#017 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3PIH
MOD_018	USER REG#018 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3PIL
MOD_019	USER REG#019 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3POH
MOD_020	USER REG#020 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3POL
MOD_021	USER REG#021 (8 characters)	Range = Maximum of 1 Digital Elements	MVRH3PIH
MOD_022	USER REG#022 (8 characters)	Range = Maximum of 1 Digital Elements	MVRH3PIL
		Range = Maximum of 1	

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MOD_023	USER REG#023 (8 characters)	Digital Elements	MVRH3POH
MOD_024	USER REG#024 (8 characters)	Range = Maximum of 1 Digital Elements	MVRH3POL
MOD_025	USER REG#025 (8 characters)	Range = Maximum of 1 Digital Elements	MVAH3PH
MOD_026	USER REG#026 (8 characters)	Range = Maximum of 1 Digital Elements	MVAH3PL
MOD_027	USER REG#027 (8 characters)	Range = Maximum of 1 Digital Elements	RTDWDGMX
MOD_028	USER REG#028 (8 characters)	Range = Maximum of 1 Digital Elements	RTDBRGMX
MOD_029	USER REG#029 (8 characters)	Range = Maximum of 1 Digital Elements	RTDAMB
MOD_030	USER REG#030 (8 characters)	Range = Maximum of 1 Digital Elements	RTDOTHMX
MOD_031	USER REG#031 (8 characters)	Range = Maximum of 1 Digital Elements	IARMS
MOD_032	USER REG#032 (8 characters)	Range = Maximum of 1 Digital Elements	IBRMS
MOD_033	USER REG#033 (8 characters)	Range = Maximum of 1 Digital Elements	ICRMS
MOD_034	USER REG#034 (8 characters)	Range = Maximum of 1 Digital Elements	INRMS
MOD_035	USER REG#035 (8 characters)	Range = Maximum of 1 Digital Elements	IAMX
MOD_036	USER REG#036 (8 characters)	Range = Maximum of 1 Digital Elements	IAMN
MOD_037	USER REG#037 (8 characters)	Range = Maximum of 1 Digital Elements	IBMX
MOD_038	USER REG#038 (8 characters)	Range = Maximum of 1 Digital Elements	IBMN
MOD_039	USER REG#039 (8 characters)	Range = Maximum of 1 Digital Elements	ICMX
MOD_040	USER REG#040 (8 characters)	Range = Maximum of 1 Digital Elements	ICMN
MOD_041	USER REG#041 (8 characters)	Range = Maximum of 1 Digital Elements	INMX
MOD_042	USER REG#042 (8 characters)	Range = Maximum of 1 Digital Elements	INMN
MOD_043	USER REG#043 (8 characters)	Range = Maximum of 1 Digital Elements	IGMX
MOD_044	USER REG#044 (8 characters)	Range = Maximum of 1 Digital Elements	IGMN
MOD_045	USER REG#045 (8 characters)	Range = Maximum of 1 Digital Elements	KW3PMX
MOD_046	USER REG#046 (8 characters)	Range = Maximum of 1 Digital Elements	KW3PMN
MOD_047	USER REG#047 (8 characters)	Range = Maximum of 1 Digital Elements	KVAR3PMX
MOD_048	USER REG#048 (8 characters)	Range = Maximum of 1	KVAR3PMN

		Digital Elements	
MOD_049	USER REG#049 (8 characters)	Range = Maximum of 1 Digital Elements	KVA3PMX
MOD_050	USER REG#050 (8 characters)	Range = Maximum of 1 Digital Elements	KVA3PMN
MOD_051	USER REG#051 (8 characters)	Range = Maximum of 1 Digital Elements	FREQMX
MOD_052	USER REG#052 (8 characters)	Range = Maximum of 1 Digital Elements	FREQMN
MOD_053	USER REG#053 (8 characters)	Range = Maximum of 1 Digital Elements	TRIP_LO
MOD_054	USER REG#054 (8 characters)	Range = Maximum of 1 Digital Elements	TRIP_HI
MOD_055	USER REG#055 (8 characters)	Range = Maximum of 1 Digital Elements	WARN_LO
MOD_056	USER REG#056 (8 characters)	Range = Maximum of 1 Digital Elements	WARN_HI
MOD_057	USER REG#057 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_058	USER REG#058 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_059	USER REG#059 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_060	USER REG#060 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_061	USER REG#061 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_062	USER REG#062 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_063	USER REG#063 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_064	USER REG#064 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_065	USER REG#065 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_066	USER REG#066 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_067	USER REG#067 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_068	USER REG#068 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_069	USER REG#069 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_070	USER REG#070 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_071	USER REG#071 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_072	USER REG#072 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_073	USER REG#073 (8 characters)	Range = Maximum of 1	NA

		Digital Elements	
MOD_074	USER REG#074 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_075	USER REG#075 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_076	USER REG#076 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_077	USER REG#077 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_078	USER REG#078 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_079	USER REG#079 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_080	USER REG#080 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_081	USER REG#081 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_082	USER REG#082 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_083	USER REG#083 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_084	USER REG#084 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_085	USER REG#085 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_086	USER REG#086 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_087	USER REG#087 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_088	USER REG#088 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_089	USER REG#089 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_090	USER REG#090 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_091	USER REG#091 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_092	USER REG#092 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_093	USER REG#093 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_094	USER REG#094 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_095	USER REG#095 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_096	USER REG#096 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_097	USER REG#097 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_098	USER REG#098 (8 characters)	Range = Maximum of 1	NA

		Digital Elements	
MOD_099	USER REG#099 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_100	USER REG#100 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_101	USER REG#101 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_102	USER REG#102 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_103	USER REG#103 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_104	USER REG#104 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_105	USER REG#105 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_106	USER REG#106 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_107	USER REG#107 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_108	USER REG#108 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_109	USER REG#109 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_110	USER REG#110 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_111	USER REG#111 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_112	USER REG#112 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_113	USER REG#113 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_114	USER REG#114 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_115	USER REG#115 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_116	USER REG#116 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_117	USER REG#117 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_118	USER REG#118 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_119	USER REG#119 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_120	USER REG#120 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_121	USER REG#121 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_122	USER REG#122 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_123	USER REG#123 (8 characters)	Range = Maximum of 1	NA

		Digital Elements	
MOD_124	USER REG#124 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_125	USER REG#125 (8 characters)	Range = Maximum of 1 Digital Elements	NA

Modbus User Map

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SEL-700G Settings Report

Group	Setting	U	Range	Default Value	Value	Delta	Description	Comments	Hidden
1	TR3		Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV06 OR SV07	87U OR 87R OR 87N1T OR 87N2T OR 50PX1T	True	Trip 3 (Generator Lockout Relay) Equation (SELogic)		False
1	87NTC		Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1	1	False	Ground Differential Element Torque Control (SELogic)		True
1	87N2P		Range = 0.30 to 15.00, OFF	OFF	OFF	False	87N Level 2 Differential Pickup (amps)		True
1	87N2D		Range = 0.00 to 400.00	0.00	0.00	False	87N Level 2 Differential Time Delay (seconds)		True
1	87N1P		Range = 0.30 to 15.00	2.50	2.50	False	87N Level 1 Differential Pickup (amps)		True
1	87N1D		Range = 0.00 to 400.00	0.10	0.10	False	87N Level 1 Differential Time Delay (seconds)		True
1	87AP		Range = 0.05 to 1.00, OFF	0.15	0.15	False	Differential Current Alarm PU (TAP)		False
1	87AD		Range = 1.00 to 120.00	5.00	5.00	False	Differential Current Alarm Delay (seconds)		False
1	50PX1P		Range = 0.50 to 96.00, OFF	OFF	4.58	True	X Side Phase Inst Overcurrent Trip Level (amps)		False
1	50PX1D		Range = 0.00 to 400.00, OFF	0.00	0.51	True	X Side Phase Inst Overcurrent Trip Delay (seconds)		False

 (Group LIKE 1%) and ((Setting = 50PX1D) or (Setting = 50PX1P) or (Setting = 87NTC) or (Setting = 87N2P) or (Setting = 87N2D) or (Setting = 87N1P) or (Setting = 87N1D) or (Setting = 87AP) or (Setting = 87AD...

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Report Date: March 08, 2022 09:12:48 am

Database: C:\Users\Kevin.myrick\OneDrive - Vertiv Co\Documents\Jobs\WJ Hooper WPP\WJ-Hooper.rdb

Device Information (Current)

Settings: 52-G1 AL 3-2-2022 (Current)

Device: 700G 007

Part#: 0700G02CCCCC6X850310

FID: SEL-700G-R301-V1-Z007004-D20210104

BFID: SLBT7XX-R600-V0-Z000000-D20200331

Device Information (Other)

Settings: 51-G1 AL 7-26-2021 (Other)

Device: 700G 007

Part#: 0700G02CCCCC6X850310

FID: SEL-700G-R301-V1-Z007004-D20210104

BFID: SLBT-700G-RXXX-V0-Z006003-DXXXXXXXXX

Hidden (H): 0/6946

Changed: 5/5

Unchanged: 0/8189

Missing: 0/0

Invalid (I): 0/0

Designer (D): 0/0

Group 1

Compared Settings

Setting	52-G1 AL 3-2-2022 (Current)	51-G1 AL 7-26-2021 (Other)
50PX1P	2 5.00	4.58
50PX1D	0.50	0.51
50GX1P	1.67	2.50
50GX1D	1.50	0.00
TR3	87U OR 87R OR 87N1T OR 87N2T OR 50PX1T OR 67GX1T	87U OR 87R OR 87N1T OR 87N2T OR 50PX1T

SEL-751 Settings Report

Overview Information

File Name	52-GM AL 7-26-21
RDB	WJ-Hooper.rdb
Device	SEL-751
Setting Version Number	008
Part Number	751202CCCBC70851D10
Firmware ID	SEL-751-R300-V3-Z008004-D20210104
SELBoot Firmware ID	SLBT7XX-R600-V0-Z000000-D20200331

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Settings Legend

Visible Setting

Hidden Setting

Invalid Setting

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Setting	Description	Range	Value
PHROT	Phase Rotation	Select: ABC, ACB	ABC
FNOM	Rated Frequency (Hz)	Select: 50, 60	60
DATE_F	Date Format	Select: MDY, YMD, DMY	MDY
METHRES	Meter Cutoff Threshold	Select: Y, N	Y
FAULT	Fault Condition (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50G1P OR 50N1P OR 51P1P OR 51QP OR 50Q1P OR TRIP
EMP	Messenger Points Enable	Range = 1 to 32, N	N
TGR	Group Change Delay (seconds)	Range = 0 to 400	3
SS1	Select Settings Group1 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
SS2	Select Settings Group2 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SS3	Select Settings Group3 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SS4	Select Settings Group4 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
EPMU	Enable Synchronized Phasor Measurement	Select: Y, N	N
IRIGC	IRIG-B Control Bits Definition	Select: NONE, C37.118	NONE
UTC_OFF	Offset From UTC (hours, in 0.25 hour increments)	Range = -24.00 to 24.00	0.00
DST_BEGM	Month To Begin DST	Range = 1 to 12, OFF	OFF
52ABF	52A Interlock in BF Logic	Select: Y, N	N
50BFP	Breaker-Failure Current Detector Pickup (amps sec.)	Range = 0.10 to 10.00	0.10
BFD	Breaker Failure Delay (seconds)	Range = 0.00 to 2.00	0.50
ATD	Auxiliary Timer Delay (seconds)	Range = 0.00 to 2.00, OFF	OFF
BFI	Breaker Failure Initiate (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG TRIP
BFISID	Breaker Failure Initiate Seal-In Delay (seconds)	Range = 0.00 to 2.00, OFF	0.00
BFRTD	Breaker Retrip Delay (seconds)	Range = 0.00 to 2.00, OFF	0.05
BFTR	Breaker Failure Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
BFULTR	Breaker Failure Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
50PAFP	Arc-Flash Maximum Phase Overcurrent Pickup (amps sec.)	Range = 0.50 to 100.00, OFF	OFF

AOUTSLOT	Select Arc-Flash Output Slot	Select: 101_3, 401_4, 301_4	101_3
AFSENS1	Arc-Flash Input 1 Sensor Type	Select: NONE, POINT, FIBER	NONE
AFSENS2	Arc-Flash Input 2 Sensor Type	Select: NONE, POINT, FIBER	NONE
AFSENS3	Arc-Flash Input 3 Sensor Type	Select: NONE, POINT, FIBER	NONE
AFSENS4	Arc-Flash Input 4 Sensor Type	Select: NONE, POINT, FIBER	NONE
AO401AQ	AO401 Analog Quantity (Off, 1 analog quantity)	Range = Maximum of 1 Analog Elements	OFF
DCLOP	DC Battery LO Voltage Pickup (Vdc)	Range = 20.00 to 300.00, OFF	OFF
DCHIP	DC Battery HI Voltage Pickup (Vdc)	Range = 20.00 to 300.00, OFF	OFF
IN101D	IN101 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN102D	IN102 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN301D	IN301 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN302D	IN302 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN303D	IN303 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN304D	IN304 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN401D	IN401 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN402D	IN402 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN403D	IN403 Debounce (milliseconds)	Range = 0 to 65000, AC	10
EBMON	Enable Breaker Monitor	Select: Y, N	N
RSTTRGT	Reset Targets (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTENRGY	Reset Energy (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTMXMN	Reset Max/Min (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTDEM	Reset Demand (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTPKDEM	Reset Peak Demand (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
DSABLSET	Disable Settings (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
TIME_SRC	IRIG Time Source	Select: IRIG1, IRIG2	IRIG1
89EN2P	Enable Two Position Disconnects	Range = 1 to 8, N	8
89NM2P1	Disconnect 1 Name	Range = ASCII string with a maximum length of 16.	2P1
		Valid range = The legal	

89A2P1	Disconnect 1 N/O Contact (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	0
89B2P1	Disconnect 1 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P1
89A2P1D	Disconnect 1 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P1D	Disconnect 1 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P1D	Disconnect 1 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P1	Disconnect 1 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P1
89CB2P1	Disconnect 1 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P1
89CR2P1	Disconnect 1 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P1 OR 89CS2P1 OR 89AL2P1
89CT2P1	Disconnect 1 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P1
89RO2P1	Disconnect 1 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P1
89OB2P1	Disconnect 1 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P1
89OR2P1	Disconnect 1 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P1 OR 89OS2P1 OR 89AL2P1
89OT2P1	Disconnect 1 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P1
89NM2P2	Disconnect 2 Name	Range = ASCII string with a maximum length of 16.	2P2
89A2P2	Disconnect 2 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P2	Disconnect 2 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P2
89A2P2D	Disconnect 2 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P2D	Disconnect 2 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P2D	Disconnect 2 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P2	Disconnect 2 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P2
89CB2P2	Disconnect 2 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT	89AL2P2

		R_TRIG F_TRIG	
89CR2P2	Disconnect 2 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P2 OR 89CS2P2 OR 89AL2P2
89CT2P2	Disconnect 2 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P2
89RO2P2	Disconnect 2 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P2
89OB2P2	Disconnect 2 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P2
89OR2P2	Disconnect 2 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P2 OR 89OS2P2 OR 89AL2P2
89OT2P2	Disconnect 2 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P2
89NM2P3	Disconnect 3 Name	Range = ASCII string with a maximum length of 16.	2P3
89A2P3	Disconnect 3 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P3	Disconnect 3 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P3
89A2P3D	Disconnect 3 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P3D	Disconnect 3 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P3D	Disconnect 3 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P3	Disconnect 3 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P3
89CB2P3	Disconnect 3 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P3
89CR2P3	Disconnect 3 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P3 OR 89CS2P3 OR 89AL2P3
89CT2P3	Disconnect 3 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P3
89RO2P3	Disconnect 3 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P3
89OB2P3	Disconnect 3 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P3
89OR2P3	Disconnect 3 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P3 OR 89OS2P3 OR 89AL2P3

89OT2P3	Disconnect 3 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P3
89NM2P4	Disconnect 4 Name	Range = ASCII string with a maximum length of 16.	2P4
89A2P4	Disconnect 4 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P4	Disconnect 4 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P4
89A2P4D	Disconnect 4 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P4D	Disconnect 4 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P4D	Disconnect 4 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P4	Disconnect 4 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P4
89CB2P4	Disconnect 4 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P4
89CR2P4	Disconnect 4 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P4 OR 89CS2P4 OR 89AL2P4
89CT2P4	Disconnect 4 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P4
89RO2P4	Disconnect 4 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P4
89OB2P4	Disconnect 4 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P4
89OR2P4	Disconnect 4 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P4 OR 89OS2P4 OR 89AL2P4
89OT2P4	Disconnect 4 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P4
89NM2P5	Disconnect 5 Name	Range = ASCII string with a maximum length of 16.	2P5
89A2P5	Disconnect 5 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P5	Disconnect 5 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P5
89A2P5D	Disconnect 5 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P5D	Disconnect 5 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P5D	Disconnect 5 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00,	0.33

		OFF	
89RC2P5	Disconnect 5 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P5
89CB2P5	Disconnect 5 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P5
89CR2P5	Disconnect 5 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P5 OR 89CS2P5 OR 89AL2P5
89CT2P5	Disconnect 5 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P5
89RO2P5	Disconnect 5 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P5
89OB2P5	Disconnect 5 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P5
89OR2P5	Disconnect 5 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P5 OR 89OS2P5 OR 89AL2P5
89OT2P5	Disconnect 5 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P5
89NM2P6	Disconnect 6 Name	Range = ASCII string with a maximum length of 16.	2P6
89A2P6	Disconnect 6 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P6	Disconnect 6 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P6
89A2P6D	Disconnect 6 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P6D	Disconnect 6 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P6D	Disconnect 6 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P6	Disconnect 6 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P6
89CB2P6	Disconnect 6 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P6
89CR2P6	Disconnect 6 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P6 OR 89CS2P6 OR 89AL2P6
89CT2P6	Disconnect 6 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P6
89RO2P6	Disconnect 6 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P6

89OB2P6	Disconnect 6 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P6
89OR2P6	Disconnect 6 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P6 OR 89OS2P6 OR 89AL2P6
89OT2P6	Disconnect 6 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P6
89NM2P7	Disconnect 7 Name	Range = ASCII string with a maximum length of 16.	2P7
89A2P7	Disconnect 7 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P7	Disconnect 7 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P7
89A2P7D	Disconnect 7 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P7D	Disconnect 7 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P7D	Disconnect 7 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P7	Disconnect 7 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P7
89CB2P7	Disconnect 7 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P7
89CR2P7	Disconnect 7 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P7 OR 89CS2P7 OR 89AL2P7
89CT2P7	Disconnect 7 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P7
89RO2P7	Disconnect 7 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P7
89OB2P7	Disconnect 7 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P7
89OR2P7	Disconnect 7 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P7 OR 89OS2P7 OR 89AL2P7
89OT2P7	Disconnect 7 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P7
89NM2P8	Disconnect 8 Name	Range = ASCII string with a maximum length of 16.	2P8
89A2P8	Disconnect 8 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P8	Disconnect 8 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT	NOT 89A2P8

		R_TRIG F_TRIG	
89A2P8D	Disconnect 8 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P8D	Disconnect 8 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P8D	Disconnect 8 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P8	Disconnect 8 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P8
89CB2P8	Disconnect 8 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P8
89CR2P8	Disconnect 8 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P8 OR 89CS2P8 OR 89AL2P8
89CT2P8	Disconnect 8 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P8
89RO2P8	Disconnect 8 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P8
89OB2P8	Disconnect 8 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P8
89OR2P8	Disconnect 8 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P8 OR 89OS2P8 OR 89AL2P8
89OT2P8	Disconnect 8 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P8
89EN3P	Enable Three Position Disconnects	Range = 1 to 2, N	N
EN_LRC	Enable Local Remote Control	Select: Y, N	N
SC850BM	IEC 61850 Blocked Mode Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SC850TM	IEC 61850 Test Mode Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
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Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	SEL-751
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	52-GM RELAY
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	240
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	240
PTR	PT Ratio	Range = 1.00 to 10000.00	35.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	35.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	Y
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	34.50
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	5.00
50G1D	Residual Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50G1TC	Residual Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
		Range = 0.25 to 100.00,	

50G4P	Residual Overcurrent Trip Pickup (amps sec.)	OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51P1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	5.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	1.03
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	2.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1

51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	108.00
27PP1D	Phase-Phase Undervoltage Trip Delay (seconds)	Range = 0.00 to 120.00	0.00
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	12.00
27S1D	Channel VS Undervoltage Delay 1 (seconds)	Range = 0.00 to 120.00	0.00
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	132.00
59PP1D	Phase-Phase Overvoltage Trip Delay (seconds)	Range = 0.00 to 120.00	0.00
59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	Y
25VLO	Voltage Window - Low Threshold (volts)	Range = 0.00 to 300.00	108.00
25VHI	Voltage Window - High Threshold (volts)	Range = 0.00 to 300.00	132.00
25RCF	Voltage Ratio Correction Factor	Range = 0.50 to 2.00	1.00
25SF	Maximum Slip Frequency (Hz)	Range = 0.05 to 0.50	0.20
25ANG1	Maximum Angle 1 (degrees)	Range = 0 to 80	15
25ANG2	Maximum Angle 2 (degrees)	Range = 0 to 80	15
SYNCPH	Synchronism Check Phase (VAB,VBC,VCA or deg lag VAB)	Select: 0, 30, 60, 90, 120, 150, 180, 210, 240, 270, 300, 330, VAB, VBC, VCA	VAB
TCLOSD	Breaker Close Time for Angle Compensation (milliseconds)	Range = 1 to 1000, OFF	OFF
BSYNCH	Block Synchronism Check (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	52A

LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	59.00
81D1TD	Frequency1 Trip Delay (seconds)	Range = 0.00 to 400.00	0.00
81D1TC	Frequency1 Torque Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	61.00
81D2TD	Frequency2 Trip Delay (seconds)	Range = 0.00 to 400.00	0.00
81D2TC	Frequency2 Torque Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	1
81RVSUP	Voltage Supervision of Rate-of-Change of Frequency Elements (volts)	Range = 12.5 to 300.0, OFF	96.0
81RISUP	Current Supervision of Rate-of-Change of Frequency Elements (amps)	Range = 0.5 to 10.0, OFF	OFF
81R1TP	Rate-of-Change of Frequency Trip 1 Pickup (Hz/sec)	Range = 0.10 to 15.00, OFF	0.50
81R1TRND	Rate-of-Change of Frequency Trend 1	Select: INC, DEC, ABS	ABS
81R1TD	Rate-of-Change of Frequency Trip 1 Delay (seconds)	Range = 0.10 to 60.00	0.25
81R1DO	Rate-of-Change of Frequency Dropout 1 Delay (seconds)	Range = 0.00 to 60.00	0.00
81R1TC	Rate-of-Change of Frequency Torque Control 1 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00

EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	3P1
3PWR1P	Three Phase Power Element Pickup (VA)	Range = 1.0 to 6500.0, OFF	50.0
PWR1T	Power Element Type	Select: +WATTS, - WATTS, +VARS, -VARS	-WATTS
PWR1D	Power Element Time Delay (seconds)	Range = 0.0 to 240.0	0.0
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	OFF
TR	Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50P1T OR 51P1T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51P1P OR 51G1P OR 51N1P OR 50P1P OR 50G1P OR 50N1P)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	IN101
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
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Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	120
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	120
PTR	PT Ratio	Range = 1.00 to 10000.00	180.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	180.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	N
VNOM	Line Voltage, Nominal Line-to-Line (volts)	Range = 20.00 to 250.00, OFF	120.00
Z1MAG	Pos. Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	2.14
Z1ANG	Pos. Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	68.86
Z0MAG	Zero Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	6.38
Z0ANG	Zero Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	72.47
Z0SMAG	Zero Seq. Source Impedance Magnitude (ohms)	Range = 0.10 to 510.00	0.36
Z0SANG	Zero Seq. Source Impedance Angle (degrees)	Range = 0.00 to 90.00	84.61
LL	Line Length - unitless	Range = 0.10 to 999.00	4.84
EFLOC	Enable Fault Location	Select: Y, N	N
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P2D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P2TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P3D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P3TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
		Range = 0.25 to 100.00,	

50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	OFF	10.00
50P4D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P4TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G4P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51AC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51ATD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51ARS	EM Reset Delay	Select: Y, N	N
51ACT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51AMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51ATC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51BC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3

51BTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51BRS	EM Reset Delay	Select: Y, N	N
51BCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51BMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51BTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51CC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51CTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51CRS	EM Reset Delay	Select: Y, N	N
51CCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51CMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51CTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51PIP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51P2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P2TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51P2RS	EM Reset Delay	Select: Y, N	N
51P2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P2TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51QC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51QTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51QRS	EM Reset Delay	Select: Y, N	N
51QCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51QMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00

51QTC	Negative Seq. Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G2TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G2RS	EM Reset Delay	Select: Y, N	N
51G2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G2TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
ELOAD	Enable Load Encroachment	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	OFF
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59Q1P	Negative-Seq Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF

59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59Q2P	Negative-Seq Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	N
LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
E78VS	Enable Vector Shift	Select: Y, N	N
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	N
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	N
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	1.0
		Valid range = The legal	ORED50T OR ORED51T OR

TR	Trip (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	ORED81T OR REMTRIP OR OC OR SV04T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51PIP OR 51G1P OR 51N1P OR 52A)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T AND LT02 OR CC
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Group 2			
Top			

Group 3			
			Top
Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	120
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	120
PTR	PT Ratio	Range = 1.00 to 10000.00	180.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	180.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	N
VNOM	Line Voltage, Nominal Line-to-Line (volts)	Range = 20.00 to 250.00, OFF	120.00
Z1MAG	Pos. Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	2.14
Z1ANG	Pos. Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	68.86
Z0MAG	Zero Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	6.38
Z0ANG	Zero Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	72.47
Z0SMAG	Zero Seq. Source Impedance Magnitude (ohms)	Range = 0.10 to 510.00	0.36
Z0SANG	Zero Seq. Source Impedance Angle (degrees)	Range = 0.00 to 90.00	84.61
LL	Line Length - unitless	Range = 0.10 to 999.00	4.84
EFLOC	Enable Fault Location	Select: Y, N	N
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P2D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P2TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P3D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P3TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
		Range = 0.25 to 100.00,	

50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	OFF	10.00
50P4D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P4TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G4P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51AC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51ATD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51ARS	EM Reset Delay	Select: Y, N	N
51ACT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51AMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51ATC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51BC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3

51BTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51BRS	EM Reset Delay	Select: Y, N	N
51BCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51BMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51BTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51CC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51CTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51CRS	EM Reset Delay	Select: Y, N	N
51CCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51CMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51CTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51PIP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51P2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P2TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51P2RS	EM Reset Delay	Select: Y, N	N
51P2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P2TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51QC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51QTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51QRS	EM Reset Delay	Select: Y, N	N
51QCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51QMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00

51QTC	Negative Seq. Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G2TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G2RS	EM Reset Delay	Select: Y, N	N
51G2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G2TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
ELOAD	Enable Load Encroachment	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	OFF
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59Q1P	Negative-Seq Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF

59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59Q2P	Negative-Seq Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	N
LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
E78VS	Enable Vector Shift	Select: Y, N	N
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	N
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	N
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	1.0
		Valid range = The legal	ORED50T OR ORED51T OR

TR	Trip (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	ORED81T OR REMTRIP OR OC OR SV04T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51PIP OR 51G1P OR 51N1P OR 52A)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T AND LT02 OR CC
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Group 3			
Top			

Group 4			
			Top
Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	120
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	120
PTR	PT Ratio	Range = 1.00 to 10000.00	180.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	180.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	N
VNOM	Line Voltage, Nominal Line-to-Line (volts)	Range = 20.00 to 250.00, OFF	120.00
Z1MAG	Pos. Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	2.14
Z1ANG	Pos. Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	68.86
Z0MAG	Zero Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	6.38
Z0ANG	Zero Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	72.47
Z0SMAG	Zero Seq. Source Impedance Magnitude (ohms)	Range = 0.10 to 510.00	0.36
Z0SANG	Zero Seq. Source Impedance Angle (degrees)	Range = 0.00 to 90.00	84.61
LL	Line Length - unitless	Range = 0.10 to 999.00	4.84
EFLOC	Enable Fault Location	Select: Y, N	N
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P2D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P2TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P3D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P3TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
		Range = 0.25 to 100.00,	

50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	OFF	10.00
50P4D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P4TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G4P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51AC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51ATD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51ARS	EM Reset Delay	Select: Y, N	N
51ACT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51AMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51ATC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51BC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3

51BTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51BRS	EM Reset Delay	Select: Y, N	N
51BCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51BMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51BTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51CC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51CTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51CRS	EM Reset Delay	Select: Y, N	N
51CCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51CMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51CTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51PIP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51P2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P2TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51P2RS	EM Reset Delay	Select: Y, N	N
51P2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P2TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51QC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51QTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51QRS	EM Reset Delay	Select: Y, N	N
51QCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51QMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00

51QTC	Negative Seq. Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G2TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G2RS	EM Reset Delay	Select: Y, N	N
51G2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G2TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
ELOAD	Enable Load Encroachment	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	OFF
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59Q1P	Negative-Seq Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF

59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59Q2P	Negative-Seq Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	N
LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
E78VS	Enable Vector Shift	Select: Y, N	N
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	N
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	N
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	1.0
		Valid range = The legal	ORED50T OR ORED51T OR

TR	Trip (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	ORED81T OR REMTRIP OR OC OR SV04T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51PIP OR 51G1P OR 51N1P OR 52A)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T AND LT02 OR CC
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Group 4			
Top			

Logic 1			
Top			
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	10
ESV	SELogic Variables/Timers	Range = 1 to 32, N	10
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
SET01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET05	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST05	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET06	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST06	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET07	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST07	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA

SET08	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST08	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET09	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST09	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET10	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST10	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SV01PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV01DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV01	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50P1T OR 50G1T OR 50N1T OR 51P1T OR 51G1T OR 51N1T #DIRECT TRIP
SV02PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV02DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV02	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(27PP1 OR 59PP1) #LIVE LINE SIDE
SV03PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV03DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV03	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(NOT SV02 AND 27S1) #SYNC CHECK OK
SV04PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV04DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV04	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	HALARM OR SALARM #PROTECTION RELAY FAIL
SV05PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV05DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV05	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SV06PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV06DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV06	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0

SV07PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV07DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV07	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SV08PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	1.00
SV08DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV08	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0 #REVERSE POWER TRIP
SV09PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV09DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV09	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SV10PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV10DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV10	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT10IFS	OUT101 Fail-Safe	Select: Y, N	N
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	TRIP
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT103FS	OUT103 Fail-Safe	Select: Y, N	Y
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV04T #PROTECTIVE RELAY ALARM TO PLC
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T #SYNC CLOSE CIRCUIT
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T #SYNC CHECK TO PLC
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N

OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50P1T OR 50G1T OR 51P1T OR 51G1T OR SV08T #DIRECT TRIP TO PLC
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 1			
Top			

Logic 2			
Top			
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	4
ESV	SELogic Variables/Timers	Range = 1 to 32, N	5
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
SET01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND NOT LT02
RST02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND LT02
SET03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB03_PUL AND LT02 AND NOT 52A
RST03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV03T) AND LT03
SET04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB04_PUL AND 52A
RST04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV04T) AND LT04
SV01PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV01DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV01	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SV02PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	3.00
SV02DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV02	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB02
SV03PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV03DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV03	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT03

SV04PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV04DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV04	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT04
SV05PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.25
SV05DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.25
SV05	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB02 OR LT03 OR LT04) AND NOT SV05T
OUT101FS	OUT101 Fail-Safe	Select: Y, N	Y
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	HALARM OR SALARM OR AFALARM
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	CLOSE
OUT103FS	OUT103 Fail-Safe	Select: Y, N	N
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	TRIP
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0

OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 2			Top

Logic 3			
Top			
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	4
ESV	SELogic Variables/Timers	Range = 1 to 32, N	5
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
SET01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND NOT LT02
RST02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND LT02
SET03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB03_PUL AND LT02 AND NOT 52A
RST03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV03T) AND LT03
SET04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB04_PUL AND 52A
RST04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV04T) AND LT04
SV01PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV01DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV01	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SV02PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	3.00
SV02DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV02	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB02
SV03PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV03DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV03	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT03

SV04PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV04DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV04	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT04
SV05PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.25
SV05DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.25
SV05	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB02 OR LT03 OR LT04) AND NOT SV05T
OUT101FS	OUT101 Fail-Safe	Select: Y, N	Y
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	HALARM OR SALARM OR AFALARM
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	CLOSE
OUT103FS	OUT103 Fail-Safe	Select: Y, N	N
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	TRIP
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0

OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 3			Top

Logic 4			
			Top
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	4
ESV	SELogic Variables/Timers	Range = 1 to 32, N	5
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
SET01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND NOT LT02
RST02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND LT02
SET03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB03_PUL AND LT02 AND NOT 52A
RST03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV03T) AND LT03
SET04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB04_PUL AND 52A
RST04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV04T) AND LT04
SV01PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV01DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV01	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SV02PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	3.00
SV02DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV02	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB02
SV03PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV03DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV03	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT03

SV04PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV04DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV04	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT04
SV05PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.25
SV05DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.25
SV05	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB02 OR LT03 OR LT04) AND NOT SV05T
OUT101FS	OUT101 Fail-Safe	Select: Y, N	Y
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	HALARM OR SALARM OR AFALARM
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	CLOSE
OUT103FS	OUT103 Fail-Safe	Select: Y, N	N
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	TRIP
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0

OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 4			Top

Front Panel			
			Top
Setting	Description	Range	Value
EDP	Display Points Enable	Range = 1 to 32, N	5
ELB	Local Bits Enable	Range = 1 to 32, N	N
FP_TO	Front-Panel Timeout (mins)	Range = 1 to 30, OFF	15
FP_CONT	Front-Panel Contrast	Range = 1 to 16	10
FP_AUTO	Front-Panel Automessages	Select: OVERRIDE, ROTATING	OVERRIDE
RSTLED	Reset Trip-Latched LEDs On Close	Select: Y, N	N
LEDENAC	ENABLED LED Asserted Color	Select: R, G, A	G
LEDTRPC	TRIP LED Asserted Color	Select: R, G, A	R
MAXACC	Maximum Access Level	Select: 1, 2	2
T01LEDL	Trip Latch T_LED	Select: Y, N	Y
T01LEDC	Target T01_LED Asserted Color (R,G,A)	Select: R, G, A	R
T01_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	ORED50T #INSTANT OC
T02LEDL	Trip Latch T_LED	Select: Y, N	Y
T02LEDC	Target T02_LED Asserted Color (R,G,A)	Select: R, G, A	R
T02_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	51AT OR 51BT OR 51CT OR 51P1T OR 51P2T #PHASE OC
T03LEDL	Trip Latch T_LED	Select: Y, N	Y
T03LEDC	Target T03_LED Asserted Color (R,G,A)	Select: R, G, A	R
T03_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	51N1T OR 51G1T OR 51N2T OR 51G2T #GND/NEU OC
T04LEDL	Trip Latch T_LED	Select: Y, N	Y
T04LEDC	Target T04_LED Asserted Color (R,G,A)	Select: R, G, A	R
T04_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	51QT #GND/NEU OC
T05LEDL	Trip Latch T_LED	Select: Y, N	Y
T05LEDC	Target T05_LED Asserted Color (R,G,A)	Select: R, G, A	R
T05_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	81D1T OR 81D2T OR 81D3T OR 81D4T #OVER/UNDER FREQUENCY
T06LEDL	Trip Latch T_LED	Select: Y, N	N
T06LEDC	Target T06_LED Asserted Color (R,G,A)	Select: R, G, A	R
T06_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT	(BFT OR T06_LED) AND NOT TRGTR

		R_TRIG F_TRIG	#BREAKER FAIL
PB1ALEDC	PB1A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB1A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB1BLEDC	PB1B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB1B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB2ALEDC	PB2A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB2A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB2BLEDC	PB2B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB2B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB3ALEDC	PB3A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB3A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB3BLEDC	PB3B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB3B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB4ALEDC	PB4A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB4A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB4BLEDC	PB4B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB4B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
DP01	Display Point (60 characters)		TID, "{16}"
DP02	Display Point (60 characters)		0
DP03	Display Point (60 characters)		IN101, BREAKER, CLOSED, OPEN

DP04	Display Point (60 characters)		0
DP05	Display Point (60 characters)		0
Front Panel			
Top			

Report			
			Top
Setting	Description	Range	Value
ER	Event Report Trigger (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG 51P1P OR R_TRIG 51G1P OR R_TRIG 51N1P OR R_TRIG 50P1P OR R_TRIG 50G1P OR R_TRIG 50N1P
LER	Length of Event Report (cycles)	Select: 15, 64, 180	15
PRE	Prefault Length (cycles)	Range = 1 to 10	5
ESERDEL	Auto-Removal Enable	Select: Y, N	N
SER1	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	IN101, OUT301, 51P1T, 51G1T, 51N1T, 50P1P, 50G1T, 50N1T, SV08
SER2	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	52A
SER3	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	SV05T, SV02T
SER4	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	SALARM, HALARM
EALIAS	Enable ALIAS Settings	Range = 1 to 20, N	N
FMR1NAM	Fast Message Read Name1 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR1
FMR1	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
FMR2NAM	Fast Message Read Name2 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR2
FMR2	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
FMR3NAM	Fast Message Read Name3 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR3
FMR3	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
FMR4NAM	Fast Message Read Name4 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR4
FMR4	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
RA01TYPE	Remote Analog 01 type	Select: I, F, L	I
RA02TYPE	Remote Analog 02 type	Select: I, F, L	I
RA03TYPE	Remote Analog 03 type	Select: I, F, L	I
RA04TYPE	Remote Analog 04 type	Select: I, F, L	I
RA05TYPE	Remote Analog 05 type	Select: I, F, L	I

RA06TYPE	Remote Analog 06 type	Select: I, F, L	I
RA07TYPE	Remote Analog 07 type	Select: I, F, L	I
RA08TYPE	Remote Analog 08 type	Select: I, F, L	I
RA09TYPE	Remote Analog 09 type	Select: I, F, L	I
RA10TYPE	Remote Analog 10 type	Select: I, F, L	I
RA11TYPE	Remote Analog 11 type	Select: I, F, L	I
RA12TYPE	Remote Analog 12 type	Select: I, F, L	I
RA13TYPE	Remote Analog 13 type	Select: I, F, L	I
RA14TYPE	Remote Analog 14 type	Select: I, F, L	I
RA15TYPE	Remote Analog 15 type	Select: I, F, L	I
RA16TYPE	Remote Analog 16 type	Select: I, F, L	I
RA17TYPE	Remote Analog 17 type	Select: I, F, L	I
RA18TYPE	Remote Analog 18 type	Select: I, F, L	I
RA19TYPE	Remote Analog 19 type	Select: I, F, L	I
RA20TYPE	Remote Analog 20 type	Select: I, F, L	I
RA21TYPE	Remote Analog 21 type	Select: I, F, L	I
RA22TYPE	Remote Analog 22 type	Select: I, F, L	I
RA23TYPE	Remote Analog 23 type	Select: I, F, L	I
RA24TYPE	Remote Analog 24 type	Select: I, F, L	I
RA25TYPE	Remote Analog 25 type	Select: I, F, L	I
RA26TYPE	Remote Analog 26 type	Select: I, F, L	I
RA27TYPE	Remote Analog 27 type	Select: I, F, L	I
RA28TYPE	Remote Analog 28 type	Select: I, F, L	I
RA29TYPE	Remote Analog 29 type	Select: I, F, L	I
RA30TYPE	Remote Analog 30 type	Select: I, F, L	I
RA31TYPE	Remote Analog 31 type	Select: I, F, L	I
RA32TYPE	Remote Analog 32 type	Select: I, F, L	I
LDLIST	Load Profile List (17 Analog Quantities)	Range = Maximum of 17 Analog Elements	NA
LDAR	Load Profile Acquisition Rate (mins)	Select: 5, 10, 15, 30, 60	15

Report[Top](#)

Port F			
Top			
Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
PROTO	Protocol	Select: SEL, MOD, EVMSG, PMU	SEL
MAXACC	Maximum Access Level	Select: 1, 2, C	2
SPEED	Data Speed (bps)	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400	9600
BITS	Data Bits (bits)	Select: 7, 8	8
PARITY	Parity	Select: O, E, N	N
STOP	Stop Bits (bits)	Select: 1, 2	1
T_OUT	Port Timeout (mins)	Range = 0 to 30	0
RTSCTS	Hardware Handshaking	Select: Y, N	N
LANG	Language	Select: ENGLISH, SPANISH	ENGLISH
AUTO	Send Auto Messages to Port	Select: Y, N	N
Port F			
Top			

Port 1			
Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
EETHFWU	Enable Ethernet Firmware Upgrade	Select: Y, N	N
IPADDR	Device IP Address [zzz.yyy.xxx.www]	Range = ASCII string with a maximum length of 15.	192.168.0.153
SUBNETM	Subnet Mask [zzz.yyy.xxx.www]	Range = ASCII string with a maximum length of 15.	255.255.255.0
DEFRTR	Default Router Gateway [zzz.yyy.xxx.www]	Range = ASCII string with a maximum length of 15.	192.168.0.1
ETCPKA	Enable TCP Keep-Alive	Select: Y, N	Y
KAIDLE	TCP Keep-Alive Idle Range (seconds)	Range = 1 to 20	10
KAINTV	TCP Keep-Alive Interval Range (seconds)	Range = 1 to 20	1
KACNT	TCP Keep-Alive Count Range	Range = 1 to 20	6
ETELNET	Enable Telnet	Select: Y, N	Y
MAXACC	Maximum Access Level	Select: 1, 2, C	2
LANG	Language	Select: ENGLISH, SPANISH	ENGLISH
TPORT	Telnet Port	Range = 1025 to 65534, 23	23
TCBAN	Telnet Connect Banner (254 ASCII printable characters)	Range = ASCII string with a maximum length of 254.	TERMINAL SERVER
TIDLE	Telnet Port Timeout (mins)	Range = 1 to 30	15
FASTOP	Fast Operate	Select: Y, N	N
EFTPSERV	Enable FTP	Select: Y, N	Y
FTPACC	FTP Maximum Access Level	Select: 1, 2, C	2
FTPUSER	FTP User Name (20 characters)	Range = ASCII string with a maximum length of 20.	FTPUSER
FTPCBAN	FTP Connect Banner (254 ASCII printable characters)	Range = ASCII string with a maximum length of 254.	FTP SERVER
FTPIDLE	FTP Idle Time (mins)	Range = 5 to 255	5
E61850	Enable IEC 61850 Protocol	Select: Y, N	Y
EGSE	Enable IEC 61850 GOOSE	Select: Y, N	Y
EMMSFS	Enable MMS File Services	Select: Y, N	Y
E850MBC	Enable 61850 Mode/Behavior Control	Select: Y, N	N
EOFFMTX	Enable GOOSE Tx in Off Mode	Select: Y, N	N
EMOD	Enable Modbus Sessions	Select: 0-2	0
EHTTP	Enable HTTP Server	Select: Y, N	Y
HTTPACC	HTTP Maximum Access Level	Select: 1, 2	2
HTTPPORT	HTTP Server TCP/IP Port Number	Range = 1 to 65534	80
HTTPBAN	HTTP Connect Banner (254 ASCII printable characters)	Range = ASCII string with a maximum length of 254.	THIS SYSTEM IS FOR THE USE OF AUTHORIZED PERSONNEL

			ONLY.
HTTPIDLE	HTTP Web Server Timeout (minutes)	Range = 1 to 60	10
ESNTP	Enable SNTP Client	Select: OFF, UNICAST, MANYCAST, BROADCAST	OFF
EPTP	Enable PTP	Select: Y, N	N
Port 1			
			Top

Port 2				Top
Setting	Description	Range	Value	
Port 2				Top

Port 3			
Top			
Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
PROTO	Protocol	Select: SEL, MOD, EVMSG, PMU, MBA, MBB, MB8A, MB8B, MBTA, MBTB	SEL
MAXACC	Maximum Access Level	Select: 1, 2, C	2
SPEED	Data Speed (bps)	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400	9600
BITS	Data Bits (bits)	Select: 7, 8	8
PARITY	Parity	Select: O, E, N	N
STOP	Stop Bits (bits)	Select: 1, 2	1
T_OUT	Port Timeout (mins)	Range = 0 to 30	5
RTSCTS	Hardware Handshaking	Select: Y, N	N
LANG	Language	Select: ENGLISH, SPANISH	ENGLISH
AUTO	Send Auto Messages to Port	Select: Y, N	N
FASTOP	Fast Operate	Select: Y, N	N
Port 3			
Top			

Modbus User Map			
			Top
Setting	Description	Range	Value
MOD_001	USER REG#001 (8 characters)	Range = Maximum of 1 Digital Elements	IA_MAG
MOD_002	USER REG#002 (8 characters)	Range = Maximum of 1 Digital Elements	IB_MAG
MOD_003	USER REG#003 (8 characters)	Range = Maximum of 1 Digital Elements	IC_MAG
MOD_004	USER REG#004 (8 characters)	Range = Maximum of 1 Digital Elements	IN_MAG
MOD_005	USER REG#005 (8 characters)	Range = Maximum of 1 Digital Elements	IG_MAG
MOD_006	USER REG#006 (8 characters)	Range = Maximum of 1 Digital Elements	IAV
MOD_007	USER REG#007 (8 characters)	Range = Maximum of 1 Digital Elements	3I2
MOD_008	USER REG#008 (8 characters)	Range = Maximum of 1 Digital Elements	UBI
MOD_009	USER REG#009 (8 characters)	Range = Maximum of 1 Digital Elements	VAVE
MOD_010	USER REG#010 (8 characters)	Range = Maximum of 1 Digital Elements	3V2
MOD_011	USER REG#011 (8 characters)	Range = Maximum of 1 Digital Elements	UBV
MOD_012	USER REG#012 (8 characters)	Range = Maximum of 1 Digital Elements	P
MOD_013	USER REG#013 (8 characters)	Range = Maximum of 1 Digital Elements	Q
MOD_014	USER REG#014 (8 characters)	Range = Maximum of 1 Digital Elements	S
MOD_015	USER REG#015 (8 characters)	Range = Maximum of 1 Digital Elements	PF
MOD_016	USER REG#016 (8 characters)	Range = Maximum of 1 Digital Elements	FREQ
MOD_017	USER REG#017 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3PIH
MOD_018	USER REG#018 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3PIL
MOD_019	USER REG#019 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3POH
MOD_020	USER REG#020 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3POL
MOD_021	USER REG#021 (8 characters)	Range = Maximum of 1 Digital Elements	MVRH3PIH
MOD_022	USER REG#022 (8 characters)	Range = Maximum of 1 Digital Elements	MVRH3PIL
		Range = Maximum of 1	

MOD_023	USER REG#023 (8 characters)	Digital Elements	MVRH3POH
MOD_024	USER REG#024 (8 characters)	Range = Maximum of 1 Digital Elements	MVRH3POL
MOD_025	USER REG#025 (8 characters)	Range = Maximum of 1 Digital Elements	MVAH3PH
MOD_026	USER REG#026 (8 characters)	Range = Maximum of 1 Digital Elements	MVAH3PL
MOD_027	USER REG#027 (8 characters)	Range = Maximum of 1 Digital Elements	RTDWDGMX
MOD_028	USER REG#028 (8 characters)	Range = Maximum of 1 Digital Elements	RTDBRGMX
MOD_029	USER REG#029 (8 characters)	Range = Maximum of 1 Digital Elements	RTDAMB
MOD_030	USER REG#030 (8 characters)	Range = Maximum of 1 Digital Elements	RTDOTHMX
MOD_031	USER REG#031 (8 characters)	Range = Maximum of 1 Digital Elements	IARMS
MOD_032	USER REG#032 (8 characters)	Range = Maximum of 1 Digital Elements	IBRMS
MOD_033	USER REG#033 (8 characters)	Range = Maximum of 1 Digital Elements	ICRMS
MOD_034	USER REG#034 (8 characters)	Range = Maximum of 1 Digital Elements	INRMS
MOD_035	USER REG#035 (8 characters)	Range = Maximum of 1 Digital Elements	IAMX
MOD_036	USER REG#036 (8 characters)	Range = Maximum of 1 Digital Elements	IAMN
MOD_037	USER REG#037 (8 characters)	Range = Maximum of 1 Digital Elements	IBMX
MOD_038	USER REG#038 (8 characters)	Range = Maximum of 1 Digital Elements	IBMN
MOD_039	USER REG#039 (8 characters)	Range = Maximum of 1 Digital Elements	ICMX
MOD_040	USER REG#040 (8 characters)	Range = Maximum of 1 Digital Elements	ICMN
MOD_041	USER REG#041 (8 characters)	Range = Maximum of 1 Digital Elements	INMX
MOD_042	USER REG#042 (8 characters)	Range = Maximum of 1 Digital Elements	INMN
MOD_043	USER REG#043 (8 characters)	Range = Maximum of 1 Digital Elements	IGMX
MOD_044	USER REG#044 (8 characters)	Range = Maximum of 1 Digital Elements	IGMN
MOD_045	USER REG#045 (8 characters)	Range = Maximum of 1 Digital Elements	KW3PMX
MOD_046	USER REG#046 (8 characters)	Range = Maximum of 1 Digital Elements	KW3PMN
MOD_047	USER REG#047 (8 characters)	Range = Maximum of 1 Digital Elements	KVAR3PMX
MOD_048	USER REG#048 (8 characters)	Range = Maximum of 1	KVAR3PMN

		Digital Elements	
MOD_049	USER REG#049 (8 characters)	Range = Maximum of 1 Digital Elements	KVA3PMX
MOD_050	USER REG#050 (8 characters)	Range = Maximum of 1 Digital Elements	KVA3PMN
MOD_051	USER REG#051 (8 characters)	Range = Maximum of 1 Digital Elements	FREQMX
MOD_052	USER REG#052 (8 characters)	Range = Maximum of 1 Digital Elements	FREQMN
MOD_053	USER REG#053 (8 characters)	Range = Maximum of 1 Digital Elements	TRIP_LO
MOD_054	USER REG#054 (8 characters)	Range = Maximum of 1 Digital Elements	TRIP_HI
MOD_055	USER REG#055 (8 characters)	Range = Maximum of 1 Digital Elements	WARN_LO
MOD_056	USER REG#056 (8 characters)	Range = Maximum of 1 Digital Elements	WARN_HI
MOD_057	USER REG#057 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_058	USER REG#058 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_059	USER REG#059 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_060	USER REG#060 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_061	USER REG#061 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_062	USER REG#062 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_063	USER REG#063 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_064	USER REG#064 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_065	USER REG#065 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_066	USER REG#066 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_067	USER REG#067 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_068	USER REG#068 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_069	USER REG#069 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_070	USER REG#070 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_071	USER REG#071 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_072	USER REG#072 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_073	USER REG#073 (8 characters)	Range = Maximum of 1	NA

		Digital Elements	
MOD_074	USER REG#074 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_075	USER REG#075 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_076	USER REG#076 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_077	USER REG#077 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_078	USER REG#078 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_079	USER REG#079 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_080	USER REG#080 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_081	USER REG#081 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_082	USER REG#082 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_083	USER REG#083 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_084	USER REG#084 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_085	USER REG#085 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_086	USER REG#086 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_087	USER REG#087 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_088	USER REG#088 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_089	USER REG#089 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_090	USER REG#090 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_091	USER REG#091 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_092	USER REG#092 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_093	USER REG#093 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_094	USER REG#094 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_095	USER REG#095 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_096	USER REG#096 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_097	USER REG#097 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_098	USER REG#098 (8 characters)	Range = Maximum of 1	NA

		Digital Elements	
MOD_099	USER REG#099 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_100	USER REG#100 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_101	USER REG#101 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_102	USER REG#102 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_103	USER REG#103 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_104	USER REG#104 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_105	USER REG#105 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_106	USER REG#106 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_107	USER REG#107 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_108	USER REG#108 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_109	USER REG#109 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_110	USER REG#110 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_111	USER REG#111 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_112	USER REG#112 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_113	USER REG#113 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_114	USER REG#114 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_115	USER REG#115 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_116	USER REG#116 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_117	USER REG#117 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_118	USER REG#118 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_119	USER REG#119 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_120	USER REG#120 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_121	USER REG#121 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_122	USER REG#122 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_123	USER REG#123 (8 characters)	Range = Maximum of 1	NA

		Digital Elements	
MOD_124	USER REG#124 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_125	USER REG#125 (8 characters)	Range = Maximum of 1 Digital Elements	NA

Modbus User Map

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SEL-751 Settings Report

Group	Setting	Range	Default Value	Value	Delta	Description	Comments	Hidden
1	50P1P	Range = 0.25 to 100.00, OFF	10.00	34.50	True	Maximum Phase Overcurrent Trip Pickup (amps sec.)		False
1	50P1D	Range = 0.00 to 400.00, OFF	0.00	0.00	False	Maximum Phase Overcurrent Trip Delay (seconds)		False
1	50N1P	Range = 0.25 to 100.00, OFF	OFF	OFF	False	Neutral Overcurrent Trip Pickup (amps sec.)		False
1	50N1D	Range = 0.00 to 400.00, OFF	0.50	0.50	False	Neutral Overcurrent Trip Delay (seconds)		True
1	50G1P	Range = 0.25 to 100.00, OFF	OFF	5.00	True	Residual Overcurrent Trip Pickup (amps sec.)		False
1	50G1D	Range = 0.00 to 400.00, OFF	0.50	0.00	True	Residual Overcurrent Trip Delay (seconds)		False
1	51P1P	Range = 0.25 to 24.00, OFF	6.00	5.00	True	Time Overcurrent Trip Pickup (amps sec.)		False
1	51P1C	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3	U3	False	TOC Curve Selection		False
1	51P1TD	Range = 0.50 to 15.00	3.00	1.03	True	TOC Time Dial		False
1	51G1P	Range = 0.25 to 24.00, OFF	0.50	2.50	True	Time Overcurrent Trip Pickup (amps sec.)		False
1	51G1C	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3	U3	False	TOC Curve Selection		False
1	51G1TD	Range = 0.50 to 15.00	1.50	1.50	False	TOC Time Dial		False
1	TR	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	ORED50T OR ORED51T OR ORED81T OR REMTRIP OR OC OR SV04T	50P1T OR 51P1T	True	Trip (SELogic)		False

(Group = 1) and ((Setting = 50G1P) or (Setting = 50G1D) or (Setting = 50N1D) or (Setting = 50N1P) or (Setting = 50P1D) or (Setting = 50P1P) or (Setting = 51G1P) or (Setting = 51G1TD) or (Setting = 51G1C) o...

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Report Date: July 29, 2021 08:03:24 am

Database: C:\Users\Kevin.myrick\OneDrive - Vertiv Co\Documents\Jobs\WJ Hooper WPP\WJ-Hooper.rdb

Device Information (Current)

Settings: 52-GM AF (Current)

Device: 751 008

Part#: 751202CCCBC70851D10

FID: SEL-751-R300-V3-Z008004-D20210104

BFID: SLBT7XX-R600-V0-Z000000-D20200331

Device Information (Other)

Settings: 52-GM AL 7-26-21 (Other)

Device: 751 008

Part#: 751202CCCBC70851D10

FID: SEL-751-R300-V3-Z008004-D20210104

BFID: SLBT-751-RXXX-V0-Z007003-DXXXXXXXXX

Hidden (H): 0/6313

Changed: 7/7

Unchanged: 0/7566

Missing: 0/0

Invalid (I): 0/0

Designer (D): 0/0

Group 1

Compared Settings

Setting	52-GM AF (Current)	52-GM AL 7-26-21 (Other)
50PIP	10.00	34.50
51PIP	6.00	5.00
51P1TD	3.00	1.03
TR	50P1T OR 50G1T OR 50N1T OR 51P1T OR 51G1T OR 51N1T	50P1T OR 5 1P 1T

Front Panel

Compared Settings

Setting	52-GM AF (Current)	52-GM AL 7-26-21 (Other)
DP03	IN101, BREAKER, OPEN, CLOSED	IN101, BREAKER, CLOSED, OPEN
DP05	1, "RELAY NOT IN SERVICE"	0

Port F

Compared Settings

Setting	52-GM AF (Current)	52-GM AL 7-26-21 (Other)
T_OUT	5	0

SEL-751 Settings Report

Overview Information

File Name	52-GM AL 7-26-21
RDB	WJ-Hooper.rdb
Device	SEL-751
Setting Version Number	008
Part Number	751202CCCBC70851D10
Firmware ID	SEL-751-R300-V3-Z008004-D20210104
SELBoot Firmware ID	SLBT7XX-R600-V0-Z000000-D20200331

Settings

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Settings Legend

Visible Setting

Hidden Setting

Invalid Setting

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Setting	Description	Range	Value
PHROT	Phase Rotation	Select: ABC, ACB	ABC
FNOM	Rated Frequency (Hz)	Select: 50, 60	60
DATE_F	Date Format	Select: MDY, YMD, DMY	MDY
METHRES	Meter Cutoff Threshold	Select: Y, N	Y
FAULT	Fault Condition (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50G1P OR 50N1P OR 51P1P OR 51QP OR 50Q1P OR TRIP
EMP	Messenger Points Enable	Range = 1 to 32, N	N
TGR	Group Change Delay (seconds)	Range = 0 to 400	3
SS1	Select Settings Group1 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
SS2	Select Settings Group2 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SS3	Select Settings Group3 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SS4	Select Settings Group4 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
EPMU	Enable Synchronized Phasor Measurement	Select: Y, N	N
IRIGC	IRIG-B Control Bits Definition	Select: NONE, C37.118	NONE
UTC_OFF	Offset From UTC (hours, in 0.25 hour increments)	Range = -24.00 to 24.00	0.00
DST_BEGM	Month To Begin DST	Range = 1 to 12, OFF	OFF
52ABF	52A Interlock in BF Logic	Select: Y, N	N
50BFP	Breaker-Failure Current Detector Pickup (amps sec.)	Range = 0.10 to 10.00	0.10
BFD	Breaker Failure Delay (seconds)	Range = 0.00 to 2.00	0.50
ATD	Auxiliary Timer Delay (seconds)	Range = 0.00 to 2.00, OFF	OFF
BFI	Breaker Failure Initiate (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG TRIP
BFISID	Breaker Failure Initiate Seal-In Delay (seconds)	Range = 0.00 to 2.00, OFF	0.00
BFRTD	Breaker Retrip Delay (seconds)	Range = 0.00 to 2.00, OFF	0.05
BFTR	Breaker Failure Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
BFULTR	Breaker Failure Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
50PAFP	Arc-Flash Maximum Phase Overcurrent Pickup (amps sec.)	Range = 0.50 to 100.00, OFF	OFF

AOUTSLOT	Select Arc-Flash Output Slot	Select: 101_3, 401_4, 301_4	101_3
AFSENS1	Arc-Flash Input 1 Sensor Type	Select: NONE, POINT, FIBER	NONE
AFSENS2	Arc-Flash Input 2 Sensor Type	Select: NONE, POINT, FIBER	NONE
AFSENS3	Arc-Flash Input 3 Sensor Type	Select: NONE, POINT, FIBER	NONE
AFSENS4	Arc-Flash Input 4 Sensor Type	Select: NONE, POINT, FIBER	NONE
AO401AQ	AO401 Analog Quantity (Off, 1 analog quantity)	Range = Maximum of 1 Analog Elements	OFF
DCLOP	DC Battery LO Voltage Pickup (Vdc)	Range = 20.00 to 300.00, OFF	OFF
DCHIP	DC Battery HI Voltage Pickup (Vdc)	Range = 20.00 to 300.00, OFF	OFF
IN101D	IN101 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN102D	IN102 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN301D	IN301 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN302D	IN302 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN303D	IN303 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN304D	IN304 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN401D	IN401 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN402D	IN402 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN403D	IN403 Debounce (milliseconds)	Range = 0 to 65000, AC	10
EBMON	Enable Breaker Monitor	Select: Y, N	N
RSTTRGT	Reset Targets (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTENRGY	Reset Energy (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTMXMN	Reset Max/Min (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTDEM	Reset Demand (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTPKDEM	Reset Peak Demand (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
DSABLSET	Disable Settings (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
TIME_SRC	IRIG Time Source	Select: IRIG1, IRIG2	IRIG1
89EN2P	Enable Two Position Disconnects	Range = 1 to 8, N	8
89NM2P1	Disconnect 1 Name	Range = ASCII string with a maximum length of 16.	2P1
		Valid range = The legal	

89A2P1	Disconnect 1 N/O Contact (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	0
89B2P1	Disconnect 1 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P1
89A2P1D	Disconnect 1 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P1D	Disconnect 1 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P1D	Disconnect 1 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P1	Disconnect 1 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P1
89CB2P1	Disconnect 1 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P1
89CR2P1	Disconnect 1 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P1 OR 89CS2P1 OR 89AL2P1
89CT2P1	Disconnect 1 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P1
89RO2P1	Disconnect 1 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P1
89OB2P1	Disconnect 1 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P1
89OR2P1	Disconnect 1 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P1 OR 89OS2P1 OR 89AL2P1
89OT2P1	Disconnect 1 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P1
89NM2P2	Disconnect 2 Name	Range = ASCII string with a maximum length of 16.	2P2
89A2P2	Disconnect 2 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P2	Disconnect 2 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P2
89A2P2D	Disconnect 2 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P2D	Disconnect 2 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P2D	Disconnect 2 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P2	Disconnect 2 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P2
89CB2P2	Disconnect 2 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT	89AL2P2

		R_TRIG F_TRIG	
89CR2P2	Disconnect 2 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P2 OR 89CS2P2 OR 89AL2P2
89CT2P2	Disconnect 2 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P2
89RO2P2	Disconnect 2 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P2
89OB2P2	Disconnect 2 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P2
89OR2P2	Disconnect 2 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P2 OR 89OS2P2 OR 89AL2P2
89OT2P2	Disconnect 2 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P2
89NM2P3	Disconnect 3 Name	Range = ASCII string with a maximum length of 16.	2P3
89A2P3	Disconnect 3 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P3	Disconnect 3 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P3
89A2P3D	Disconnect 3 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P3D	Disconnect 3 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P3D	Disconnect 3 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P3	Disconnect 3 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P3
89CB2P3	Disconnect 3 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P3
89CR2P3	Disconnect 3 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P3 OR 89CS2P3 OR 89AL2P3
89CT2P3	Disconnect 3 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P3
89RO2P3	Disconnect 3 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P3
89OB2P3	Disconnect 3 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P3
89OR2P3	Disconnect 3 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P3 OR 89OS2P3 OR 89AL2P3

89OT2P3	Disconnect 3 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P3
89NM2P4	Disconnect 4 Name	Range = ASCII string with a maximum length of 16.	2P4
89A2P4	Disconnect 4 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P4	Disconnect 4 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P4
89A2P4D	Disconnect 4 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P4D	Disconnect 4 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P4D	Disconnect 4 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P4	Disconnect 4 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P4
89CB2P4	Disconnect 4 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P4
89CR2P4	Disconnect 4 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P4 OR 89CS2P4 OR 89AL2P4
89CT2P4	Disconnect 4 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P4
89RO2P4	Disconnect 4 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P4
89OB2P4	Disconnect 4 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P4
89OR2P4	Disconnect 4 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P4 OR 89OS2P4 OR 89AL2P4
89OT2P4	Disconnect 4 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P4
89NM2P5	Disconnect 5 Name	Range = ASCII string with a maximum length of 16.	2P5
89A2P5	Disconnect 5 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P5	Disconnect 5 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P5
89A2P5D	Disconnect 5 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P5D	Disconnect 5 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P5D	Disconnect 5 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00,	0.33

		OFF	
89RC2P5	Disconnect 5 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P5
89CB2P5	Disconnect 5 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P5
89CR2P5	Disconnect 5 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P5 OR 89CS2P5 OR 89AL2P5
89CT2P5	Disconnect 5 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P5
89RO2P5	Disconnect 5 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P5
89OB2P5	Disconnect 5 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P5
89OR2P5	Disconnect 5 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P5 OR 89OS2P5 OR 89AL2P5
89OT2P5	Disconnect 5 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P5
89NM2P6	Disconnect 6 Name	Range = ASCII string with a maximum length of 16.	2P6
89A2P6	Disconnect 6 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P6	Disconnect 6 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P6
89A2P6D	Disconnect 6 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P6D	Disconnect 6 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P6D	Disconnect 6 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P6	Disconnect 6 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P6
89CB2P6	Disconnect 6 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P6
89CR2P6	Disconnect 6 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P6 OR 89CS2P6 OR 89AL2P6
89CT2P6	Disconnect 6 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P6
89RO2P6	Disconnect 6 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P6

89OB2P6	Disconnect 6 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P6
89OR2P6	Disconnect 6 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P6 OR 89OS2P6 OR 89AL2P6
89OT2P6	Disconnect 6 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P6
89NM2P7	Disconnect 7 Name	Range = ASCII string with a maximum length of 16.	2P7
89A2P7	Disconnect 7 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P7	Disconnect 7 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P7
89A2P7D	Disconnect 7 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P7D	Disconnect 7 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P7D	Disconnect 7 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P7	Disconnect 7 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P7
89CB2P7	Disconnect 7 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P7
89CR2P7	Disconnect 7 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P7 OR 89CS2P7 OR 89AL2P7
89CT2P7	Disconnect 7 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P7
89RO2P7	Disconnect 7 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P7
89OB2P7	Disconnect 7 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P7
89OR2P7	Disconnect 7 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P7 OR 89OS2P7 OR 89AL2P7
89OT2P7	Disconnect 7 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P7
89NM2P8	Disconnect 8 Name	Range = ASCII string with a maximum length of 16.	2P8
89A2P8	Disconnect 8 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P8	Disconnect 8 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT	NOT 89A2P8

		R_TRIG F_TRIG	
89A2P8D	Disconnect 8 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P8D	Disconnect 8 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P8D	Disconnect 8 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P8	Disconnect 8 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P8
89CB2P8	Disconnect 8 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P8
89CR2P8	Disconnect 8 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P8 OR 89CS2P8 OR 89AL2P8
89CT2P8	Disconnect 8 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P8
89RO2P8	Disconnect 8 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P8
89OB2P8	Disconnect 8 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P8
89OR2P8	Disconnect 8 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P8 OR 89OS2P8 OR 89AL2P8
89OT2P8	Disconnect 8 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P8
89EN3P	Enable Three Position Disconnects	Range = 1 to 2, N	N
EN_LRC	Enable Local Remote Control	Select: Y, N	N
SC850BM	IEC 61850 Blocked Mode Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SC850TM	IEC 61850 Test Mode Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
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Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	SEL-751
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	52-GM RELAY
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	240
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	240
PTR	PT Ratio	Range = 1.00 to 10000.00	35.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	35.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	Y
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	34.50
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	5.00
50G1D	Residual Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50G1TC	Residual Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
		Range = 0.25 to 100.00,	

50G4P	Residual Overcurrent Trip Pickup (amps sec.)	OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51P1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	5.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	1.03
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	2.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1

51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	108.00
27PP1D	Phase-Phase Undervoltage Trip Delay (seconds)	Range = 0.00 to 120.00	0.00
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	12.00
27S1D	Channel VS Undervoltage Delay 1 (seconds)	Range = 0.00 to 120.00	0.00
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	132.00
59PP1D	Phase-Phase Overvoltage Trip Delay (seconds)	Range = 0.00 to 120.00	0.00
59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	Y
25VLO	Voltage Window - Low Threshold (volts)	Range = 0.00 to 300.00	108.00
25VHI	Voltage Window - High Threshold (volts)	Range = 0.00 to 300.00	132.00
25RCF	Voltage Ratio Correction Factor	Range = 0.50 to 2.00	1.00
25SF	Maximum Slip Frequency (Hz)	Range = 0.05 to 0.50	0.20
25ANG1	Maximum Angle 1 (degrees)	Range = 0 to 80	15
25ANG2	Maximum Angle 2 (degrees)	Range = 0 to 80	15
SYNCPH	Synchronism Check Phase (VAB,VBC,VCA or deg lag VAB)	Select: 0, 30, 60, 90, 120, 150, 180, 210, 240, 270, 300, 330, VAB, VBC, VCA	VAB
TCLOSD	Breaker Close Time for Angle Compensation (milliseconds)	Range = 1 to 1000, OFF	OFF
BSYNCH	Block Synchronism Check (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	52A

LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	59.00
81D1TD	Frequency1 Trip Delay (seconds)	Range = 0.00 to 400.00	0.00
81D1TC	Frequency1 Torque Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	61.00
81D2TD	Frequency2 Trip Delay (seconds)	Range = 0.00 to 400.00	0.00
81D2TC	Frequency2 Torque Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	1
81RVSUP	Voltage Supervision of Rate-of-Change of Frequency Elements (volts)	Range = 12.5 to 300.0, OFF	96.0
81RISUP	Current Supervision of Rate-of-Change of Frequency Elements (amps)	Range = 0.5 to 10.0, OFF	OFF
81R1TP	Rate-of-Change of Frequency Trip 1 Pickup (Hz/sec)	Range = 0.10 to 15.00, OFF	0.50
81R1TRND	Rate-of-Change of Frequency Trend 1	Select: INC, DEC, ABS	ABS
81R1TD	Rate-of-Change of Frequency Trip 1 Delay (seconds)	Range = 0.10 to 60.00	0.25
81R1DO	Rate-of-Change of Frequency Dropout 1 Delay (seconds)	Range = 0.00 to 60.00	0.00
81R1TC	Rate-of-Change of Frequency Torque Control 1 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00

EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	3P1
3PWR1P	Three Phase Power Element Pickup (VA)	Range = 1.0 to 6500.0, OFF	50.0
PWR1T	Power Element Type	Select: +WATTS, - WATTS, +VARS, -VARS	-WATTS
PWR1D	Power Element Time Delay (seconds)	Range = 0.0 to 240.0	0.0
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	OFF
TR	Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50P1T OR 51P1T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51P1P OR 51G1P OR 51N1P OR 50P1P OR 50G1P OR 50N1P)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	IN101
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
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Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	120
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	120
PTR	PT Ratio	Range = 1.00 to 10000.00	180.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	180.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	N
VNOM	Line Voltage, Nominal Line-to-Line (volts)	Range = 20.00 to 250.00, OFF	120.00
Z1MAG	Pos. Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	2.14
Z1ANG	Pos. Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	68.86
Z0MAG	Zero Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	6.38
Z0ANG	Zero Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	72.47
Z0SMAG	Zero Seq. Source Impedance Magnitude (ohms)	Range = 0.10 to 510.00	0.36
Z0SANG	Zero Seq. Source Impedance Angle (degrees)	Range = 0.00 to 90.00	84.61
LL	Line Length - unitless	Range = 0.10 to 999.00	4.84
EFLOC	Enable Fault Location	Select: Y, N	N
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P2D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P2TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P3D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P3TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
		Range = 0.25 to 100.00,	

50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	OFF	10.00
50P4D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P4TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G4P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51AC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51ATD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51ARS	EM Reset Delay	Select: Y, N	N
51ACT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51AMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51ATC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51BC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3

51BTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51BRS	EM Reset Delay	Select: Y, N	N
51BCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51BMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51BTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51CC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51CTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51CRS	EM Reset Delay	Select: Y, N	N
51CCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51CMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51CTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51PIP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51P2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P2TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51P2RS	EM Reset Delay	Select: Y, N	N
51P2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P2TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51QC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51QTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51QRS	EM Reset Delay	Select: Y, N	N
51QCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51QMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00

51QTC	Negative Seq. Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G2TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G2RS	EM Reset Delay	Select: Y, N	N
51G2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G2TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
ELOAD	Enable Load Encroachment	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	OFF
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59Q1P	Negative-Seq Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF

59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59Q2P	Negative-Seq Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	N
LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
E78VS	Enable Vector Shift	Select: Y, N	N
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	N
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	N
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	1.0
		Valid range = The legal	ORED50T OR ORED51T OR

TR	Trip (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	ORED81T OR REMTRIP OR OC OR SV04T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51PIP OR 51G1P OR 51N1P OR 52A)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T AND LT02 OR CC
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Group 2			
Top			

Group 3			
			Top
Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	120
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	120
PTR	PT Ratio	Range = 1.00 to 10000.00	180.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	180.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	N
VNOM	Line Voltage, Nominal Line-to-Line (volts)	Range = 20.00 to 250.00, OFF	120.00
Z1MAG	Pos. Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	2.14
Z1ANG	Pos. Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	68.86
Z0MAG	Zero Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	6.38
Z0ANG	Zero Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	72.47
Z0SMAG	Zero Seq. Source Impedance Magnitude (ohms)	Range = 0.10 to 510.00	0.36
Z0SANG	Zero Seq. Source Impedance Angle (degrees)	Range = 0.00 to 90.00	84.61
LL	Line Length - unitless	Range = 0.10 to 999.00	4.84
EFLOC	Enable Fault Location	Select: Y, N	N
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P2D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P2TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P3D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P3TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
		Range = 0.25 to 100.00,	

50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	OFF	10.00
50P4D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P4TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G4P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51AC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51ATD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51ARS	EM Reset Delay	Select: Y, N	N
51ACT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51AMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51ATC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51BC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3

51BTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51BRS	EM Reset Delay	Select: Y, N	N
51BCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51BMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51BTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51CC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51CTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51CRS	EM Reset Delay	Select: Y, N	N
51CCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51CMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51CTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51PIP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51P2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P2TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51P2RS	EM Reset Delay	Select: Y, N	N
51P2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P2TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51QC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51QTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51QRS	EM Reset Delay	Select: Y, N	N
51QCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51QMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00

51QTC	Negative Seq. Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G2TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G2RS	EM Reset Delay	Select: Y, N	N
51G2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G2TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
ELOAD	Enable Load Encroachment	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	OFF
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59Q1P	Negative-Seq Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF

59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59Q2P	Negative-Seq Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	N
LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
E78VS	Enable Vector Shift	Select: Y, N	N
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	N
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	N
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	1.0
		Valid range = The legal	ORED50T OR ORED51T OR

TR	Trip (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	ORED81T OR REMTRIP OR OC OR SV04T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51PIP OR 51G1P OR 51N1P OR 52A)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T AND LT02 OR CC
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Group 3			
Top			

Group 4			
			Top
Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	120
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	120
PTR	PT Ratio	Range = 1.00 to 10000.00	180.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	180.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	N
VNOM	Line Voltage, Nominal Line-to-Line (volts)	Range = 20.00 to 250.00, OFF	120.00
Z1MAG	Pos. Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	2.14
Z1ANG	Pos. Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	68.86
Z0MAG	Zero Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	6.38
Z0ANG	Zero Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	72.47
Z0SMAG	Zero Seq. Source Impedance Magnitude (ohms)	Range = 0.10 to 510.00	0.36
Z0SANG	Zero Seq. Source Impedance Angle (degrees)	Range = 0.00 to 90.00	84.61
LL	Line Length - unitless	Range = 0.10 to 999.00	4.84
EFLOC	Enable Fault Location	Select: Y, N	N
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P2D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P2TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P3D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P3TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
		Range = 0.25 to 100.00,	

50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	OFF	10.00
50P4D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P4TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G4P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51AC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51ATD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51ARS	EM Reset Delay	Select: Y, N	N
51ACT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51AMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51ATC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51BC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3

51BTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51BRS	EM Reset Delay	Select: Y, N	N
51BCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51BMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51BTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51CC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51CTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51CRS	EM Reset Delay	Select: Y, N	N
51CCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51CMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51CTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51PIP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51P2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P2TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51P2RS	EM Reset Delay	Select: Y, N	N
51P2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P2TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51QC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51QTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51QRS	EM Reset Delay	Select: Y, N	N
51QCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51QMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00

51QTC	Negative Seq. Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G2TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G2RS	EM Reset Delay	Select: Y, N	N
51G2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G2TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
ELOAD	Enable Load Encroachment	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	OFF
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59Q1P	Negative-Seq Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF

59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59Q2P	Negative-Seq Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	N
LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
E78VS	Enable Vector Shift	Select: Y, N	N
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	N
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	N
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	1.0
		Valid range = The legal	ORED50T OR ORED51T OR

TR	Trip (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	ORED81T OR REMTRIP OR OC OR SV04T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51PIP OR 51G1P OR 51N1P OR 52A)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T AND LT02 OR CC
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Group 4			
Top			

Logic 1			
Top			
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	10
ESV	SELogic Variables/Timers	Range = 1 to 32, N	10
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
SET01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET05	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST05	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET06	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST06	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET07	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST07	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA

SET08	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST08	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET09	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST09	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET10	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST10	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SV01PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV01DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV01	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50P1T OR 50G1T OR 50N1T OR 51P1T OR 51G1T OR 51N1T #DIRECT TRIP
SV02PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV02DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV02	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(27PP1 OR 59PP1) #LIVE LINE SIDE
SV03PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV03DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV03	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(NOT SV02 AND 27S1) #SYNC CHECK OK
SV04PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV04DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV04	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	HALARM OR SALARM #PROTECTION RELAY FAIL
SV05PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV05DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV05	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SV06PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV06DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV06	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0

SV07PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV07DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV07	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SV08PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	1.00
SV08DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV08	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0 #REVERSE POWER TRIP
SV09PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV09DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV09	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SV10PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV10DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV10	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT10IFS	OUT101 Fail-Safe	Select: Y, N	N
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	TRIP
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT103FS	OUT103 Fail-Safe	Select: Y, N	Y
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV04T #PROTECTIVE RELAY ALARM TO PLC
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T #SYNC CLOSE CIRCUIT
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T #SYNC CHECK TO PLC
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N

OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50P1T OR 50G1T OR 51P1T OR 51G1T OR SV08T #DIRECT TRIP TO PLC
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 1			
Top			

Logic 2			
Top			
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	4
ESV	SELogic Variables/Timers	Range = 1 to 32, N	5
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
SET01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND NOT LT02
RST02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND LT02
SET03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB03_PUL AND LT02 AND NOT 52A
RST03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV03T) AND LT03
SET04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB04_PUL AND 52A
RST04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV04T) AND LT04
SV01PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV01DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV01	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SV02PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	3.00
SV02DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV02	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB02
SV03PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV03DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV03	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT03

SV04PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV04DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV04	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT04
SV05PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.25
SV05DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.25
SV05	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB02 OR LT03 OR LT04) AND NOT SV05T
OUT101FS	OUT101 Fail-Safe	Select: Y, N	Y
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	HALARM OR SALARM OR AFALARM
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	CLOSE
OUT103FS	OUT103 Fail-Safe	Select: Y, N	N
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	TRIP
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0

OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 2			Top

Logic 3			
Top			
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	4
ESV	SELogic Variables/Timers	Range = 1 to 32, N	5
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
SET01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND NOT LT02
RST02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND LT02
SET03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB03_PUL AND LT02 AND NOT 52A
RST03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV03T) AND LT03
SET04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB04_PUL AND 52A
RST04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV04T) AND LT04
SV01PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV01DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV01	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SV02PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	3.00
SV02DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV02	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB02
SV03PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV03DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV03	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT03

SV04PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV04DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV04	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT04
SV05PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.25
SV05DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.25
SV05	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB02 OR LT03 OR LT04) AND NOT SV05T
OUT101FS	OUT101 Fail-Safe	Select: Y, N	Y
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	HALARM OR SALARM OR AFALARM
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	CLOSE
OUT103FS	OUT103 Fail-Safe	Select: Y, N	N
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	TRIP
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0

OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 3			Top

Logic 4			
			Top
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	4
ESV	SELogic Variables/Timers	Range = 1 to 32, N	5
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
SET01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND NOT LT02
RST02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND LT02
SET03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB03_PUL AND LT02 AND NOT 52A
RST03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV03T) AND LT03
SET04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB04_PUL AND 52A
RST04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV04T) AND LT04
SV01PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV01DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV01	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SV02PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	3.00
SV02DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV02	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB02
SV03PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV03DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV03	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT03

SV04PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV04DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV04	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT04
SV05PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.25
SV05DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.25
SV05	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB02 OR LT03 OR LT04) AND NOT SV05T
OUT101FS	OUT101 Fail-Safe	Select: Y, N	Y
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	HALARM OR SALARM OR AFALARM
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	CLOSE
OUT103FS	OUT103 Fail-Safe	Select: Y, N	N
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	TRIP
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0

OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 4			Top

Front Panel			
			Top
Setting	Description	Range	Value
EDP	Display Points Enable	Range = 1 to 32, N	5
ELB	Local Bits Enable	Range = 1 to 32, N	N
FP_TO	Front-Panel Timeout (mins)	Range = 1 to 30, OFF	15
FP_CONT	Front-Panel Contrast	Range = 1 to 16	10
FP_AUTO	Front-Panel Automessages	Select: OVERRIDE, ROTATING	OVERRIDE
RSTLED	Reset Trip-Latched LEDs On Close	Select: Y, N	N
LEDENAC	ENABLED LED Asserted Color	Select: R, G, A	G
LEDTRPC	TRIP LED Asserted Color	Select: R, G, A	R
MAXACC	Maximum Access Level	Select: 1, 2	2
T01LEDL	Trip Latch T_LED	Select: Y, N	Y
T01LEDC	Target T01_LED Asserted Color (R,G,A)	Select: R, G, A	R
T01_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	ORED50T #INSTANT OC
T02LEDL	Trip Latch T_LED	Select: Y, N	Y
T02LEDC	Target T02_LED Asserted Color (R,G,A)	Select: R, G, A	R
T02_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	51AT OR 51BT OR 51CT OR 51P1T OR 51P2T #PHASE OC
T03LEDL	Trip Latch T_LED	Select: Y, N	Y
T03LEDC	Target T03_LED Asserted Color (R,G,A)	Select: R, G, A	R
T03_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	51N1T OR 51G1T OR 51N2T OR 51G2T #GND/NEU OC
T04LEDL	Trip Latch T_LED	Select: Y, N	Y
T04LEDC	Target T04_LED Asserted Color (R,G,A)	Select: R, G, A	R
T04_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	51QT #GND/NEU OC
T05LEDL	Trip Latch T_LED	Select: Y, N	Y
T05LEDC	Target T05_LED Asserted Color (R,G,A)	Select: R, G, A	R
T05_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	81D1T OR 81D2T OR 81D3T OR 81D4T #OVER/UNDER FREQUENCY
T06LEDL	Trip Latch T_LED	Select: Y, N	N
T06LEDC	Target T06_LED Asserted Color (R,G,A)	Select: R, G, A	R
T06_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT	(BFT OR T06_LED) AND NOT TRGTR

		R_TRIG F_TRIG	#BREAKER FAIL
PB1ALEDC	PB1A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB1A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB1BLEDC	PB1B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB1B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB2ALEDC	PB2A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB2A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB2BLEDC	PB2B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB2B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB3ALEDC	PB3A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB3A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB3BLEDC	PB3B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB3B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB4ALEDC	PB4A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB4A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB4BLEDC	PB4B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB4B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
DP01	Display Point (60 characters)		TID, "{16}"
DP02	Display Point (60 characters)		0
DP03	Display Point (60 characters)		IN101, BREAKER, CLOSED, OPEN

DP04	Display Point (60 characters)		0
DP05	Display Point (60 characters)		0
Front Panel			
Top			

Report			
			Top
Setting	Description	Range	Value
ER	Event Report Trigger (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG 51P1P OR R_TRIG 51G1P OR R_TRIG 51N1P OR R_TRIG 50P1P OR R_TRIG 50G1P OR R_TRIG 50N1P
LER	Length of Event Report (cycles)	Select: 15, 64, 180	15
PRE	Prefault Length (cycles)	Range = 1 to 10	5
ESERDEL	Auto-Removal Enable	Select: Y, N	N
SER1	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	IN101, OUT301, 51P1T, 51G1T, 51N1T, 50P1P, 50G1T, 50N1T, SV08
SER2	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	52A
SER3	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	SV05T, SV02T
SER4	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	SALARM, HALARM
EALIAS	Enable ALIAS Settings	Range = 1 to 20, N	N
FMR1NAM	Fast Message Read Name1 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR1
FMR1	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
FMR2NAM	Fast Message Read Name2 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR2
FMR2	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
FMR3NAM	Fast Message Read Name3 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR3
FMR3	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
FMR4NAM	Fast Message Read Name4 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR4
FMR4	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
RA01TYPE	Remote Analog 01 type	Select: I, F, L	I
RA02TYPE	Remote Analog 02 type	Select: I, F, L	I
RA03TYPE	Remote Analog 03 type	Select: I, F, L	I
RA04TYPE	Remote Analog 04 type	Select: I, F, L	I
RA05TYPE	Remote Analog 05 type	Select: I, F, L	I

RA06TYPE	Remote Analog 06 type	Select: I, F, L	I
RA07TYPE	Remote Analog 07 type	Select: I, F, L	I
RA08TYPE	Remote Analog 08 type	Select: I, F, L	I
RA09TYPE	Remote Analog 09 type	Select: I, F, L	I
RA10TYPE	Remote Analog 10 type	Select: I, F, L	I
RA11TYPE	Remote Analog 11 type	Select: I, F, L	I
RA12TYPE	Remote Analog 12 type	Select: I, F, L	I
RA13TYPE	Remote Analog 13 type	Select: I, F, L	I
RA14TYPE	Remote Analog 14 type	Select: I, F, L	I
RA15TYPE	Remote Analog 15 type	Select: I, F, L	I
RA16TYPE	Remote Analog 16 type	Select: I, F, L	I
RA17TYPE	Remote Analog 17 type	Select: I, F, L	I
RA18TYPE	Remote Analog 18 type	Select: I, F, L	I
RA19TYPE	Remote Analog 19 type	Select: I, F, L	I
RA20TYPE	Remote Analog 20 type	Select: I, F, L	I
RA21TYPE	Remote Analog 21 type	Select: I, F, L	I
RA22TYPE	Remote Analog 22 type	Select: I, F, L	I
RA23TYPE	Remote Analog 23 type	Select: I, F, L	I
RA24TYPE	Remote Analog 24 type	Select: I, F, L	I
RA25TYPE	Remote Analog 25 type	Select: I, F, L	I
RA26TYPE	Remote Analog 26 type	Select: I, F, L	I
RA27TYPE	Remote Analog 27 type	Select: I, F, L	I
RA28TYPE	Remote Analog 28 type	Select: I, F, L	I
RA29TYPE	Remote Analog 29 type	Select: I, F, L	I
RA30TYPE	Remote Analog 30 type	Select: I, F, L	I
RA31TYPE	Remote Analog 31 type	Select: I, F, L	I
RA32TYPE	Remote Analog 32 type	Select: I, F, L	I
LDLIST	Load Profile List (17 Analog Quantities)	Range = Maximum of 17 Analog Elements	NA
LDAR	Load Profile Acquisition Rate (mins)	Select: 5, 10, 15, 30, 60	15

Report[Top](#)

Port F			
Top			
Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
PROTO	Protocol	Select: SEL, MOD, EVMSG, PMU	SEL
MAXACC	Maximum Access Level	Select: 1, 2, C	2
SPEED	Data Speed (bps)	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400	9600
BITS	Data Bits (bits)	Select: 7, 8	8
PARITY	Parity	Select: O, E, N	N
STOP	Stop Bits (bits)	Select: 1, 2	1
T_OUT	Port Timeout (mins)	Range = 0 to 30	0
RTSCTS	Hardware Handshaking	Select: Y, N	N
LANG	Language	Select: ENGLISH, SPANISH	ENGLISH
AUTO	Send Auto Messages to Port	Select: Y, N	N
Port F			
Top			

Port 1			
			Top
Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
EETHFWU	Enable Ethernet Firmware Upgrade	Select: Y, N	N
IPADDR	Device IP Address [zzz.yyy.xxx.www]	Range = ASCII string with a maximum length of 15.	192.168.0.153
SUBNETM	Subnet Mask [zzz.yyy.xxx.www]	Range = ASCII string with a maximum length of 15.	255.255.255.0
DEFRTR	Default Router Gateway [zzz.yyy.xxx.www]	Range = ASCII string with a maximum length of 15.	192.168.0.1
ETCPKA	Enable TCP Keep-Alive	Select: Y, N	Y
KAIDLE	TCP Keep-Alive Idle Range (seconds)	Range = 1 to 20	10
KAINTV	TCP Keep-Alive Interval Range (seconds)	Range = 1 to 20	1
KACNT	TCP Keep-Alive Count Range	Range = 1 to 20	6
ETELNET	Enable Telnet	Select: Y, N	Y
MAXACC	Maximum Access Level	Select: 1, 2, C	2
LANG	Language	Select: ENGLISH, SPANISH	ENGLISH
TPORT	Telnet Port	Range = 1025 to 65534, 23	23
TCBAN	Telnet Connect Banner (254 ASCII printable characters)	Range = ASCII string with a maximum length of 254.	TERMINAL SERVER
TIDLE	Telnet Port Timeout (mins)	Range = 1 to 30	15
FASTOP	Fast Operate	Select: Y, N	N
EFTPSERV	Enable FTP	Select: Y, N	Y
FTPACC	FTP Maximum Access Level	Select: 1, 2, C	2
FTPUSER	FTP User Name (20 characters)	Range = ASCII string with a maximum length of 20.	FTPUSER
FTPCBAN	FTP Connect Banner (254 ASCII printable characters)	Range = ASCII string with a maximum length of 254.	FTP SERVER
FTPIDLE	FTP Idle Time (mins)	Range = 5 to 255	5
E61850	Enable IEC 61850 Protocol	Select: Y, N	Y
EGSE	Enable IEC 61850 GOOSE	Select: Y, N	Y
EMMSFS	Enable MMS File Services	Select: Y, N	Y
E850MBC	Enable 61850 Mode/Behavior Control	Select: Y, N	N
EOFFMTX	Enable GOOSE Tx in Off Mode	Select: Y, N	N
EMOD	Enable Modbus Sessions	Select: 0-2	0
EHTTP	Enable HTTP Server	Select: Y, N	Y
HTTPACC	HTTP Maximum Access Level	Select: 1, 2	2
HTTPPORT	HTTP Server TCP/IP Port Number	Range = 1 to 65534	80
HTTPBAN	HTTP Connect Banner (254 ASCII printable characters)	Range = ASCII string with a maximum length of 254.	THIS SYSTEM IS FOR THE USE OF AUTHORIZED PERSONNEL

			ONLY.
HTTPIDLE	HTTP Web Server Timeout (minutes)	Range = 1 to 60	10
ESNTP	Enable SNTP Client	Select: OFF, UNICAST, MANYCAST, BROADCAST	OFF
EPTP	Enable PTP	Select: Y, N	N
Port 1			
			Top

Port 2				Top
Setting	Description	Range	Value	
Port 2				Top

Port 3			
Top			
Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
PROTO	Protocol	Select: SEL, MOD, EVMSG, PMU, MBA, MBB, MB8A, MB8B, MBTA, MBTB	SEL
MAXACC	Maximum Access Level	Select: 1, 2, C	2
SPEED	Data Speed (bps)	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400	9600
BITS	Data Bits (bits)	Select: 7, 8	8
PARITY	Parity	Select: O, E, N	N
STOP	Stop Bits (bits)	Select: 1, 2	1
T_OUT	Port Timeout (mins)	Range = 0 to 30	5
RTSCTS	Hardware Handshaking	Select: Y, N	N
LANG	Language	Select: ENGLISH, SPANISH	ENGLISH
AUTO	Send Auto Messages to Port	Select: Y, N	N
FASTOP	Fast Operate	Select: Y, N	N
Port 3			
Top			

Modbus User Map			
			Top
Setting	Description	Range	Value
MOD_001	USER REG#001 (8 characters)	Range = Maximum of 1 Digital Elements	IA_MAG
MOD_002	USER REG#002 (8 characters)	Range = Maximum of 1 Digital Elements	IB_MAG
MOD_003	USER REG#003 (8 characters)	Range = Maximum of 1 Digital Elements	IC_MAG
MOD_004	USER REG#004 (8 characters)	Range = Maximum of 1 Digital Elements	IN_MAG
MOD_005	USER REG#005 (8 characters)	Range = Maximum of 1 Digital Elements	IG_MAG
MOD_006	USER REG#006 (8 characters)	Range = Maximum of 1 Digital Elements	IAV
MOD_007	USER REG#007 (8 characters)	Range = Maximum of 1 Digital Elements	3I2
MOD_008	USER REG#008 (8 characters)	Range = Maximum of 1 Digital Elements	UBI
MOD_009	USER REG#009 (8 characters)	Range = Maximum of 1 Digital Elements	VAVE
MOD_010	USER REG#010 (8 characters)	Range = Maximum of 1 Digital Elements	3V2
MOD_011	USER REG#011 (8 characters)	Range = Maximum of 1 Digital Elements	UBV
MOD_012	USER REG#012 (8 characters)	Range = Maximum of 1 Digital Elements	P
MOD_013	USER REG#013 (8 characters)	Range = Maximum of 1 Digital Elements	Q
MOD_014	USER REG#014 (8 characters)	Range = Maximum of 1 Digital Elements	S
MOD_015	USER REG#015 (8 characters)	Range = Maximum of 1 Digital Elements	PF
MOD_016	USER REG#016 (8 characters)	Range = Maximum of 1 Digital Elements	FREQ
MOD_017	USER REG#017 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3PIH
MOD_018	USER REG#018 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3PIL
MOD_019	USER REG#019 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3POH
MOD_020	USER REG#020 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3POL
MOD_021	USER REG#021 (8 characters)	Range = Maximum of 1 Digital Elements	MVRH3PIH
MOD_022	USER REG#022 (8 characters)	Range = Maximum of 1 Digital Elements	MVRH3PIL
		Range = Maximum of 1	

MOD_023	USER REG#023 (8 characters)	Digital Elements	MVRH3POH
MOD_024	USER REG#024 (8 characters)	Range = Maximum of 1 Digital Elements	MVRH3POL
MOD_025	USER REG#025 (8 characters)	Range = Maximum of 1 Digital Elements	MVAH3PH
MOD_026	USER REG#026 (8 characters)	Range = Maximum of 1 Digital Elements	MVAH3PL
MOD_027	USER REG#027 (8 characters)	Range = Maximum of 1 Digital Elements	RTDWDGMX
MOD_028	USER REG#028 (8 characters)	Range = Maximum of 1 Digital Elements	RTDBRGMX
MOD_029	USER REG#029 (8 characters)	Range = Maximum of 1 Digital Elements	RTDAMB
MOD_030	USER REG#030 (8 characters)	Range = Maximum of 1 Digital Elements	RTDOTHMX
MOD_031	USER REG#031 (8 characters)	Range = Maximum of 1 Digital Elements	IARMS
MOD_032	USER REG#032 (8 characters)	Range = Maximum of 1 Digital Elements	IBRMS
MOD_033	USER REG#033 (8 characters)	Range = Maximum of 1 Digital Elements	ICRMS
MOD_034	USER REG#034 (8 characters)	Range = Maximum of 1 Digital Elements	INRMS
MOD_035	USER REG#035 (8 characters)	Range = Maximum of 1 Digital Elements	IAMX
MOD_036	USER REG#036 (8 characters)	Range = Maximum of 1 Digital Elements	IAMN
MOD_037	USER REG#037 (8 characters)	Range = Maximum of 1 Digital Elements	IBMX
MOD_038	USER REG#038 (8 characters)	Range = Maximum of 1 Digital Elements	IBMN
MOD_039	USER REG#039 (8 characters)	Range = Maximum of 1 Digital Elements	ICMX
MOD_040	USER REG#040 (8 characters)	Range = Maximum of 1 Digital Elements	ICMN
MOD_041	USER REG#041 (8 characters)	Range = Maximum of 1 Digital Elements	INMX
MOD_042	USER REG#042 (8 characters)	Range = Maximum of 1 Digital Elements	INMN
MOD_043	USER REG#043 (8 characters)	Range = Maximum of 1 Digital Elements	IGMX
MOD_044	USER REG#044 (8 characters)	Range = Maximum of 1 Digital Elements	IGMN
MOD_045	USER REG#045 (8 characters)	Range = Maximum of 1 Digital Elements	KW3PMX
MOD_046	USER REG#046 (8 characters)	Range = Maximum of 1 Digital Elements	KW3PMN
MOD_047	USER REG#047 (8 characters)	Range = Maximum of 1 Digital Elements	KVAR3PMX
MOD_048	USER REG#048 (8 characters)	Range = Maximum of 1	KVAR3PMN

		Digital Elements	
MOD_049	USER REG#049 (8 characters)	Range = Maximum of 1 Digital Elements	KVA3PMX
MOD_050	USER REG#050 (8 characters)	Range = Maximum of 1 Digital Elements	KVA3PMN
MOD_051	USER REG#051 (8 characters)	Range = Maximum of 1 Digital Elements	FREQMX
MOD_052	USER REG#052 (8 characters)	Range = Maximum of 1 Digital Elements	FREQMN
MOD_053	USER REG#053 (8 characters)	Range = Maximum of 1 Digital Elements	TRIP_LO
MOD_054	USER REG#054 (8 characters)	Range = Maximum of 1 Digital Elements	TRIP_HI
MOD_055	USER REG#055 (8 characters)	Range = Maximum of 1 Digital Elements	WARN_LO
MOD_056	USER REG#056 (8 characters)	Range = Maximum of 1 Digital Elements	WARN_HI
MOD_057	USER REG#057 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_058	USER REG#058 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_059	USER REG#059 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_060	USER REG#060 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_061	USER REG#061 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_062	USER REG#062 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_063	USER REG#063 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_064	USER REG#064 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_065	USER REG#065 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_066	USER REG#066 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_067	USER REG#067 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_068	USER REG#068 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_069	USER REG#069 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_070	USER REG#070 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_071	USER REG#071 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_072	USER REG#072 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_073	USER REG#073 (8 characters)	Range = Maximum of 1	NA

		Digital Elements	
MOD_074	USER REG#074 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_075	USER REG#075 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_076	USER REG#076 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_077	USER REG#077 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_078	USER REG#078 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_079	USER REG#079 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_080	USER REG#080 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_081	USER REG#081 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_082	USER REG#082 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_083	USER REG#083 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_084	USER REG#084 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_085	USER REG#085 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_086	USER REG#086 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_087	USER REG#087 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_088	USER REG#088 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_089	USER REG#089 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_090	USER REG#090 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_091	USER REG#091 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_092	USER REG#092 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_093	USER REG#093 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_094	USER REG#094 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_095	USER REG#095 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_096	USER REG#096 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_097	USER REG#097 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_098	USER REG#098 (8 characters)	Range = Maximum of 1	NA

		Digital Elements	
MOD_099	USER REG#099 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_100	USER REG#100 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_101	USER REG#101 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_102	USER REG#102 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_103	USER REG#103 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_104	USER REG#104 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_105	USER REG#105 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_106	USER REG#106 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_107	USER REG#107 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_108	USER REG#108 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_109	USER REG#109 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_110	USER REG#110 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_111	USER REG#111 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_112	USER REG#112 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_113	USER REG#113 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_114	USER REG#114 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_115	USER REG#115 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_116	USER REG#116 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_117	USER REG#117 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_118	USER REG#118 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_119	USER REG#119 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_120	USER REG#120 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_121	USER REG#121 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_122	USER REG#122 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_123	USER REG#123 (8 characters)	Range = Maximum of 1	NA

		Digital Elements	
MOD_124	USER REG#124 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_125	USER REG#125 (8 characters)	Range = Maximum of 1 Digital Elements	NA

Modbus User Map

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SEL-751 Settings Report

Group	Setting	Range	Default Value	Value	Delta	Description	Comments	Hidden
1	50P1P	Range = 0.25 to 100.00, OFF	10.00	69.00	True	Maximum Phase Overcurrent Trip Pickup (amps sec.)		False
1	50P1D	Range = 0.00 to 400.00, OFF	0.00	0.00	False	Maximum Phase Overcurrent Trip Delay (seconds)		False
1	50G1P	Range = 0.25 to 100.00, OFF	OFF	20.00	True	Residual Overcurrent Trip Pickup (amps sec.)		False
1	50G1D	Range = 0.00 to 400.00, OFF	0.50	0.00	True	Residual Overcurrent Trip Delay (seconds)		False
1	51P1P	Range = 0.25 to 24.00, OFF	6.00	3.00	True	Time Overcurrent Trip Pickup (amps sec.)		False
1	51P1C	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3	U4	True	TOC Curve Selection		False
1	51P1TD	Range = 0.50 to 15.00	3.00	3.00	False	TOC Time Dial		False
1	51G1P	Range = 0.25 to 24.00, OFF	0.50	1.25	True	Time Overcurrent Trip Pickup (amps sec.)		False
1	51G1C	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3	U2	True	TOC Curve Selection		False
1	51G1TD	Range = 0.50 to 15.00	1.50	2.17	True	TOC Time Dial		False
1	TR	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	ORED50T OR ORED51T OR ORED81T OR REMTRIP OR OC OR SV04T	50P1T OR 50G1T OR 51P1T OR 51G1T	True	Trip (SELogic)		False

Ⓜ (Group = 1) and ((Setting = 50P1D) or (Setting = 50P1P) or (Setting = 50G1D) or (Setting = 50G1P) or (Setting = 51G1C) or (Setting = 51G1P) or (Setting = 51G1TD) or (Setting = 51P1C) or (Setting = 51P1P) o...

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Report Date: July 29, 2021 08:11:02 am

Database: C:\Users\Kevin.myrick\OneDrive - Vertiv Co\Documents\Jobs\WJ Hooper WPP\WJ-Hooper.rdb

Device Information (Current)

Settings: 52-UM AF (Current)

Device: 751 008

Part#: 751202CCCBC70851D10

FID: SEL-751-R300-V3-Z008004-D20210104

BFID: SLBT7XX-R600-V0-Z000000-D20200331

Device Information (Other)

Settings: 52-UM AL 7-26-21 (Other)

Device: 751 008

Part#: 751202CCCBC70851D10

FID: SEL-751-R300-V3-Z008004-D20210104

BFID: SLBT-751-RXXX-V0-Z007003-DXXXXXXXXX

Hidden (H): 0/6383

Changed: 9/11

Unchanged: 0/7562

Missing: 0/0

Invalid (I): 0/0

Designer (D): 0/0

Group 1

Compared Settings

Setting	52-UM AF (Current)	52-UM AL 7-26-21 (Other)
50P1P	10.00	69.00
50G1P	5.00	20.00
51P1P	6.00	3.00
51P1C	U3	U4
51G1P	2.50	1.25
51G1C	U3	U2
51G1TD	1.50	2.17
TR	50P1T OR 50G1T OR 50N1T OR 51P1T OR 51G1T OR 51N1T OR SV08T	50P1T OR 50G1T OR 51P1T OR 51G1T

Front Panel

Compared Settings

Setting	52-UM AF (Current)	52-UM AL 7-26-21 (Other)
DP04	1, "RELAY NOT IN SERVICE"	0

SEL-751 Settings Report

Overview Information

File Name	52-UM AL 7-26-21
RDB	WJ-Hooper.rdb
Device	SEL-751
Setting Version Number	008
Part Number	751202CCCBC70851D10
Firmware ID	SEL-751-R300-V3-Z008004-D20210104
SELBoot Firmware ID	SLBT7XX-R600-V0-Z000000-D20200331

Settings

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Settings Legend

Visible Setting

Hidden Setting

Invalid Setting

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Setting	Description	Range	Value
PHROT	Phase Rotation	Select: ABC, ACB	ABC
FNOM	Rated Frequency (Hz)	Select: 50, 60	60
DATE_F	Date Format	Select: MDY, YMD, DMY	MDY
METHRES	Meter Cutoff Threshold	Select: Y, N	Y
FAULT	Fault Condition (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50G1P OR 50N1P OR 51P1P OR 51QP OR 50Q1P OR TRIP
EMP	Messenger Points Enable	Range = 1 to 32, N	N
TGR	Group Change Delay (seconds)	Range = 0 to 400	3
SS1	Select Settings Group1 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
SS2	Select Settings Group2 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SS3	Select Settings Group3 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SS4	Select Settings Group4 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
EPMU	Enable Synchronized Phasor Measurement	Select: Y, N	N
IRIGC	IRIG-B Control Bits Definition	Select: NONE, C37.118	NONE
UTC_OFF	Offset From UTC (hours, in 0.25 hour increments)	Range = -24.00 to 24.00	0.00
DST_BEGM	Month To Begin DST	Range = 1 to 12, OFF	OFF
52ABF	52A Interlock in BF Logic	Select: Y, N	N
50BFP	Breaker-Failure Current Detector Pickup (amps sec.)	Range = 0.10 to 10.00	0.10
BFD	Breaker Failure Delay (seconds)	Range = 0.00 to 2.00	0.50
ATD	Auxiliary Timer Delay (seconds)	Range = 0.00 to 2.00, OFF	OFF
BFI	Breaker Failure Initiate (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG TRIP
BFISID	Breaker Failure Initiate Seal-In Delay (seconds)	Range = 0.00 to 2.00, OFF	0.00
BFRTD	Breaker Retrip Delay (seconds)	Range = 0.00 to 2.00, OFF	0.05
BFTR	Breaker Failure Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
BFULTR	Breaker Failure Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
50PAFP	Arc-Flash Maximum Phase Overcurrent Pickup (amps sec.)	Range = 0.50 to 100.00, OFF	OFF

AOUTSLOT	Select Arc-Flash Output Slot	Select: 101_3, 401_4, 301_4	101_3
AFSENS1	Arc-Flash Input 1 Sensor Type	Select: NONE, POINT, FIBER	NONE
AFSENS2	Arc-Flash Input 2 Sensor Type	Select: NONE, POINT, FIBER	NONE
AFSENS3	Arc-Flash Input 3 Sensor Type	Select: NONE, POINT, FIBER	NONE
AFSENS4	Arc-Flash Input 4 Sensor Type	Select: NONE, POINT, FIBER	NONE
AO401AQ	AO401 Analog Quantity (Off, 1 analog quantity)	Range = Maximum of 1 Analog Elements	OFF
DCLOP	DC Battery LO Voltage Pickup (Vdc)	Range = 20.00 to 300.00, OFF	OFF
DCHIP	DC Battery HI Voltage Pickup (Vdc)	Range = 20.00 to 300.00, OFF	OFF
IN101D	IN101 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN102D	IN102 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN301D	IN301 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN302D	IN302 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN303D	IN303 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN304D	IN304 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN401D	IN401 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN402D	IN402 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN403D	IN403 Debounce (milliseconds)	Range = 0 to 65000, AC	10
EBMON	Enable Breaker Monitor	Select: Y, N	N
RSTTRGT	Reset Targets (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTENRGY	Reset Energy (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTMXMN	Reset Max/Min (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTDEM	Reset Demand (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTPKDEM	Reset Peak Demand (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
DSABLSET	Disable Settings (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
TIME_SRC	IRIG Time Source	Select: IRIG1, IRIG2	IRIG1
89EN2P	Enable Two Position Disconnects	Range = 1 to 8, N	8
89NM2P1	Disconnect 1 Name	Range = ASCII string with a maximum length of 16.	2P1
		Valid range = The legal	

89A2P1	Disconnect 1 N/O Contact (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	0
89B2P1	Disconnect 1 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P1
89A2P1D	Disconnect 1 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P1D	Disconnect 1 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P1D	Disconnect 1 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P1	Disconnect 1 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P1
89CB2P1	Disconnect 1 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P1
89CR2P1	Disconnect 1 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P1 OR 89CS2P1 OR 89AL2P1
89CT2P1	Disconnect 1 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P1
89RO2P1	Disconnect 1 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P1
89OB2P1	Disconnect 1 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P1
89OR2P1	Disconnect 1 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P1 OR 89OS2P1 OR 89AL2P1
89OT2P1	Disconnect 1 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P1
89NM2P2	Disconnect 2 Name	Range = ASCII string with a maximum length of 16.	2P2
89A2P2	Disconnect 2 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P2	Disconnect 2 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P2
89A2P2D	Disconnect 2 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P2D	Disconnect 2 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P2D	Disconnect 2 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P2	Disconnect 2 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P2
89CB2P2	Disconnect 2 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT	89AL2P2

		R_TRIG F_TRIG	
89CR2P2	Disconnect 2 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P2 OR 89CS2P2 OR 89AL2P2
89CT2P2	Disconnect 2 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P2
89RO2P2	Disconnect 2 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P2
89OB2P2	Disconnect 2 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P2
89OR2P2	Disconnect 2 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P2 OR 89OS2P2 OR 89AL2P2
89OT2P2	Disconnect 2 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P2
89NM2P3	Disconnect 3 Name	Range = ASCII string with a maximum length of 16.	2P3
89A2P3	Disconnect 3 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P3	Disconnect 3 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P3
89A2P3D	Disconnect 3 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P3D	Disconnect 3 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P3D	Disconnect 3 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P3	Disconnect 3 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P3
89CB2P3	Disconnect 3 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P3
89CR2P3	Disconnect 3 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P3 OR 89CS2P3 OR 89AL2P3
89CT2P3	Disconnect 3 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P3
89RO2P3	Disconnect 3 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P3
89OB2P3	Disconnect 3 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P3
89OR2P3	Disconnect 3 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P3 OR 89OS2P3 OR 89AL2P3

89OT2P3	Disconnect 3 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P3
89NM2P4	Disconnect 4 Name	Range = ASCII string with a maximum length of 16.	2P4
89A2P4	Disconnect 4 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P4	Disconnect 4 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P4
89A2P4D	Disconnect 4 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P4D	Disconnect 4 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P4D	Disconnect 4 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P4	Disconnect 4 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P4
89CB2P4	Disconnect 4 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P4
89CR2P4	Disconnect 4 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P4 OR 89CS2P4 OR 89AL2P4
89CT2P4	Disconnect 4 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P4
89RO2P4	Disconnect 4 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P4
89OB2P4	Disconnect 4 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P4
89OR2P4	Disconnect 4 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P4 OR 89OS2P4 OR 89AL2P4
89OT2P4	Disconnect 4 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P4
89NM2P5	Disconnect 5 Name	Range = ASCII string with a maximum length of 16.	2P5
89A2P5	Disconnect 5 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P5	Disconnect 5 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P5
89A2P5D	Disconnect 5 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P5D	Disconnect 5 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P5D	Disconnect 5 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00,	0.33

		OFF	
89RC2P5	Disconnect 5 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P5
89CB2P5	Disconnect 5 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P5
89CR2P5	Disconnect 5 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P5 OR 89CS2P5 OR 89AL2P5
89CT2P5	Disconnect 5 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P5
89RO2P5	Disconnect 5 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P5
89OB2P5	Disconnect 5 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P5
89OR2P5	Disconnect 5 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P5 OR 89OS2P5 OR 89AL2P5
89OT2P5	Disconnect 5 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P5
89NM2P6	Disconnect 6 Name	Range = ASCII string with a maximum length of 16.	2P6
89A2P6	Disconnect 6 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P6	Disconnect 6 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P6
89A2P6D	Disconnect 6 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P6D	Disconnect 6 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P6D	Disconnect 6 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P6	Disconnect 6 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P6
89CB2P6	Disconnect 6 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P6
89CR2P6	Disconnect 6 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P6 OR 89CS2P6 OR 89AL2P6
89CT2P6	Disconnect 6 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P6
89RO2P6	Disconnect 6 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P6

89OB2P6	Disconnect 6 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P6
89OR2P6	Disconnect 6 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P6 OR 89OS2P6 OR 89AL2P6
89OT2P6	Disconnect 6 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P6
89NM2P7	Disconnect 7 Name	Range = ASCII string with a maximum length of 16.	2P7
89A2P7	Disconnect 7 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P7	Disconnect 7 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P7
89A2P7D	Disconnect 7 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P7D	Disconnect 7 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P7D	Disconnect 7 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P7	Disconnect 7 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P7
89CB2P7	Disconnect 7 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P7
89CR2P7	Disconnect 7 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P7 OR 89CS2P7 OR 89AL2P7
89CT2P7	Disconnect 7 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P7
89RO2P7	Disconnect 7 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P7
89OB2P7	Disconnect 7 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P7
89OR2P7	Disconnect 7 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P7 OR 89OS2P7 OR 89AL2P7
89OT2P7	Disconnect 7 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P7
89NM2P8	Disconnect 8 Name	Range = ASCII string with a maximum length of 16.	2P8
89A2P8	Disconnect 8 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P8	Disconnect 8 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT	NOT 89A2P8

		R_TRIG F_TRIG	
89A2P8D	Disconnect 8 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P8D	Disconnect 8 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P8D	Disconnect 8 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P8	Disconnect 8 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P8
89CB2P8	Disconnect 8 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P8
89CR2P8	Disconnect 8 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P8 OR 89CS2P8 OR 89AL2P8
89CT2P8	Disconnect 8 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P8
89RO2P8	Disconnect 8 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P8
89OB2P8	Disconnect 8 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P8
89OR2P8	Disconnect 8 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P8 OR 89OS2P8 OR 89AL2P8
89OT2P8	Disconnect 8 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P8
89EN3P	Enable Three Position Disconnects	Range = 1 to 2, N	N
EN_LRC	Enable Local Remote Control	Select: Y, N	N
SC850BM	IEC 61850 Blocked Mode Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SC850TM	IEC 61850 Test Mode Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
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Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	SEL-751
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	52-UM RELAY
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	400
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	60
PTR	PT Ratio	Range = 1.00 to 10000.00	35.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	35.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	Y
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	69.00
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	20.00
50G1D	Residual Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50G1TC	Residual Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
		Range = 0.25 to 100.00,	

50G4P	Residual Overcurrent Trip Pickup (amps sec.)	OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51P1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	3.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U4
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	1.25
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U2
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	2.17
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1

51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	108.00
27PP1D	Phase-Phase Undervoltage Trip Delay (seconds)	Range = 0.00 to 120.00	0.00
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	12.00
27S1D	Channel VS Undervoltage Delay 1 (seconds)	Range = 0.00 to 120.00	0.00
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	132.00
59PP1D	Phase-Phase Overvoltage Trip Delay (seconds)	Range = 0.00 to 120.00	0.00
59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	Y
25VLO	Voltage Window - Low Threshold (volts)	Range = 0.00 to 300.00	108.00
25VHI	Voltage Window - High Threshold (volts)	Range = 0.00 to 300.00	132.00
25RCF	Voltage Ratio Correction Factor	Range = 0.50 to 2.00	1.00
25SF	Maximum Slip Frequency (Hz)	Range = 0.05 to 0.50	0.20
25ANG1	Maximum Angle 1 (degrees)	Range = 0 to 80	15
25ANG2	Maximum Angle 2 (degrees)	Range = 0 to 80	15
SYNCPH	Synchronism Check Phase (VAB,VBC,VCA or deg lag VAB)	Select: 0, 30, 60, 90, 120, 150, 180, 210, 240, 270, 300, 330, VAB, VBC, VCA	VAB
TCLOSD	Breaker Close Time for Angle Compensation (milliseconds)	Range = 1 to 1000, OFF	OFF
BSYNCH	Block Synchronism Check (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	52A

LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	59.00
81D1TD	Frequency1 Trip Delay (seconds)	Range = 0.00 to 400.00	0.00
81D1TC	Frequency1 Torque Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	61.00
81D2TD	Frequency2 Trip Delay (seconds)	Range = 0.00 to 400.00	0.00
81D2TC	Frequency2 Torque Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	1
81RVSUP	Voltage Supervision of Rate-of-Change of Frequency Elements (volts)	Range = 12.5 to 300.0, OFF	56.0
81RISUP	Current Supervision of Rate-of-Change of Frequency Elements (amps)	Range = 0.5 to 10.0, OFF	OFF
81R1TP	Rate-of-Change of Frequency Trip 1 Pickup (Hz/sec)	Range = 0.10 to 15.00, OFF	0.50
81R1TRND	Rate-of-Change of Frequency Trend 1	Select: INC, DEC, ABS	ABS
81R1TD	Rate-of-Change of Frequency Trip 1 Delay (seconds)	Range = 0.10 to 60.00	0.25
81R1DO	Rate-of-Change of Frequency Dropout 1 Delay (seconds)	Range = 0.00 to 60.00	0.00
81R1TC	Rate-of-Change of Frequency Torque Control 1 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00

EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	3P1
3PWR1P	Three Phase Power Element Pickup (VA)	Range = 1.0 to 6500.0, OFF	50.0
PWR1T	Power Element Type	Select: +WATTS, - WATTS, +VARS, -VARS	-WATTS
PWR1D	Power Element Time Delay (seconds)	Range = 0.0 to 240.0	0.0
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	OFF
TR	Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50P1T OR 50G1T OR 51P1T OR 51G1T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51P1P OR 51G1P OR 51N1P OR 50P1P OR 50G1P OR 50N1P)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	IN101
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
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Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	120
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	120
PTR	PT Ratio	Range = 1.00 to 10000.00	180.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	180.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	N
VNOM	Line Voltage, Nominal Line-to-Line (volts)	Range = 20.00 to 250.00, OFF	120.00
Z1MAG	Pos. Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	2.14
Z1ANG	Pos. Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	68.86
Z0MAG	Zero Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	6.38
Z0ANG	Zero Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	72.47
Z0SMAG	Zero Seq. Source Impedance Magnitude (ohms)	Range = 0.10 to 510.00	0.36
Z0SANG	Zero Seq. Source Impedance Angle (degrees)	Range = 0.00 to 90.00	84.61
LL	Line Length - unitless	Range = 0.10 to 999.00	4.84
EFLOC	Enable Fault Location	Select: Y, N	N
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P2D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P2TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P3D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P3TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
		Range = 0.25 to 100.00,	

50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	OFF	10.00
50P4D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P4TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G4P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51AC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51ATD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51ARS	EM Reset Delay	Select: Y, N	N
51ACT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51AMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51ATC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51BC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3

51BTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51BRS	EM Reset Delay	Select: Y, N	N
51BCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51BMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51BTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51CC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51CTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51CRS	EM Reset Delay	Select: Y, N	N
51CCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51CMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51CTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51PIP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51P2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P2TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51P2RS	EM Reset Delay	Select: Y, N	N
51P2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P2TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51QC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51QTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51QRS	EM Reset Delay	Select: Y, N	N
51QCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51QMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00

51QTC	Negative Seq. Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G2TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G2RS	EM Reset Delay	Select: Y, N	N
51G2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G2TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
ELOAD	Enable Load Encroachment	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	OFF
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59Q1P	Negative-Seq Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF

59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59Q2P	Negative-Seq Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	N
LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
E78VS	Enable Vector Shift	Select: Y, N	N
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	N
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	N
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	1.0
		Valid range = The legal	ORED50T OR ORED51T OR

TR	Trip (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	ORED81T OR REMTRIP OR OC OR SV04T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51PIP OR 51G1P OR 51N1P OR 52A)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T AND LT02 OR CC
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Group 2			
Top			

Group 3			
			Top
Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	120
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	120
PTR	PT Ratio	Range = 1.00 to 10000.00	180.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	180.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	N
VNOM	Line Voltage, Nominal Line-to-Line (volts)	Range = 20.00 to 250.00, OFF	120.00
Z1MAG	Pos. Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	2.14
Z1ANG	Pos. Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	68.86
Z0MAG	Zero Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	6.38
Z0ANG	Zero Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	72.47
Z0SMAG	Zero Seq. Source Impedance Magnitude (ohms)	Range = 0.10 to 510.00	0.36
Z0SANG	Zero Seq. Source Impedance Angle (degrees)	Range = 0.00 to 90.00	84.61
LL	Line Length - unitless	Range = 0.10 to 999.00	4.84
EFLOC	Enable Fault Location	Select: Y, N	N
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P2D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P2TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P3D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P3TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
		Range = 0.25 to 100.00,	

50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	OFF	10.00
50P4D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P4TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G4P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51AC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51ATD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51ARS	EM Reset Delay	Select: Y, N	N
51ACT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51AMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51ATC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51BC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3

51BTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51BRS	EM Reset Delay	Select: Y, N	N
51BCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51BMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51BTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51CC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51CTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51CRS	EM Reset Delay	Select: Y, N	N
51CCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51CMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51CTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51PIP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51P2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P2TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51P2RS	EM Reset Delay	Select: Y, N	N
51P2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P2TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51QC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51QTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51QRS	EM Reset Delay	Select: Y, N	N
51QCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51QMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00

51QTC	Negative Seq. Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G2TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G2RS	EM Reset Delay	Select: Y, N	N
51G2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G2TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
ELOAD	Enable Load Encroachment	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	OFF
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59Q1P	Negative-Seq Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF

59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59Q2P	Negative-Seq Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	N
LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
E78VS	Enable Vector Shift	Select: Y, N	N
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	N
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	N
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	1.0
		Valid range = The legal	ORED50T OR ORED51T OR

TR	Trip (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	ORED81T OR REMTRIP OR OC OR SV04T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51PIP OR 51G1P OR 51N1P OR 52A)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T AND LT02 OR CC
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Group 3			
Top			

Group 4			
			Top
Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	120
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	120
PTR	PT Ratio	Range = 1.00 to 10000.00	180.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	180.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	N
VNOM	Line Voltage, Nominal Line-to-Line (volts)	Range = 20.00 to 250.00, OFF	120.00
Z1MAG	Pos. Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	2.14
Z1ANG	Pos. Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	68.86
Z0MAG	Zero Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	6.38
Z0ANG	Zero Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	72.47
Z0SMAG	Zero Seq. Source Impedance Magnitude (ohms)	Range = 0.10 to 510.00	0.36
Z0SANG	Zero Seq. Source Impedance Angle (degrees)	Range = 0.00 to 90.00	84.61
LL	Line Length - unitless	Range = 0.10 to 999.00	4.84
EFLOC	Enable Fault Location	Select: Y, N	N
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P2D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P2TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P3D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P3TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
		Range = 0.25 to 100.00,	

50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	OFF	10.00
50P4D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P4TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G4P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51AC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51ATD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51ARS	EM Reset Delay	Select: Y, N	N
51ACT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51AMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51ATC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51BC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3

51BTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51BRS	EM Reset Delay	Select: Y, N	N
51BCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51BMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51BTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51CC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51CTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51CRS	EM Reset Delay	Select: Y, N	N
51CCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51CMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51CTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51PIP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51P2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P2TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51P2RS	EM Reset Delay	Select: Y, N	N
51P2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P2TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51QC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51QTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51QRS	EM Reset Delay	Select: Y, N	N
51QCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51QMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00

51QTC	Negative Seq. Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G2TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G2RS	EM Reset Delay	Select: Y, N	N
51G2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G2TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
ELOAD	Enable Load Encroachment	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	OFF
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59Q1P	Negative-Seq Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF

59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59Q2P	Negative-Seq Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	N
LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
E78VS	Enable Vector Shift	Select: Y, N	N
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	N
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	N
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	1.0
		Valid range = The legal	ORED50T OR ORED51T OR

TR	Trip (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	ORED81T OR REMTRIP OR OC OR SV04T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51PIP OR 51G1P OR 51N1P OR 52A)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T AND LT02 OR CC
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Group 4			
Top			

Logic 1			
Top			
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	10
ESV	SELogic Variables/Timers	Range = 1 to 32, N	10
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
SET01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET05	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST05	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET06	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST06	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET07	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST07	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA

SET08	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST08	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET09	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST09	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET10	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST10	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SV01PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV01DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV01	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50P1T OR 50G1T OR 50N1T OR 51P1T OR 51G1T OR 51N1T OR SV05T OR SV08T OR 78VSO OR 81R1T #DIRECT TRIP
SV02PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV02DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV02	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	27PP1T OR 59PP1T OR 81D1T OR 81D2T #UTILITY FAIL
SV03PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV03DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV03	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(NOT SV02 AND 27S1) #SYNC CHECK OK
SV04PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV04DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV04	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	HALARM OR SALARM #PROTECTION RELAY FAIL
SV05PU	SV_Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV05DO	SV_Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV05	SV_Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(27PP1T OR 59PP1T OR 81D1T OR 81D2T) AND IN302 #LOU WHILE

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SV06PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV06DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV06	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SV07PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV07DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV07	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SV08PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	1.00
SV08DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV08	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	3PWR1T AND NOT IN303 #REVERSE POWER TRIP
SV09PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV09DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV09	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SV10PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV10DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV10	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT101FS	OUT101 Fail-Safe	Select: Y, N	N
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	TRIP #TRIP
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV01T #DIRECT TRIP
OUT103FS	OUT103 Fail-Safe	Select: Y, N	Y
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV04T #PROTECTIVE RELAY ALARM TO PLC
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T #SYNC CLOSE CIRCUIT
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T #SYNC CHECK TO PLC
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N

OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV02T #LOSS UTILITY TO PLC
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV01T #DIRECT TRIP
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV01T #DIRECT TRIP TO PLC
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 1			
			Top

Logic 2			
Top			
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	N
ESV	SELogic Variables/Timers	Range = 1 to 32, N	N
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
OUT101FS	OUT101 Fail-Safe	Select: Y, N	N
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT103FS	OUT103 Fail-Safe	Select: Y, N	N
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0

OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 2			Top

Logic 3			
Top			
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	N
ESV	SELogic Variables/Timers	Range = 1 to 32, N	N
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
OUT101FS	OUT101 Fail-Safe	Select: Y, N	N
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT103FS	OUT103 Fail-Safe	Select: Y, N	N
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0

OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 3			Top

Logic 4			
Top			
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	N
ESV	SELogic Variables/Timers	Range = 1 to 32, N	N
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
OUT101FS	OUT101 Fail-Safe	Select: Y, N	N
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT103FS	OUT103 Fail-Safe	Select: Y, N	N
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0

OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 4			Top

Front Panel			
			Top
Setting	Description	Range	Value
EDP	Display Points Enable	Range = 1 to 32, N	4
ELB	Local Bits Enable	Range = 1 to 32, N	N
FP_TO	Front-Panel Timeout (mins)	Range = 1 to 30, OFF	15
FP_CONT	Front-Panel Contrast	Range = 1 to 16	10
FP_AUTO	Front-Panel Automessages	Select: OVERRIDE, ROTATING	OVERRIDE
RSTLED	Reset Trip-Latched LEDs On Close	Select: Y, N	Y
LEDENAC	ENABLED LED Asserted Color	Select: R, G, A	G
LEDTRPC	TRIP LED Asserted Color	Select: R, G, A	R
MAXACC	Maximum Access Level	Select: 1, 2	2
T01LEDL	Trip Latch T_LED	Select: Y, N	Y
T01LEDC	Target T01_LED Asserted Color (R,G,A)	Select: R, G, A	R
T01_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	ORED50T
T02LEDL	Trip Latch T_LED	Select: Y, N	Y
T02LEDC	Target T02_LED Asserted Color (R,G,A)	Select: R, G, A	R
T02_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	51AT OR 51BT OR 51CT OR 51P1T OR 51P2T
T03LEDL	Trip Latch T_LED	Select: Y, N	Y
T03LEDC	Target T03_LED Asserted Color (R,G,A)	Select: R, G, A	R
T03_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	51N1T OR 51G1T OR 51N2T OR 51G2T
T04LEDL	Trip Latch T_LED	Select: Y, N	Y
T04LEDC	Target T04_LED Asserted Color (R,G,A)	Select: R, G, A	R
T04_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	51QT
T05LEDL	Trip Latch T_LED	Select: Y, N	Y
T05LEDC	Target T05_LED Asserted Color (R,G,A)	Select: R, G, A	R
T05_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	81D1T OR 81D2T OR 81D3T OR 81D4T
T06LEDL	Trip Latch T_LED	Select: Y, N	N
T06LEDC	Target T06_LED Asserted Color (R,G,A)	Select: R, G, A	R
T06_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(BFT OR T06_LED) AND NOT TRGTR
PB1ALEDC	PB1A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO

PB1A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	79RS
PB1BLEDC	PB1B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB1B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	79LO
PB2ALEDC	PB2A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB2A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT LT02 OR SV02 AND NOT SV02T AND SV05T
PB2BLEDC	PB2B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB2B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT02 OR SV02 AND NOT SV02T AND SV05T
PB3ALEDC	PB3A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB3A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT LT02 AND NOT 52A
PB3BLEDC	PB3B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB3B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	52A OR SV03 AND NOT SV03T AND SV05T
PB4ALEDC	PB4A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB4A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB4BLEDC	PB4B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB4B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A OR SV04 AND NOT SV04T AND SV05T
DP01	Display Point (60 characters)		TID, " {16}"
DP02	Display Point (60 characters)		P, "3P POWER={4, 1} KW"
DP03	Display Point (60 characters)		SV02T, , "UTILITY FAILED"

DP04	Display Point (60 characters)	0
Front Panel		Top

Report			
			Top
Setting	Description	Range	Value
ER	Event Report Trigger (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG 51P1P OR R_TRIG 51G1P OR R_TRIG 51N1P OR R_TRIG 50P1P OR R_TRIG 50G1P OR R_TRIG 50N1P
LER	Length of Event Report (cycles)	Select: 15, 64, 180	15
PRE	Prefault Length (cycles)	Range = 1 to 10	5
ESERDEL	Auto-Removal Enable	Select: Y, N	N
SER1	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	IN101, IN301, IN302, OUT301, 51P1T, 51G1T, 51N1T, 50P1P, 50G1T, 50N1T, SV08
SER2	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	52A
SER3	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	SV05T, SV02T
SER4	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	SALARM, HALARM
EALIAS	Enable ALIAS Settings	Range = 1 to 20, N	N
FMR1NAM	Fast Message Read Name1 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR1
FMR1	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
FMR2NAM	Fast Message Read Name2 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR2
FMR2	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
FMR3NAM	Fast Message Read Name3 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR3
FMR3	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
FMR4NAM	Fast Message Read Name4 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR4
FMR4	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
RA01TYPE	Remote Analog 01 type	Select: I, F, L	I
RA02TYPE	Remote Analog 02 type	Select: I, F, L	I
RA03TYPE	Remote Analog 03 type	Select: I, F, L	I
RA04TYPE	Remote Analog 04 type	Select: I, F, L	I

RA05TYPE	Remote Analog 05 type	Select: I, F, L	I
RA06TYPE	Remote Analog 06 type	Select: I, F, L	I
RA07TYPE	Remote Analog 07 type	Select: I, F, L	I
RA08TYPE	Remote Analog 08 type	Select: I, F, L	I
RA09TYPE	Remote Analog 09 type	Select: I, F, L	I
RA10TYPE	Remote Analog 10 type	Select: I, F, L	I
RA11TYPE	Remote Analog 11 type	Select: I, F, L	I
RA12TYPE	Remote Analog 12 type	Select: I, F, L	I
RA13TYPE	Remote Analog 13 type	Select: I, F, L	I
RA14TYPE	Remote Analog 14 type	Select: I, F, L	I
RA15TYPE	Remote Analog 15 type	Select: I, F, L	I
RA16TYPE	Remote Analog 16 type	Select: I, F, L	I
RA17TYPE	Remote Analog 17 type	Select: I, F, L	I
RA18TYPE	Remote Analog 18 type	Select: I, F, L	I
RA19TYPE	Remote Analog 19 type	Select: I, F, L	I
RA20TYPE	Remote Analog 20 type	Select: I, F, L	I
RA21TYPE	Remote Analog 21 type	Select: I, F, L	I
RA22TYPE	Remote Analog 22 type	Select: I, F, L	I
RA23TYPE	Remote Analog 23 type	Select: I, F, L	I
RA24TYPE	Remote Analog 24 type	Select: I, F, L	I
RA25TYPE	Remote Analog 25 type	Select: I, F, L	I
RA26TYPE	Remote Analog 26 type	Select: I, F, L	I
RA27TYPE	Remote Analog 27 type	Select: I, F, L	I
RA28TYPE	Remote Analog 28 type	Select: I, F, L	I
RA29TYPE	Remote Analog 29 type	Select: I, F, L	I
RA30TYPE	Remote Analog 30 type	Select: I, F, L	I
RA31TYPE	Remote Analog 31 type	Select: I, F, L	I
RA32TYPE	Remote Analog 32 type	Select: I, F, L	I
LDLIST	Load Profile List (17 Analog Quantities)	Range = Maximum of 17 Analog Elements	NA
LDAR	Load Profile Acquisition Rate (mins)	Select: 5, 10, 15, 30, 60	15
Report			
Top			

Port F			
Top			
Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
PROTO	Protocol	Select: SEL, MOD, EVMSG, PMU	SEL
MAXACC	Maximum Access Level	Select: 1, 2, C	2
SPEED	Data Speed (bps)	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400	9600
BITS	Data Bits (bits)	Select: 7, 8	8
PARITY	Parity	Select: O, E, N	N
STOP	Stop Bits (bits)	Select: 1, 2	1
T_OUT	Port Timeout (mins)	Range = 0 to 30	5
RTSCTS	Hardware Handshaking	Select: Y, N	N
LANG	Language	Select: ENGLISH, SPANISH	ENGLISH
AUTO	Send Auto Messages to Port	Select: Y, N	N
Port F			
Top			

Port 1			
			Top
Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
EETHFWU	Enable Ethernet Firmware Upgrade	Select: Y, N	N
IPADDR	Device IP Address [zzz.yyy.xxx.www]	Range = ASCII string with a maximum length of 15.	192.168.0.155
SUBNETM	Subnet Mask [zzz.yyy.xxx.www]	Range = ASCII string with a maximum length of 15.	255.255.255.0
DEFRTR	Default Router Gateway [zzz.yyy.xxx.www]	Range = ASCII string with a maximum length of 15.	192.168.0.1
ETCPKA	Enable TCP Keep-Alive	Select: Y, N	Y
KAIDLE	TCP Keep-Alive Idle Range (seconds)	Range = 1 to 20	10
KAINTV	TCP Keep-Alive Interval Range (seconds)	Range = 1 to 20	1
KACNT	TCP Keep-Alive Count Range	Range = 1 to 20	6
ETELNET	Enable Telnet	Select: Y, N	Y
MAXACC	Maximum Access Level	Select: 1, 2, C	2
LANG	Language	Select: ENGLISH, SPANISH	ENGLISH
TPORT	Telnet Port	Range = 1025 to 65534, 23	23
TCBAN	Telnet Connect Banner (254 ASCII printable characters)	Range = ASCII string with a maximum length of 254.	TERMINAL SERVER
TIDLE	Telnet Port Timeout (mins)	Range = 1 to 30	15
FASTOP	Fast Operate	Select: Y, N	N
EFTPSERV	Enable FTP	Select: Y, N	Y
FTPACC	FTP Maximum Access Level	Select: 1, 2, C	2
FTPUSER	FTP User Name (20 characters)	Range = ASCII string with a maximum length of 20.	FTPUSER
FTPCBAN	FTP Connect Banner (254 ASCII printable characters)	Range = ASCII string with a maximum length of 254.	FTP SERVER
FTPIDLE	FTP Idle Time (mins)	Range = 5 to 255	5
E61850	Enable IEC 61850 Protocol	Select: Y, N	Y
EGSE	Enable IEC 61850 GOOSE	Select: Y, N	Y
EMMSFS	Enable MMS File Services	Select: Y, N	Y
E850MBC	Enable 61850 Mode/Behavior Control	Select: Y, N	N
EOFFMTX	Enable GOOSE Tx in Off Mode	Select: Y, N	N
EMOD	Enable Modbus Sessions	Select: 0-2	0
EHTTP	Enable HTTP Server	Select: Y, N	Y
HTTPACC	HTTP Maximum Access Level	Select: 1, 2	2
HTTPPORT	HTTP Server TCP/IP Port Number	Range = 1 to 65534	80
HTTPBAN	HTTP Connect Banner (254 ASCII printable characters)	Range = ASCII string with a maximum length of 254.	THIS SYSTEM IS FOR THE USE OF AUTHORIZED PERSONNEL

			ONLY.
HTTPIDLE	HTTP Web Server Timeout (minutes)	Range = 1 to 60	10
ESNTP	Enable SNTP Client	Select: OFF, UNICAST, MANYCAST, BROADCAST	OFF
EPTP	Enable PTP	Select: Y, N	N
Port 1			
Top			

Port 2				Top
Setting	Description	Range	Value	
Port 2				Top

Port 3			
Top			
Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
PROTO	Protocol	Select: SEL, MOD, EVMSG, PMU, MBA, MBB, MB8A, MB8B, MBTA, MBTB	SEL
MAXACC	Maximum Access Level	Select: 1, 2, C	2
SPEED	Data Speed (bps)	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400	9600
BITS	Data Bits (bits)	Select: 7, 8	8
PARITY	Parity	Select: O, E, N	N
STOP	Stop Bits (bits)	Select: 1, 2	1
T_OUT	Port Timeout (mins)	Range = 0 to 30	5
RTSCTS	Hardware Handshaking	Select: Y, N	N
LANG	Language	Select: ENGLISH, SPANISH	ENGLISH
AUTO	Send Auto Messages to Port	Select: Y, N	N
FASTOP	Fast Operate	Select: Y, N	N
Port 3			
Top			

Modbus User Map			
Setting	Description	Range	Value
MOD_001	USER REG#001 (8 characters)	Range = Maximum of 1 Digital Elements	IA_MAG
MOD_002	USER REG#002 (8 characters)	Range = Maximum of 1 Digital Elements	IB_MAG
MOD_003	USER REG#003 (8 characters)	Range = Maximum of 1 Digital Elements	IC_MAG
MOD_004	USER REG#004 (8 characters)	Range = Maximum of 1 Digital Elements	IN_MAG
MOD_005	USER REG#005 (8 characters)	Range = Maximum of 1 Digital Elements	IG_MAG
MOD_006	USER REG#006 (8 characters)	Range = Maximum of 1 Digital Elements	IAV
MOD_007	USER REG#007 (8 characters)	Range = Maximum of 1 Digital Elements	3I2
MOD_008	USER REG#008 (8 characters)	Range = Maximum of 1 Digital Elements	UBI
MOD_009	USER REG#009 (8 characters)	Range = Maximum of 1 Digital Elements	VAVE
MOD_010	USER REG#010 (8 characters)	Range = Maximum of 1 Digital Elements	3V2
MOD_011	USER REG#011 (8 characters)	Range = Maximum of 1 Digital Elements	UBV
MOD_012	USER REG#012 (8 characters)	Range = Maximum of 1 Digital Elements	P
MOD_013	USER REG#013 (8 characters)	Range = Maximum of 1 Digital Elements	Q
MOD_014	USER REG#014 (8 characters)	Range = Maximum of 1 Digital Elements	S
MOD_015	USER REG#015 (8 characters)	Range = Maximum of 1 Digital Elements	PF
MOD_016	USER REG#016 (8 characters)	Range = Maximum of 1 Digital Elements	FREQ
MOD_017	USER REG#017 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3PIH
MOD_018	USER REG#018 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3PIL
MOD_019	USER REG#019 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3POH
MOD_020	USER REG#020 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3POL
MOD_021	USER REG#021 (8 characters)	Range = Maximum of 1 Digital Elements	MVRH3PIH
MOD_022	USER REG#022 (8 characters)	Range = Maximum of 1 Digital Elements	MVRH3PIL
		Range = Maximum of 1	

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MOD_023	USER REG#023 (8 characters)	Digital Elements	MVRH3POH
MOD_024	USER REG#024 (8 characters)	Range = Maximum of 1 Digital Elements	MVRH3POL
MOD_025	USER REG#025 (8 characters)	Range = Maximum of 1 Digital Elements	MVAH3PH
MOD_026	USER REG#026 (8 characters)	Range = Maximum of 1 Digital Elements	MVAH3PL
MOD_027	USER REG#027 (8 characters)	Range = Maximum of 1 Digital Elements	RTDWDGMX
MOD_028	USER REG#028 (8 characters)	Range = Maximum of 1 Digital Elements	RTDBRGMX
MOD_029	USER REG#029 (8 characters)	Range = Maximum of 1 Digital Elements	RTDAMB
MOD_030	USER REG#030 (8 characters)	Range = Maximum of 1 Digital Elements	RTDOTHMX
MOD_031	USER REG#031 (8 characters)	Range = Maximum of 1 Digital Elements	IARMS
MOD_032	USER REG#032 (8 characters)	Range = Maximum of 1 Digital Elements	IBRMS
MOD_033	USER REG#033 (8 characters)	Range = Maximum of 1 Digital Elements	ICRMS
MOD_034	USER REG#034 (8 characters)	Range = Maximum of 1 Digital Elements	INRMS
MOD_035	USER REG#035 (8 characters)	Range = Maximum of 1 Digital Elements	IAMX
MOD_036	USER REG#036 (8 characters)	Range = Maximum of 1 Digital Elements	IAMN
MOD_037	USER REG#037 (8 characters)	Range = Maximum of 1 Digital Elements	IBMX
MOD_038	USER REG#038 (8 characters)	Range = Maximum of 1 Digital Elements	IBMN
MOD_039	USER REG#039 (8 characters)	Range = Maximum of 1 Digital Elements	ICMX
MOD_040	USER REG#040 (8 characters)	Range = Maximum of 1 Digital Elements	ICMN
MOD_041	USER REG#041 (8 characters)	Range = Maximum of 1 Digital Elements	INMX
MOD_042	USER REG#042 (8 characters)	Range = Maximum of 1 Digital Elements	INMN
MOD_043	USER REG#043 (8 characters)	Range = Maximum of 1 Digital Elements	IGMX
MOD_044	USER REG#044 (8 characters)	Range = Maximum of 1 Digital Elements	IGMN
MOD_045	USER REG#045 (8 characters)	Range = Maximum of 1 Digital Elements	KW3PMX
MOD_046	USER REG#046 (8 characters)	Range = Maximum of 1 Digital Elements	KW3PMN
MOD_047	USER REG#047 (8 characters)	Range = Maximum of 1 Digital Elements	KVAR3PMX
MOD_048	USER REG#048 (8 characters)	Range = Maximum of 1	KVAR3PMN

		Digital Elements	
MOD_049	USER REG#049 (8 characters)	Range = Maximum of 1 Digital Elements	KVA3PMX
MOD_050	USER REG#050 (8 characters)	Range = Maximum of 1 Digital Elements	KVA3PMN
MOD_051	USER REG#051 (8 characters)	Range = Maximum of 1 Digital Elements	FREQMX
MOD_052	USER REG#052 (8 characters)	Range = Maximum of 1 Digital Elements	FREQMN
MOD_053	USER REG#053 (8 characters)	Range = Maximum of 1 Digital Elements	TRIP_LO
MOD_054	USER REG#054 (8 characters)	Range = Maximum of 1 Digital Elements	TRIP_HI
MOD_055	USER REG#055 (8 characters)	Range = Maximum of 1 Digital Elements	WARN_LO
MOD_056	USER REG#056 (8 characters)	Range = Maximum of 1 Digital Elements	WARN_HI
MOD_057	USER REG#057 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_058	USER REG#058 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_059	USER REG#059 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_060	USER REG#060 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_061	USER REG#061 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_062	USER REG#062 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_063	USER REG#063 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_064	USER REG#064 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_065	USER REG#065 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_066	USER REG#066 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_067	USER REG#067 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_068	USER REG#068 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_069	USER REG#069 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_070	USER REG#070 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_071	USER REG#071 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_072	USER REG#072 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_073	USER REG#073 (8 characters)	Range = Maximum of 1	NA

		Digital Elements	
MOD_074	USER REG#074 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_075	USER REG#075 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_076	USER REG#076 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_077	USER REG#077 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_078	USER REG#078 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_079	USER REG#079 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_080	USER REG#080 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_081	USER REG#081 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_082	USER REG#082 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_083	USER REG#083 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_084	USER REG#084 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_085	USER REG#085 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_086	USER REG#086 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_087	USER REG#087 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_088	USER REG#088 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_089	USER REG#089 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_090	USER REG#090 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_091	USER REG#091 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_092	USER REG#092 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_093	USER REG#093 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_094	USER REG#094 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_095	USER REG#095 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_096	USER REG#096 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_097	USER REG#097 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_098	USER REG#098 (8 characters)	Range = Maximum of 1	NA

		Digital Elements	
MOD_099	USER REG#099 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_100	USER REG#100 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_101	USER REG#101 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_102	USER REG#102 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_103	USER REG#103 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_104	USER REG#104 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_105	USER REG#105 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_106	USER REG#106 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_107	USER REG#107 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_108	USER REG#108 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_109	USER REG#109 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_110	USER REG#110 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_111	USER REG#111 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_112	USER REG#112 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_113	USER REG#113 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_114	USER REG#114 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_115	USER REG#115 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_116	USER REG#116 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_117	USER REG#117 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_118	USER REG#118 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_119	USER REG#119 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_120	USER REG#120 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_121	USER REG#121 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_122	USER REG#122 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_123	USER REG#123 (8 characters)	Range = Maximum of 1	NA

		Digital Elements	
MOD_124	USER REG#124 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_125	USER REG#125 (8 characters)	Range = Maximum of 1 Digital Elements	NA

Modbus User Map

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SEL-751 Settings Report

Group	Setting	Range	Default Value	Value	Delta	Description	Comments	Hidden
1	50P1P	Range = 0.25 to 100.00, OFF	10.00	10.00	False	Maximum Phase Overcurrent Trip Pickup (amps sec.)		False
1	50P1D	Range = 0.00 to 400.00, OFF	0.00	0.00	False	Maximum Phase Overcurrent Trip Delay (seconds)		False
1	50G1P	Range = 0.25 to 100.00, OFF	OFF	5.00	True	Residual Overcurrent Trip Pickup (amps sec.)		False
1	50G1D	Range = 0.00 to 400.00, OFF	0.50	0.00	True	Residual Overcurrent Trip Delay (seconds)		False
1	51P1P	Range = 0.25 to 24.00, OFF	6.00	6.00	False	Time Overcurrent Trip Pickup (amps sec.)		False
1	51P1C	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3	U3	False	TOC Curve Selection		False
1	51P1TD	Range = 0.50 to 15.00	3.00	3.00	False	TOC Time Dial		False
1	51G1P	Range = 0.25 to 24.00, OFF	0.50	2.50	True	Time Overcurrent Trip Pickup (amps sec.)		False
1	51G1C	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3	U3	False	TOC Curve Selection		False
1	51G1TD	Range = 0.50 to 15.00	1.50	1.50	False	TOC Time Dial		False
1	TR	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	ORED50T OR ORED51T OR ORED81T OR REMRIP OR OC OR SV04T	50P1T OR 51P1T	True	Trip (SELogic)		False

 (Group = 1) and ((Setting = 50P1D) or (Setting = 50P1P) or (Setting = 50G1D) or (Setting = 50G1P) or (Setting = 51G1C) or (Setting = 51G1P) or (Setting = 51G1TD) or (Setting = 51P1C) or (Setting = 51P1P) o...

SEL-751 Settings Report

Overview Information

File Name	52-TG-LB AL 7-26-2021
RDB	WJ-Hooper.rdb
Device	SEL-751
Setting Version Number	008
Part Number	751202CCCBC70851D10
Firmware ID	SEL-751-R300-V3-Z008004-D20210104
SELBoot Firmware ID	SLBT7XX-R600-V0-Z000000-D20200331

Settings

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Settings Legend

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Hidden Setting

Invalid Setting

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Setting	Description	Range	Value
PHROT	Phase Rotation	Select: ABC, ACB	ABC
FNOM	Rated Frequency (Hz)	Select: 50, 60	60
DATE_F	Date Format	Select: MDY, YMD, DMY	MDY
METHRES	Meter Cutoff Threshold	Select: Y, N	Y
FAULT	Fault Condition (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50G1P OR 50N1P OR 51P1P OR 51QP OR 50Q1P OR TRIP
EMP	Messenger Points Enable	Range = 1 to 32, N	N
TGR	Group Change Delay (seconds)	Range = 0 to 400	3
SS1	Select Settings Group1 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
SS2	Select Settings Group2 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SS3	Select Settings Group3 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SS4	Select Settings Group4 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
EPMU	Enable Synchronized Phasor Measurement	Select: Y, N	N
IRIGC	IRIG-B Control Bits Definition	Select: NONE, C37.118	NONE
UTC_OFF	Offset From UTC (hours, in 0.25 hour increments)	Range = -24.00 to 24.00	0.00
DST_BEGM	Month To Begin DST	Range = 1 to 12, OFF	OFF
52ABF	52A Interlock in BF Logic	Select: Y, N	N
50BFP	Breaker-Failure Current Detector Pickup (amps sec.)	Range = 0.10 to 10.00	0.10
BFD	Breaker Failure Delay (seconds)	Range = 0.00 to 2.00	0.50
ATD	Auxiliary Timer Delay (seconds)	Range = 0.00 to 2.00, OFF	OFF
BFI	Breaker Failure Initiate (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG TRIP
BFISID	Breaker Failure Initiate Seal-In Delay (seconds)	Range = 0.00 to 2.00, OFF	0.00
BFRTD	Breaker Retrip Delay (seconds)	Range = 0.00 to 2.00, OFF	0.05
BFTR	Breaker Failure Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
BFULTR	Breaker Failure Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
50PAFP	Arc-Flash Maximum Phase Overcurrent Pickup (amps sec.)	Range = 0.50 to 100.00, OFF	OFF

AOUTSLOT	Select Arc-Flash Output Slot	Select: 101_3, 401_4, 301_4	101_3
AFSENS1	Arc-Flash Input 1 Sensor Type	Select: NONE, POINT, FIBER	NONE
AFSENS2	Arc-Flash Input 2 Sensor Type	Select: NONE, POINT, FIBER	NONE
AFSENS3	Arc-Flash Input 3 Sensor Type	Select: NONE, POINT, FIBER	NONE
AFSENS4	Arc-Flash Input 4 Sensor Type	Select: NONE, POINT, FIBER	NONE
AO401AQ	AO401 Analog Quantity (Off, 1 analog quantity)	Range = Maximum of 1 Analog Elements	OFF
DCLOP	DC Battery LO Voltage Pickup (Vdc)	Range = 20.00 to 300.00, OFF	OFF
DCHIP	DC Battery HI Voltage Pickup (Vdc)	Range = 20.00 to 300.00, OFF	OFF
IN101D	IN101 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN102D	IN102 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN301D	IN301 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN302D	IN302 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN303D	IN303 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN304D	IN304 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN401D	IN401 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN402D	IN402 Debounce (milliseconds)	Range = 0 to 65000, AC	10
IN403D	IN403 Debounce (milliseconds)	Range = 0 to 65000, AC	10
EBMON	Enable Breaker Monitor	Select: Y, N	N
RSTTRGT	Reset Targets (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTENRGY	Reset Energy (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTMXMN	Reset Max/Min (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTDEM	Reset Demand (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
RSTPKDEM	Reset Peak Demand (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
DSABLSET	Disable Settings (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
TIME_SRC	IRIG Time Source	Select: IRIG1, IRIG2	IRIG1
89EN2P	Enable Two Position Disconnects	Range = 1 to 8, N	8
89NM2P1	Disconnect 1 Name	Range = ASCII string with a maximum length of 16.	2P1
		Valid range = The legal	

89A2P1	Disconnect 1 N/O Contact (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	0
89B2P1	Disconnect 1 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P1
89A2P1D	Disconnect 1 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P1D	Disconnect 1 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P1D	Disconnect 1 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P1	Disconnect 1 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P1
89CB2P1	Disconnect 1 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P1
89CR2P1	Disconnect 1 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P1 OR 89CS2P1 OR 89AL2P1
89CT2P1	Disconnect 1 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P1
89RO2P1	Disconnect 1 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P1
89OB2P1	Disconnect 1 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P1
89OR2P1	Disconnect 1 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P1 OR 89OS2P1 OR 89AL2P1
89OT2P1	Disconnect 1 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P1
89NM2P2	Disconnect 2 Name	Range = ASCII string with a maximum length of 16.	2P2
89A2P2	Disconnect 2 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P2	Disconnect 2 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P2
89A2P2D	Disconnect 2 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P2D	Disconnect 2 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P2D	Disconnect 2 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P2	Disconnect 2 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P2
89CB2P2	Disconnect 2 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT	89AL2P2

		R_TRIG F_TRIG	
89CR2P2	Disconnect 2 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P2 OR 89CS2P2 OR 89AL2P2
89CT2P2	Disconnect 2 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P2
89RO2P2	Disconnect 2 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P2
89OB2P2	Disconnect 2 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P2
89OR2P2	Disconnect 2 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P2 OR 89OS2P2 OR 89AL2P2
89OT2P2	Disconnect 2 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P2
89NM2P3	Disconnect 3 Name	Range = ASCII string with a maximum length of 16.	2P3
89A2P3	Disconnect 3 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P3	Disconnect 3 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P3
89A2P3D	Disconnect 3 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P3D	Disconnect 3 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P3D	Disconnect 3 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P3	Disconnect 3 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P3
89CB2P3	Disconnect 3 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P3
89CR2P3	Disconnect 3 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P3 OR 89CS2P3 OR 89AL2P3
89CT2P3	Disconnect 3 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P3
89RO2P3	Disconnect 3 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P3
89OB2P3	Disconnect 3 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P3
89OR2P3	Disconnect 3 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P3 OR 89OS2P3 OR 89AL2P3

89OT2P3	Disconnect 3 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P3
89NM2P4	Disconnect 4 Name	Range = ASCII string with a maximum length of 16.	2P4
89A2P4	Disconnect 4 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P4	Disconnect 4 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P4
89A2P4D	Disconnect 4 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P4D	Disconnect 4 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P4D	Disconnect 4 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P4	Disconnect 4 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P4
89CB2P4	Disconnect 4 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P4
89CR2P4	Disconnect 4 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P4 OR 89CS2P4 OR 89AL2P4
89CT2P4	Disconnect 4 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P4
89RO2P4	Disconnect 4 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P4
89OB2P4	Disconnect 4 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P4
89OR2P4	Disconnect 4 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P4 OR 89OS2P4 OR 89AL2P4
89OT2P4	Disconnect 4 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P4
89NM2P5	Disconnect 5 Name	Range = ASCII string with a maximum length of 16.	2P5
89A2P5	Disconnect 5 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P5	Disconnect 5 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P5
89A2P5D	Disconnect 5 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P5D	Disconnect 5 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P5D	Disconnect 5 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00,	0.33

		OFF	
89RC2P5	Disconnect 5 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P5
89CB2P5	Disconnect 5 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P5
89CR2P5	Disconnect 5 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P5 OR 89CS2P5 OR 89AL2P5
89CT2P5	Disconnect 5 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P5
89RO2P5	Disconnect 5 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P5
89OB2P5	Disconnect 5 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P5
89OR2P5	Disconnect 5 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P5 OR 89OS2P5 OR 89AL2P5
89OT2P5	Disconnect 5 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P5
89NM2P6	Disconnect 6 Name	Range = ASCII string with a maximum length of 16.	2P6
89A2P6	Disconnect 6 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P6	Disconnect 6 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P6
89A2P6D	Disconnect 6 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P6D	Disconnect 6 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P6D	Disconnect 6 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P6	Disconnect 6 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P6
89CB2P6	Disconnect 6 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P6
89CR2P6	Disconnect 6 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P6 OR 89CS2P6 OR 89AL2P6
89CT2P6	Disconnect 6 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P6
89RO2P6	Disconnect 6 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P6

89OB2P6	Disconnect 6 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P6
89OR2P6	Disconnect 6 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P6 OR 89OS2P6 OR 89AL2P6
89OT2P6	Disconnect 6 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P6
89NM2P7	Disconnect 7 Name	Range = ASCII string with a maximum length of 16.	2P7
89A2P7	Disconnect 7 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P7	Disconnect 7 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89A2P7
89A2P7D	Disconnect 7 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P7D	Disconnect 7 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P7D	Disconnect 7 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P7	Disconnect 7 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P7
89CB2P7	Disconnect 7 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P7
89CR2P7	Disconnect 7 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P7 OR 89CS2P7 OR 89AL2P7
89CT2P7	Disconnect 7 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P7
89RO2P7	Disconnect 7 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P7
89OB2P7	Disconnect 7 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P7
89OR2P7	Disconnect 7 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P7 OR 89OS2P7 OR 89AL2P7
89OT2P7	Disconnect 7 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P7
89NM2P8	Disconnect 8 Name	Range = ASCII string with a maximum length of 16.	2P8
89A2P8	Disconnect 8 N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
89B2P8	Disconnect 8 N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT	NOT 89A2P8

		R_TRIG F_TRIG	
89A2P8D	Disconnect 8 Alarm Timer (seconds)	Range = 0.00 to 300.00	5.00
89S2P8D	Disconnect 8 Open and Close Seal-in Time (seconds)	Range = 0.00 to 300.00, OFF	4.67
89I2P8D	Disconnect 8 Open and Close Immobility Time (seconds)	Range = 0.00 to 300.00, OFF	0.33
89RC2P8	Disconnect 8 Remote Close Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CC2P8
89CB2P8	Disconnect 8 Close Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P8
89CR2P8	Disconnect 8 Close Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89CL2P8 OR 89CS2P8 OR 89AL2P8
89CT2P8	Disconnect 8 Close Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89OP2P8
89RO2P8	Disconnect 8 Remote Open Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OC2P8
89OB2P8	Disconnect 8 Open Block (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89AL2P8
89OR2P8	Disconnect 8 Open Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	89OP2P8 OR 89OS2P8 OR 89AL2P8
89OT2P8	Disconnect 8 Open Immobility Time Reset (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 89CL2P8
89EN3P	Enable Three Position Disconnects	Range = 1 to 2, N	N
EN_LRC	Enable Local Remote Control	Select: Y, N	N
SC850BM	IEC 61850 Blocked Mode Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SC850TM	IEC 61850 Test Mode Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
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Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	SEL-751
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	52-FEEDER RELAY
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	120
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	120
PTR	PT Ratio	Range = 1.00 to 10000.00	35.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	35.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	Y
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	5.00
50G1D	Residual Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50G1TC	Residual Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
		Range = 0.25 to 100.00,	

50G4P	Residual Overcurrent Trip Pickup (amps sec.)	OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51P1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	2.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1

51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	108.00
27PP1D	Phase-Phase Undervoltage Trip Delay (seconds)	Range = 0.00 to 120.00	0.50
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	12.00
27S1D	Channel VS Undervoltage Delay 1 (seconds)	Range = 0.00 to 120.00	0.00
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	132.00
59PP1D	Phase-Phase Overvoltage Trip Delay (seconds)	Range = 0.00 to 120.00	0.00
59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	Y
25VLO	Voltage Window - Low Threshold (volts)	Range = 0.00 to 300.00	108.00
25VHI	Voltage Window - High Threshold (volts)	Range = 0.00 to 300.00	132.00
25RCF	Voltage Ratio Correction Factor	Range = 0.50 to 2.00	1.00
25SF	Maximum Slip Frequency (Hz)	Range = 0.05 to 0.50	0.20
25ANG1	Maximum Angle 1 (degrees)	Range = 0 to 80	15
25ANG2	Maximum Angle 2 (degrees)	Range = 0 to 80	15
SYNCPH	Synchronism Check Phase (VAB,VBC,VCA or deg lag VAB)	Select: 0, 30, 60, 90, 120, 150, 180, 210, 240, 270, 300, 330, VAB, VBC, VCA	VAB
TCLOSD	Breaker Close Time for Angle Compensation (milliseconds)	Range = 1 to 1000, OFF	OFF
BSYNCH	Block Synchronism Check (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	52A

LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	59.00
81D1TD	Frequency1 Trip Delay (seconds)	Range = 0.00 to 400.00	0.00
81D1TC	Frequency1 Torque Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	61.00
81D2TD	Frequency2 Trip Delay (seconds)	Range = 0.00 to 400.00	0.00
81D2TC	Frequency2 Torque Control Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	1
81RVSUP	Voltage Supervision of Rate-of-Change of Frequency Elements (volts)	Range = 12.5 to 300.0, OFF	96.0
81RISUP	Current Supervision of Rate-of-Change of Frequency Elements (amps)	Range = 0.5 to 10.0, OFF	OFF
81R1TP	Rate-of-Change of Frequency Trip 1 Pickup (Hz/sec)	Range = 0.10 to 15.00, OFF	0.50
81R1TRND	Rate-of-Change of Frequency Trend 1	Select: INC, DEC, ABS	ABS
81R1TD	Rate-of-Change of Frequency Trip 1 Delay (seconds)	Range = 0.10 to 60.00	0.25
81R1DO	Rate-of-Change of Frequency Dropout 1 Delay (seconds)	Range = 0.00 to 60.00	0.00
81R1TC	Rate-of-Change of Frequency Torque Control 1 Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00

EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	3P1
3PWR1P	Three Phase Power Element Pickup (VA)	Range = 1.0 to 6500.0, OFF	50.0
PWR1T	Power Element Type	Select: +WATTS, - WATTS, +VARS, -VARS	-WATTS
PWR1D	Power Element Time Delay (seconds)	Range = 0.0 to 240.0	0.0
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	OFF
TR	Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50P1T OR 51P1T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51P1P OR 51G1P OR 51N1P OR 50P1P OR 50G1P OR 50N1P)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	IN101
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Group 1			
			Top

Group 2			
			Top
Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	120
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	120
PTR	PT Ratio	Range = 1.00 to 10000.00	180.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	180.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	N
VNOM	Line Voltage, Nominal Line-to-Line (volts)	Range = 20.00 to 250.00, OFF	120.00
Z1MAG	Pos. Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	2.14
Z1ANG	Pos. Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	68.86
Z0MAG	Zero Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	6.38
Z0ANG	Zero Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	72.47
Z0SMAG	Zero Seq. Source Impedance Magnitude (ohms)	Range = 0.10 to 510.00	0.36
Z0SANG	Zero Seq. Source Impedance Angle (degrees)	Range = 0.00 to 90.00	84.61
LL	Line Length - unitless	Range = 0.10 to 999.00	4.84
EFLOC	Enable Fault Location	Select: Y, N	N
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P2D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P2TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P3D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P3TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
		Range = 0.25 to 100.00,	

50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	OFF	10.00
50P4D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P4TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G4P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51AC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51ATD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51ARS	EM Reset Delay	Select: Y, N	N
51ACT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51AMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51ATC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51BC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3

51BTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51BRS	EM Reset Delay	Select: Y, N	N
51BCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51BMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51BTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51CC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51CTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51CRS	EM Reset Delay	Select: Y, N	N
51CCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51CMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51CTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51PIP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51P2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P2TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51P2RS	EM Reset Delay	Select: Y, N	N
51P2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P2TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51QC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51QTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51QRS	EM Reset Delay	Select: Y, N	N
51QCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51QMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00

51QTC	Negative Seq. Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G2TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G2RS	EM Reset Delay	Select: Y, N	N
51G2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G2TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
ELOAD	Enable Load Encroachment	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	OFF
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59Q1P	Negative-Seq Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF

59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59Q2P	Negative-Seq Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	N
LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
E78VS	Enable Vector Shift	Select: Y, N	N
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	N
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	N
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	1.0
		Valid range = The legal	ORED50T OR ORED51T OR

TR	Trip (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	ORED81T OR REMTRIP OR OC OR SV04T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51PIP OR 51G1P OR 51N1P OR 52A)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T AND LT02 OR CC
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Group 2			
Top			

Group 3			
			Top
Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	120
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	120
PTR	PT Ratio	Range = 1.00 to 10000.00	180.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	180.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	N
VNOM	Line Voltage, Nominal Line-to-Line (volts)	Range = 20.00 to 250.00, OFF	120.00
Z1MAG	Pos. Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	2.14
Z1ANG	Pos. Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	68.86
Z0MAG	Zero Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	6.38
Z0ANG	Zero Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	72.47
Z0SMAG	Zero Seq. Source Impedance Magnitude (ohms)	Range = 0.10 to 510.00	0.36
Z0SANG	Zero Seq. Source Impedance Angle (degrees)	Range = 0.00 to 90.00	84.61
LL	Line Length - unitless	Range = 0.10 to 999.00	4.84
EFLOC	Enable Fault Location	Select: Y, N	N
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P2D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P2TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P3D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P3TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
		Range = 0.25 to 100.00,	

50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	OFF	10.00
50P4D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P4TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G4P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51AC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51ATD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51ARS	EM Reset Delay	Select: Y, N	N
51ACT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51AMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51ATC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51BC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3

51BTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51BRS	EM Reset Delay	Select: Y, N	N
51BCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51BMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51BTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51CC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51CTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51CRS	EM Reset Delay	Select: Y, N	N
51CCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51CMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51CTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51PIP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51P2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P2TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51P2RS	EM Reset Delay	Select: Y, N	N
51P2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P2TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51QC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51QTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51QRS	EM Reset Delay	Select: Y, N	N
51QCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51QMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00

51QTC	Negative Seq. Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G2TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G2RS	EM Reset Delay	Select: Y, N	N
51G2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G2TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
ELOAD	Enable Load Encroachment	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	OFF
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59Q1P	Negative-Seq Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF

59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59Q2P	Negative-Seq Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	N
LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
E78VS	Enable Vector Shift	Select: Y, N	N
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	N
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	N
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	1.0
		Valid range = The legal	ORED50T OR ORED51T OR

TR	Trip (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	ORED81T OR REMTRIP OR OC OR SV04T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51PIP OR 51G1P OR 51N1P OR 52A)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T AND LT02 OR CC
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Group 3			
Top			

Group 4			
			Top
Setting	Description	Range	Value
RID	Relay Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
TID	Terminal Identifier (16 characters)	Range = ASCII string with a maximum length of 16.	NOT USED
CTR	Phase (IA,IB,IC) CT Ratio CTR:1	Range = 1 to 5000	120
CTRN	Neutral (IN) CT Ratio CTRN:1	Range = 1 to 5000	120
PTR	PT Ratio	Range = 1.00 to 10000.00	180.00
PTRS	Synch. Voltage (VS) PT Ratio	Range = 1.00 to 10000.00	180.00
DELTA_Y	Transformer Connection	Select: WYE, DELTA	DELTA
VSCONN	Synch. Channel Connection	Select: VS, 3V0	VS
SINGLEV	Single Voltage Input	Select: Y, N	N
VNOM	Line Voltage, Nominal Line-to-Line (volts)	Range = 20.00 to 250.00, OFF	120.00
Z1MAG	Pos. Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	2.14
Z1ANG	Pos. Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	68.86
Z0MAG	Zero Seq. Line Impedance Magnitude (ohms)	Range = 0.10 to 510.00	6.38
Z0ANG	Zero Seq. Line Impedance Angle (degrees)	Range = 5.00 to 90.00	72.47
Z0SMAG	Zero Seq. Source Impedance Magnitude (ohms)	Range = 0.10 to 510.00	0.36
Z0SANG	Zero Seq. Source Impedance Angle (degrees)	Range = 0.00 to 90.00	84.61
LL	Line Length - unitless	Range = 0.10 to 999.00	4.84
EFLOC	Enable Fault Location	Select: Y, N	N
50P1P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P1D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P1TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P2P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P2D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P2TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50P3P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	10.00
50P3D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P3TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
		Range = 0.25 to 100.00,	

50P4P	Maximum Phase Overcurrent Trip Pickup (amps sec.)	OFF	10.00
50P4D	Maximum Phase Overcurrent Trip Delay (seconds)	Range = 0.00 to 400.00, OFF	0.00
50P4TC	Maximum Phase Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
50N1P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N2P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N3P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50N4P	Neutral Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G1P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G2P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G3P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50G4P	Residual Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q1P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q2P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q3P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
50Q4P	Negative Sequence Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 100.00, OFF	OFF
E50INC	Incipient fault overcurrent detection level (amps sec)	Range = 5.00 to 50.00, OFF	15.00
50IALC	Incipient fault overcurrent alarm counter	Range = 1 to 100	1
50ITRC	Incipient fault overcurrent trip counter	Range = 1 to 100	10
51AP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51AC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51ATD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51ARS	EM Reset Delay	Select: Y, N	N
51ACT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51AMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51ATC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51BP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51BC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3

51BTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51BRS	EM Reset Delay	Select: Y, N	N
51BCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51BMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51BTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51CP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51CC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51CTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51CRS	EM Reset Delay	Select: Y, N	N
51CCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51CMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51CTC	Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51PIP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51PIC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P1TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51PIRS	EM Reset Delay	Select: Y, N	N
51P1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P1TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51P2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51P2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51P2TD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51P2RS	EM Reset Delay	Select: Y, N	N
51P2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51P2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51P2TC	Maximum Phase Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51QP	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	6.00
51QC	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51QTD	TOC Time Dial	Range = 0.50 to 15.00	3.00
51QRS	EM Reset Delay	Select: Y, N	N
51QCT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51QMR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00

51QTC	Negative Seq. Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51N1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51N2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	OFF
51G1P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G1C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G1TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G1RS	EM Reset Delay	Select: Y, N	N
51G1CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G1MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G1TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
51G2P	Time Overcurrent Trip Pickup (amps sec.)	Range = 0.25 to 24.00, OFF	0.50
51G2C	TOC Curve Selection	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51G2TD	TOC Time Dial	Range = 0.50 to 15.00	1.50
51G2RS	EM Reset Delay	Select: Y, N	N
51G2CT	Constant Time Adder (seconds)	Range = 0.00 to 1.00	0.00
51G2MR	Minimum Response Time (seconds)	Range = 0.00 to 1.00	0.00
51G2TC	Ground Time Overcurrent Torque Control (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	1
EDIR	Enable Directional Control	Select: Y, AUTO, N	N
EHBL2	Enable Second Harmonic Blocking	Select: Y, N	N
EHBL5	Enable Fifth Harmonic Blocking	Select: Y, N	N
ELOAD	Enable Load Encroachment	Select: Y, N	N
E49IEC	Enable IEC Thermal Element	Range = 1 to 3, N	N
27PP1P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S1P	Channel VS Undervoltage Pickup 1 (volts)	Range = 2.00 to 300.00, OFF	OFF
27PP2P	Phase-Phase Undervoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
27S2P	Channel VS Undervoltage Pickup 2 (volts)	Range = 2.00 to 300.00, OFF	OFF
E27I1	Inverse Time Undervoltage Element Enable	Select: Y, N	N
E27I2	Inverse Time Undervoltage Element Enable	Select: Y, N	N
59Q1P	Negative-Seq Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP1P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF

59S1P	Channel VS Overvoltage Trip 1 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59Q2P	Negative-Seq Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
59PP2P	Phase-Phase Overvoltage Trip Level (volts)	Range = 2.00 to 300.00, OFF	OFF
59S2P	Channel VS Overvoltage Trip 2 Pickup (volts)	Range = 2.00 to 300.00, OFF	OFF
E59I1	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I2	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I3	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E59I4	Inverse Time Overvoltage Element Enable	Select: Y, N	N
E25	Synchronism Check Enable	Select: Y, N	N
LOPBLK	Loss of Potential Block Condition Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
55LGTP	Power Factor Lag Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDTP	Power Factor Lead Trip Pickup	Range = 0.05 to 0.99, OFF	OFF
55LGAP	Power Factor Lag Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
55LDAP	Power Factor Lead Alarm Pickup	Range = 0.05 to 0.99, OFF	OFF
E78VS	Enable Vector Shift	Select: Y, N	N
81D1TP	Frequency1 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D2TP	Frequency2 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D3TP	Frequency3 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D4TP	Frequency4 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D5TP	Frequency5 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
81D6TP	Frequency6 Trip Pickup (Hz)	Range = 15.00 to 70.00, OFF	OFF
E81R	Enable Rate-of-Change of Frequency Elements	Select: N, 1-4	N
E81RF	Enable Fast Rate-of-Change of Frequency Elements	Select: Y, N	N
EDEM	Demand Metering	Select: THM, ROL	THM
DMTC	Time Constant (mins)	Select: 5, 10, 15, 30, 60	5
PHDEMP	Phase Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	5.00
GNDEMP	Residual Ground Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
3I2DEMP	Negative-Sequence Pickup (amps sec.)	Range = 0.50 to 16.00, OFF	1.00
EPWR	Enable Three Phase Power Elements	Select: N, 3P1, 3P2	N
TDURD	Minimum Trip Time (seconds)	Range = 0.0 to 400.0	0.5
CFD	Close Failure Time Delay (seconds)	Range = 0.0 to 400.0, OFF	1.0
		Valid range = The legal	ORED50T OR ORED51T OR

TR	Trip (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	ORED81T OR REMTRIP OR OC OR SV04T
REMTRIP	Remote Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
ULTRIP	Unlatch Trip (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT (51PIP OR 51G1P OR 51N1P OR 52A)
52A	Breaker Status N/O Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
52B	Breaker Status N/C Contact (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NOT 52A
CL	Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV03T AND LT02 OR CC
ULCL	Unlatch Close (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Group 4			
Top			

Logic 1			
Top			
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	10
ESV	SELogic Variables/Timers	Range = 1 to 32, N	10
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
SET01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET05	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST05	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET06	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST06	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET07	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST07	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA

SET08	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST08	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET09	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST09	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET10	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST10	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SV01PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV01DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV01	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50P1T OR 50G1T OR 50N1T OR 51P1T OR 51G1T OR 51N1T OR SV08T #DIRECT TRIP
SV02PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV02DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV02	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SV03PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.50
SV03DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV03	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	25A1 OR (NOT SV02 AND 27S1) #SYNC CHECK OK
SV04PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV04DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV04	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	HALARM OR SALARM #PROTECTION RELAY FAIL
SV05PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV05DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV05	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SV06PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV06DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
		Valid range = The legal	

SV06	SV_ Input (SELogic)	operators: AND OR NOT R_TRIG F_TRIG	0
SV07PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV07DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV07	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SV08PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	1.00
SV08DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV08	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0 #REVERSE POWER TRIP
SV09PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV09DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV09	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
SV10PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV10DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV10	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT101FS	OUT101 Fail-Safe	Select: Y, N	N
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	TRIP
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT103FS	OUT103 Fail-Safe	Select: Y, N	Y
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	SV04T #PROTECTIVE RELAY ALARM TO PLC
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT	0

		R_TRIG F_TRIG	
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	50P1T OR 50G1T OR 51P1T OR 51G1T OR SV08T #DIRECT TRIP TO PLC
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 1			
			Top

Logic 2			
Top			
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	4
ESV	SELogic Variables/Timers	Range = 1 to 32, N	5
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
SET01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND NOT LT02
RST02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND LT02
SET03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB03_PUL AND LT02 AND NOT 52A
RST03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV03T) AND LT03
SET04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB04_PUL AND 52A
RST04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV04T) AND LT04
SV01PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV01DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV01	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SV02PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	3.00
SV02DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV02	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB02
SV03PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV03DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV03	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT03

SV04PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV04DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV04	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT04
SV05PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.25
SV05DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.25
SV05	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB02 OR LT03 OR LT04) AND NOT SV05T
OUT101FS	OUT101 Fail-Safe	Select: Y, N	Y
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	HALARM OR SALARM OR AFALARM
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	CLOSE
OUT103FS	OUT103 Fail-Safe	Select: Y, N	N
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	TRIP
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0

OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 2			Top

Logic 3			
Top			
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	4
ESV	SELogic Variables/Timers	Range = 1 to 32, N	5
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
SET01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND NOT LT02
RST02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND LT02
SET03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB03_PUL AND LT02 AND NOT 52A
RST03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV03T) AND LT03
SET04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB04_PUL AND 52A
RST04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV04T) AND LT04
SV01PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV01DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV01	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SV02PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	3.00
SV02DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV02	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB02
SV03PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV03DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV03	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT03

SV04PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV04DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV04	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT04
SV05PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.25
SV05DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.25
SV05	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB02 OR LT03 OR LT04) AND NOT SV05T
OUT101FS	OUT101 Fail-Safe	Select: Y, N	Y
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	HALARM OR SALARM OR AFALARM
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	CLOSE
OUT103FS	OUT103 Fail-Safe	Select: Y, N	N
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	TRIP
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0

OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 3			Top

Logic 4			
			Top
Setting	Description	Range	Value
ELAT	SELogic Latches	Range = 1 to 32, N	4
ESV	SELogic Variables/Timers	Range = 1 to 32, N	5
ESC	SELogic Counters	Range = 1 to 32, N	N
EMV	SELogic Math Variables	Range = 1 to 32, N	N
SET01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
RST01	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SET02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND NOT LT02
RST02	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG SV02T AND LT02
SET03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB03_PUL AND LT02 AND NOT 52A
RST03	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV03T) AND LT03
SET04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB04_PUL AND 52A
RST04	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB03_PUL OR PB04_PUL OR SV04T) AND LT04
SV01PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV01DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV01	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	NA
SV02PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	3.00
SV02DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV02	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	PB02
SV03PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV03DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV03	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT03

SV04PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.00
SV04DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.00
SV04	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	LT04
SV05PU	SV_ Timer Pickup (seconds)	Range = 0.00 to 3000.00	0.25
SV05DO	SV_ Timer Dropout (seconds)	Range = 0.00 to 3000.00	0.25
SV05	SV_ Input (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	(PB02 OR LT03 OR LT04) AND NOT SV05T
OUT101FS	OUT101 Fail-Safe	Select: Y, N	Y
OUT101	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	HALARM OR SALARM OR AFALARM
OUT102FS	OUT102 Fail-Safe	Select: Y, N	N
OUT102	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	CLOSE
OUT103FS	OUT103 Fail-Safe	Select: Y, N	N
OUT103	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	TRIP
OUT301FS	OUT301 Fail-Safe	Select: Y, N	N
OUT301	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT302FS	OUT302 Fail-Safe	Select: Y, N	N
OUT302	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT303FS	OUT303 Fail-Safe	Select: Y, N	N
OUT303	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT304FS	OUT304 Fail-Safe	Select: Y, N	N
OUT304	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT401FS	OUT401 Fail-Safe	Select: Y, N	N
OUT401	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT402FS	OUT402 Fail-Safe	Select: Y, N	N
OUT402	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
OUT403FS	OUT403 Fail-Safe	Select: Y, N	N
OUT403	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0

OUT404FS	OUT404 Fail-Safe	Select: Y, N	N
OUT404	(SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
Logic 4			Top

Front Panel			
			Top
Setting	Description	Range	Value
EDP	Display Points Enable	Range = 1 to 32, N	5
ELB	Local Bits Enable	Range = 1 to 32, N	N
FP_TO	Front-Panel Timeout (mins)	Range = 1 to 30, OFF	15
FP_CONT	Front-Panel Contrast	Range = 1 to 16	10
FP_AUTO	Front-Panel Automessages	Select: OVERRIDE, ROTATING	OVERRIDE
RSTLED	Reset Trip-Latched LEDs On Close	Select: Y, N	N
LEDENAC	ENABLED LED Asserted Color	Select: R, G, A	G
LEDTRPC	TRIP LED Asserted Color	Select: R, G, A	R
MAXACC	Maximum Access Level	Select: 1, 2	2
T01LEDL	Trip Latch T_LED	Select: Y, N	Y
T01LEDC	Target T01_LED Asserted Color (R,G,A)	Select: R, G, A	R
T01_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	ORED50T #INSTANT OC
T02LEDL	Trip Latch T_LED	Select: Y, N	Y
T02LEDC	Target T02_LED Asserted Color (R,G,A)	Select: R, G, A	R
T02_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	51AT OR 51BT OR 51CT OR 51P1T OR 51P2T #PHASE OC
T03LEDL	Trip Latch T_LED	Select: Y, N	Y
T03LEDC	Target T03_LED Asserted Color (R,G,A)	Select: R, G, A	R
T03_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	51N1T OR 51G1T OR 51N2T OR 51G2T #GND/NEU OC
T04LEDL	Trip Latch T_LED	Select: Y, N	Y
T04LEDC	Target T04_LED Asserted Color (R,G,A)	Select: R, G, A	R
T04_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	51QT #NEG SEQ OC
T05LEDL	Trip Latch T_LED	Select: Y, N	Y
T05LEDC	Target T05_LED Asserted Color (R,G,A)	Select: R, G, A	R
T05_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	81D1T OR 81D2T OR 81D3T OR 81D4T #OVER/UNDER FREQUENCY
T06LEDL	Trip Latch T_LED	Select: Y, N	N
T06LEDC	Target T06_LED Asserted Color (R,G,A)	Select: R, G, A	R
T06_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT	(BFT OR T06_LED) AND NOT TRGTR

		R_TRIG F_TRIG	#BREAKER FAIL
PB1ALEDC	PB1A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB1A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB1BLEDC	PB1B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB1B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB2ALEDC	PB2A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB2A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB2BLEDC	PB2B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB2B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB3ALEDC	PB3A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB3A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB3BLEDC	PB3B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB3B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB4ALEDC	PB4A_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB4A_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
PB4BLEDC	PB4B_LED Asserted/Deasserted Colors (R,G,A,O)	Select: AG, AO, AR, GA, GO, GR, OA, OG, OR, RA, RG, RO	AO
PB4B_LED	Equation (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	0
DP01	Display Point (60 characters)		TID, " {16}"
DP02	Display Point (60 characters)		0
DP03	Display Point (60 characters)		IN101, BREAKER, CLOSED, OPEN

DP04	Display Point (60 characters)		0
DP05	Display Point (60 characters)		0
Front Panel			
Top			

Report			
			Top
Setting	Description	Range	Value
ER	Event Report Trigger (SELogic)	Valid range = The legal operators: AND OR NOT R_TRIG F_TRIG	R_TRIG 51P1P OR R_TRIG 51G1P OR R_TRIG 51N1P OR R_TRIG 50P1P OR R_TRIG 50G1P OR R_TRIG 50N1P
LER	Length of Event Report (cycles)	Select: 15, 64, 180	15
PRE	Prefault Length (cycles)	Range = 1 to 10	5
ESERDEL	Auto-Removal Enable	Select: Y, N	N
SER1	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	IN101, 51P1T, 51G1T, 51N1T, 50P1P, 50G1T, 50N1T
SER2	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	52A
SER3	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	SV05T, SV02T
SER4	(24 Relay Word bits)	Valid range = 0, NA or a list of relay elements.	SALARM, HALARM
EALIAS	Enable ALIAS Settings	Range = 1 to 20, N	N
FMR1NAM	Fast Message Read Name1 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR1
FMR1	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
FMR2NAM	Fast Message Read Name2 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR2
FMR2	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
FMR3NAM	Fast Message Read Name3 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR3
FMR3	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
FMR4NAM	Fast Message Read Name4 (9 characters)	Range = ASCII string with a maximum length of 9.	FMR4
FMR4	(24 analog quantities)	Valid range = 0, NA or a list of relay elements.	NA
RA01TYPE	Remote Analog 01 type	Select: I, F, L	I
RA02TYPE	Remote Analog 02 type	Select: I, F, L	I
RA03TYPE	Remote Analog 03 type	Select: I, F, L	I
RA04TYPE	Remote Analog 04 type	Select: I, F, L	I
RA05TYPE	Remote Analog 05 type	Select: I, F, L	I
RA06TYPE	Remote Analog 06 type	Select: I, F, L	I

RA07TYPE	Remote Analog 07 type	Select: I, F, L	I
RA08TYPE	Remote Analog 08 type	Select: I, F, L	I
RA09TYPE	Remote Analog 09 type	Select: I, F, L	I
RA10TYPE	Remote Analog 10 type	Select: I, F, L	I
RA11TYPE	Remote Analog 11 type	Select: I, F, L	I
RA12TYPE	Remote Analog 12 type	Select: I, F, L	I
RA13TYPE	Remote Analog 13 type	Select: I, F, L	I
RA14TYPE	Remote Analog 14 type	Select: I, F, L	I
RA15TYPE	Remote Analog 15 type	Select: I, F, L	I
RA16TYPE	Remote Analog 16 type	Select: I, F, L	I
RA17TYPE	Remote Analog 17 type	Select: I, F, L	I
RA18TYPE	Remote Analog 18 type	Select: I, F, L	I
RA19TYPE	Remote Analog 19 type	Select: I, F, L	I
RA20TYPE	Remote Analog 20 type	Select: I, F, L	I
RA21TYPE	Remote Analog 21 type	Select: I, F, L	I
RA22TYPE	Remote Analog 22 type	Select: I, F, L	I
RA23TYPE	Remote Analog 23 type	Select: I, F, L	I
RA24TYPE	Remote Analog 24 type	Select: I, F, L	I
RA25TYPE	Remote Analog 25 type	Select: I, F, L	I
RA26TYPE	Remote Analog 26 type	Select: I, F, L	I
RA27TYPE	Remote Analog 27 type	Select: I, F, L	I
RA28TYPE	Remote Analog 28 type	Select: I, F, L	I
RA29TYPE	Remote Analog 29 type	Select: I, F, L	I
RA30TYPE	Remote Analog 30 type	Select: I, F, L	I
RA31TYPE	Remote Analog 31 type	Select: I, F, L	I
RA32TYPE	Remote Analog 32 type	Select: I, F, L	I
LDLIST	Load Profile List (17 Analog Quantities)	Range = Maximum of 17 Analog Elements	NA
LDAR	Load Profile Acquisition Rate (mins)	Select: 5, 10, 15, 30, 60	15

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Port F			
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Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
PROTO	Protocol	Select: SEL, MOD, EVMSG, PMU	SEL
MAXACC	Maximum Access Level	Select: 1, 2, C	2
SPEED	Data Speed (bps)	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400	9600
BITS	Data Bits (bits)	Select: 7, 8	8
PARITY	Parity	Select: O, E, N	N
STOP	Stop Bits (bits)	Select: 1, 2	1
T_OUT	Port Timeout (mins)	Range = 0 to 30	5
RTSCTS	Hardware Handshaking	Select: Y, N	N
LANG	Language	Select: ENGLISH, SPANISH	ENGLISH
AUTO	Send Auto Messages to Port	Select: Y, N	N
Port F			
Top			

Port 1			
Top			
Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
EETHFWU	Enable Ethernet Firmware Upgrade	Select: Y, N	N
IPADDR	Device IP Address [zzz.yyy.xxx.www]	Range = ASCII string with a maximum length of 15.	192.168.0.152
SUBNETM	Subnet Mask [zzz.yyy.xxx.www]	Range = ASCII string with a maximum length of 15.	255.255.255.0
DEFRTR	Default Router Gateway [zzz.yyy.xxx.www]	Range = ASCII string with a maximum length of 15.	192.168.0.1
ETCPKA	Enable TCP Keep-Alive	Select: Y, N	Y
KAIDLE	TCP Keep-Alive Idle Range (seconds)	Range = 1 to 20	10
KAINTV	TCP Keep-Alive Interval Range (seconds)	Range = 1 to 20	1
KACNT	TCP Keep-Alive Count Range	Range = 1 to 20	6
ETELNET	Enable Telnet	Select: Y, N	Y
MAXACC	Maximum Access Level	Select: 1, 2, C	2
LANG	Language	Select: ENGLISH, SPANISH	ENGLISH
TPORT	Telnet Port	Range = 1025 to 65534, 23	23
TCBAN	Telnet Connect Banner (254 ASCII printable characters)	Range = ASCII string with a maximum length of 254.	TERMINAL SERVER
TIDLE	Telnet Port Timeout (mins)	Range = 1 to 30	15
FASTOP	Fast Operate	Select: Y, N	N
EFTPSERV	Enable FTP	Select: Y, N	Y
FTPACC	FTP Maximum Access Level	Select: 1, 2, C	2
FTPUSER	FTP User Name (20 characters)	Range = ASCII string with a maximum length of 20.	FTPUSER
FTPCBAN	FTP Connect Banner (254 ASCII printable characters)	Range = ASCII string with a maximum length of 254.	FTP SERVER
FTPIDLE	FTP Idle Time (mins)	Range = 5 to 255	5
E61850	Enable IEC 61850 Protocol	Select: Y, N	Y
EGSE	Enable IEC 61850 GOOSE	Select: Y, N	Y
EMMSFS	Enable MMS File Services	Select: Y, N	Y
E850MBC	Enable 61850 Mode/Behavior Control	Select: Y, N	N
EOFFMTX	Enable GOOSE Tx in Off Mode	Select: Y, N	N
EMOD	Enable Modbus Sessions	Select: 0-2	0
EHTTP	Enable HTTP Server	Select: Y, N	Y
HTTPACC	HTTP Maximum Access Level	Select: 1, 2	2
HTTPPORT	HTTP Server TCP/IP Port Number	Range = 1 to 65534	80
HTTPBAN	HTTP Connect Banner (254 ASCII printable characters)	Range = ASCII string with a maximum length of 254.	THIS SYSTEM IS FOR THE USE OF AUTHORIZED PERSONNEL

			ONLY.
HTTPIDLE	HTTP Web Server Timeout (minutes)	Range = 1 to 60	10
ESNTP	Enable SNTP Client	Select: OFF, UNICAST, MANYCAST, BROADCAST	OFF
EPTP	Enable PTP	Select: Y, N	N
Port 1			
Top			

Port 2				Top
Setting	Description	Range	Value	
Port 2				Top

Port 3			
Top			
Setting	Description	Range	Value
EPORT	Enable Port	Select: Y, N	Y
PROTO	Protocol	Select: SEL, MOD, EVMSG, PMU, MBA, MBB, MB8A, MB8B, MBTA, MBTB	SEL
MAXACC	Maximum Access Level	Select: 1, 2, C	2
SPEED	Data Speed (bps)	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400	9600
BITS	Data Bits (bits)	Select: 7, 8	8
PARITY	Parity	Select: O, E, N	N
STOP	Stop Bits (bits)	Select: 1, 2	1
T_OUT	Port Timeout (mins)	Range = 0 to 30	5
RTSCTS	Hardware Handshaking	Select: Y, N	N
LANG	Language	Select: ENGLISH, SPANISH	ENGLISH
AUTO	Send Auto Messages to Port	Select: Y, N	N
FASTOP	Fast Operate	Select: Y, N	N
Port 3			
Top			

Modbus User Map			
			Top
Setting	Description	Range	Value
MOD_001	USER REG#001 (8 characters)	Range = Maximum of 1 Digital Elements	IA_MAG
MOD_002	USER REG#002 (8 characters)	Range = Maximum of 1 Digital Elements	IB_MAG
MOD_003	USER REG#003 (8 characters)	Range = Maximum of 1 Digital Elements	IC_MAG
MOD_004	USER REG#004 (8 characters)	Range = Maximum of 1 Digital Elements	IN_MAG
MOD_005	USER REG#005 (8 characters)	Range = Maximum of 1 Digital Elements	IG_MAG
MOD_006	USER REG#006 (8 characters)	Range = Maximum of 1 Digital Elements	IAV
MOD_007	USER REG#007 (8 characters)	Range = Maximum of 1 Digital Elements	3I2
MOD_008	USER REG#008 (8 characters)	Range = Maximum of 1 Digital Elements	UBI
MOD_009	USER REG#009 (8 characters)	Range = Maximum of 1 Digital Elements	VAVE
MOD_010	USER REG#010 (8 characters)	Range = Maximum of 1 Digital Elements	3V2
MOD_011	USER REG#011 (8 characters)	Range = Maximum of 1 Digital Elements	UBV
MOD_012	USER REG#012 (8 characters)	Range = Maximum of 1 Digital Elements	P
MOD_013	USER REG#013 (8 characters)	Range = Maximum of 1 Digital Elements	Q
MOD_014	USER REG#014 (8 characters)	Range = Maximum of 1 Digital Elements	S
MOD_015	USER REG#015 (8 characters)	Range = Maximum of 1 Digital Elements	PF
MOD_016	USER REG#016 (8 characters)	Range = Maximum of 1 Digital Elements	FREQ
MOD_017	USER REG#017 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3PIH
MOD_018	USER REG#018 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3PIL
MOD_019	USER REG#019 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3POH
MOD_020	USER REG#020 (8 characters)	Range = Maximum of 1 Digital Elements	MWH3POL
MOD_021	USER REG#021 (8 characters)	Range = Maximum of 1 Digital Elements	MVRH3PIH
MOD_022	USER REG#022 (8 characters)	Range = Maximum of 1 Digital Elements	MVRH3PIL
		Range = Maximum of 1	

MOD_023	USER REG#023 (8 characters)	Digital Elements	MVRH3POH
MOD_024	USER REG#024 (8 characters)	Range = Maximum of 1 Digital Elements	MVRH3POL
MOD_025	USER REG#025 (8 characters)	Range = Maximum of 1 Digital Elements	MVAH3PH
MOD_026	USER REG#026 (8 characters)	Range = Maximum of 1 Digital Elements	MVAH3PL
MOD_027	USER REG#027 (8 characters)	Range = Maximum of 1 Digital Elements	RTDWDGMX
MOD_028	USER REG#028 (8 characters)	Range = Maximum of 1 Digital Elements	RTDBRGMX
MOD_029	USER REG#029 (8 characters)	Range = Maximum of 1 Digital Elements	RTDAMB
MOD_030	USER REG#030 (8 characters)	Range = Maximum of 1 Digital Elements	RTDOTHMX
MOD_031	USER REG#031 (8 characters)	Range = Maximum of 1 Digital Elements	IARMS
MOD_032	USER REG#032 (8 characters)	Range = Maximum of 1 Digital Elements	IBRMS
MOD_033	USER REG#033 (8 characters)	Range = Maximum of 1 Digital Elements	ICRMS
MOD_034	USER REG#034 (8 characters)	Range = Maximum of 1 Digital Elements	INRMS
MOD_035	USER REG#035 (8 characters)	Range = Maximum of 1 Digital Elements	IAMX
MOD_036	USER REG#036 (8 characters)	Range = Maximum of 1 Digital Elements	IAMN
MOD_037	USER REG#037 (8 characters)	Range = Maximum of 1 Digital Elements	IBMX
MOD_038	USER REG#038 (8 characters)	Range = Maximum of 1 Digital Elements	IBMN
MOD_039	USER REG#039 (8 characters)	Range = Maximum of 1 Digital Elements	ICMX
MOD_040	USER REG#040 (8 characters)	Range = Maximum of 1 Digital Elements	ICMN
MOD_041	USER REG#041 (8 characters)	Range = Maximum of 1 Digital Elements	INMX
MOD_042	USER REG#042 (8 characters)	Range = Maximum of 1 Digital Elements	INMN
MOD_043	USER REG#043 (8 characters)	Range = Maximum of 1 Digital Elements	IGMX
MOD_044	USER REG#044 (8 characters)	Range = Maximum of 1 Digital Elements	IGMN
MOD_045	USER REG#045 (8 characters)	Range = Maximum of 1 Digital Elements	KW3PMX
MOD_046	USER REG#046 (8 characters)	Range = Maximum of 1 Digital Elements	KW3PMN
MOD_047	USER REG#047 (8 characters)	Range = Maximum of 1 Digital Elements	KVAR3PMX
MOD_048	USER REG#048 (8 characters)	Range = Maximum of 1	KVAR3PMN

		Digital Elements	
MOD_049	USER REG#049 (8 characters)	Range = Maximum of 1 Digital Elements	KVA3PMX
MOD_050	USER REG#050 (8 characters)	Range = Maximum of 1 Digital Elements	KVA3PMN
MOD_051	USER REG#051 (8 characters)	Range = Maximum of 1 Digital Elements	FREQMX
MOD_052	USER REG#052 (8 characters)	Range = Maximum of 1 Digital Elements	FREQMN
MOD_053	USER REG#053 (8 characters)	Range = Maximum of 1 Digital Elements	TRIP_LO
MOD_054	USER REG#054 (8 characters)	Range = Maximum of 1 Digital Elements	TRIP_HI
MOD_055	USER REG#055 (8 characters)	Range = Maximum of 1 Digital Elements	WARN_LO
MOD_056	USER REG#056 (8 characters)	Range = Maximum of 1 Digital Elements	WARN_HI
MOD_057	USER REG#057 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_058	USER REG#058 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_059	USER REG#059 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_060	USER REG#060 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_061	USER REG#061 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_062	USER REG#062 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_063	USER REG#063 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_064	USER REG#064 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_065	USER REG#065 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_066	USER REG#066 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_067	USER REG#067 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_068	USER REG#068 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_069	USER REG#069 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_070	USER REG#070 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_071	USER REG#071 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_072	USER REG#072 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_073	USER REG#073 (8 characters)	Range = Maximum of 1	NA

		Digital Elements	
MOD_074	USER REG#074 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_075	USER REG#075 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_076	USER REG#076 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_077	USER REG#077 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_078	USER REG#078 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_079	USER REG#079 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_080	USER REG#080 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_081	USER REG#081 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_082	USER REG#082 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_083	USER REG#083 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_084	USER REG#084 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_085	USER REG#085 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_086	USER REG#086 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_087	USER REG#087 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_088	USER REG#088 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_089	USER REG#089 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_090	USER REG#090 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_091	USER REG#091 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_092	USER REG#092 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_093	USER REG#093 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_094	USER REG#094 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_095	USER REG#095 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_096	USER REG#096 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_097	USER REG#097 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_098	USER REG#098 (8 characters)	Range = Maximum of 1	NA

		Digital Elements	
MOD_099	USER REG#099 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_100	USER REG#100 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_101	USER REG#101 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_102	USER REG#102 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_103	USER REG#103 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_104	USER REG#104 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_105	USER REG#105 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_106	USER REG#106 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_107	USER REG#107 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_108	USER REG#108 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_109	USER REG#109 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_110	USER REG#110 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_111	USER REG#111 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_112	USER REG#112 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_113	USER REG#113 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_114	USER REG#114 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_115	USER REG#115 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_116	USER REG#116 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_117	USER REG#117 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_118	USER REG#118 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_119	USER REG#119 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_120	USER REG#120 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_121	USER REG#121 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_122	USER REG#122 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_123	USER REG#123 (8 characters)	Range = Maximum of 1	NA

		Digital Elements	
MOD_124	USER REG#124 (8 characters)	Range = Maximum of 1 Digital Elements	NA
MOD_125	USER REG#125 (8 characters)	Range = Maximum of 1 Digital Elements	NA

Modbus User Map

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