

# 7SR17 Rho

Motor Protection Relay

## IEC 61850 Model Implementation Conformance Statement (MICS)

### Document Release History

This document is issue 2016/09. The list of revisions up to and including this issue is:

2016/09	First issue
---------	-------------

### Software Revision History

2016/09	2436H80012 R4e-2a (7SR170)	First IEC 61850 Release
---------	----------------------------	-------------------------

The copyright and other intellectual property rights in this document, and in any model or article produced from it (and including any registered or unregistered design rights) are the property of Siemens Protection Devices Limited. No part of this document shall be reproduced or modified or stored in another form, in any data retrieval system, without the permission of Siemens Protection Devices Limited, nor shall any model or article be reproduced from this document unless Siemens Protection Devices Limited consent.

While the information and guidance given in this document is believed to be correct, no liability shall be accepted for any loss or damage caused by any error or omission, whether such error or omission is the result of negligence or any other cause. Any and all such liability is disclaimed.

# Contents

<b>SOFTWARE REVISION HISTORY.....</b>	<b>1</b>
<b>1 REYROLLE -&gt; IEC 61850 .....</b>	<b>6</b>
1.1 Device.....	6
1.2.....	15
1.3 BREAK CAP MENU.....	15
1.4 CB FAIL.....	15
1.5 Change Group.....	16
1.6 CURRENT METERS.....	16
1.7 Delta Trip Counters .....	17
1.8 DERIVED EARTH FAULT MENU.....	17
1.9 Disturbance Recorder.....	20
1.10 Double Point Controls (Enhanced Security) .....	20
1.11 Double Point Controls (Normal Security).....	21
1.12 Double Point Inputs .....	22
1.13 Double Point Outputs.....	23
1.14 General Trip Information.....	24
1.15 MEASURED EARTH FAULT MENU .....	24
1.16 MEASUREMENT () .....	26
1.17 MEASUREMENT (Max).....	28
1.18 MEASUREMENT (Mean).....	29
1.19 MEASUREMENT (Min).....	30
1.20 NPS OVERVOLTAGE .....	31
1.21 OVERCURRENT MENU.....	31
1.22 PHASE U/O VOLTAGE .....	34
1.23 PHASE UNBALANCE MENU.....	38
1.24 POWER FACTOR MENU.....	38
1.25 POWER MENU .....	41
1.26 RESTRICTED EARTH FAULT MENU .....	43
1.27 SENSITIVE POWER MENU.....	44
1.28 Single Point Controls (Enhanced Security).....	45
1.29 Single Point Controls (Normal Security).....	45
1.30 Single Point Inputs.....	46
1.31 Single Point Outputs.....	50
1.32 STALLED ROTOR MENU .....	52
1.33 THERMAL MENU .....	54

1.34	U/O FREQUENCY .....	54
1.35	UNDER CURRENT MENU .....	56
1.36	VOLTAGE METERS.....	57
<b>2</b>	<b>IEC 61850 -&gt; REYROLLE .....</b>	<b>58</b>
2.1	PROT .....	58
2.1.1	A14PTOC1 .....	58
2.1.2	A14PTOC2 .....	58
2.1.3	A14PTOC3 .....	59
2.1.4	A14PTOC4 .....	60
2.1.5	A2759PTOV1.....	60
2.1.6	A2759PTOV2.....	61
2.1.7	A2759PTOV3.....	62
2.1.8	A2759PTOV4.....	62
2.1.9	A2759PTUV1.....	63
2.1.10	A2759PTUV2.....	64
2.1.11	A2759PTUV3.....	64
2.1.12	A2759PTUV4.....	65
2.1.13	A32PDOP1 .....	66
2.1.14	A32PDOP2 .....	67
2.1.15	A32PDUP1 .....	67
2.1.16	A32PDUP2 .....	68
2.1.17	A32SPDOP1 .....	69
2.1.18	A32SPDOP2 .....	69
2.1.19	A32SPDUP1 .....	70
2.1.20	A32SPDUP2 .....	70
2.1.21	A37PTUC1 .....	71
2.1.22	A37PTUC2 .....	71
2.1.23	A46PhRevPTOC1.....	72
2.1.24	A46PUPTOC1 .....	72
2.1.25	A47PTOV1 .....	73
2.1.26	A47PTOV2 .....	73
2.1.27	A48PMSS1 .....	74
2.1.28	A48PMSS2 .....	74
2.1.29	A49PMRI1 .....	75
2.1.30	A49PTTR1 .....	75
2.1.31	A50BCLPTOC1 .....	76
2.1.32	A50BfRBRF1 .....	76
2.1.33	A50gPTOC1 .....	77

2.1.34	A50gPTOC2 .....	77
2.1.35	A50nPTOC1 .....	78
2.1.36	A50nPTOC2 .....	78
2.1.37	A50PTOC1 .....	79
2.1.38	A50PTOC2 .....	79
2.1.39	A51gPTOC1 .....	80
2.1.40	A51gPTOC2 .....	81
2.1.41	A51nPTOC1 .....	81
2.1.42	A51nPTOC2 .....	81
2.1.43	A51PTOC1 .....	82
2.1.44	A51PTOC2 .....	83
2.1.45	A55PDOP1 .....	83
2.1.46	A55PDOP2 .....	84
2.1.47	A55PDUP1 .....	85
2.1.48	A55PDUP2 .....	86
2.1.49	A66PMRI1 .....	86
2.1.50	A81PTOF1 .....	87
2.1.51	A81PTOF2 .....	87
2.1.52	A81PTUF1 .....	88
2.1.53	A81PTUF2 .....	88
2.1.54	A87REFPTOC1 .....	88
2.1.55	CntDelGGIO1 .....	89
2.1.56	LLN0 .....	89
2.1.57	PTRC1 .....	90
2.2	MEAS .....	91
2.2.1	I_MSQI1 .....	91
2.2.2	LLN0 .....	91
2.2.3	MaxMMXU1 .....	92
2.2.4	MeanMMXU1 .....	93
2.2.5	MinMMXU1 .....	93
2.2.6	MMXU1 .....	94
2.2.7	V_MSQI1 .....	95
2.3	DR .....	96
2.3.1	LLN0 .....	96
2.3.2	RDRE1 .....	96
2.4	CTRL .....	97
2.4.1	BI6GGIO1 .....	97
2.4.2	BO8GGIO1 .....	97

2.4.3	DPDOesGGIO1 .....	98
2.4.4	DPDOesGGIO2 .....	98
2.4.5	DPDOesGGIO3 .....	99
2.4.6	DPDOesGGIO4 .....	99
2.4.7	DPDOnsGGIO1 .....	99
2.4.8	DPDOnsGGIO2 .....	100
2.4.9	DPDOnsGGIO3 .....	100
2.4.10	DPDOnsGGIO4 .....	100
2.4.11	DPi8GGIO1 .....	101
2.4.12	DPi8GGIO2 .....	101
2.4.13	DPo8GGIO1 .....	102
2.4.14	DPo8GGIO2 .....	103
2.4.15	E4GGIO1.....	103
2.4.16	L9GGIO1 .....	104
2.4.17	LLN0.....	104
2.4.18	Q0CILO1 .....	105
2.4.19	Q0CSWI1 .....	105
2.4.20	Q0XCBR1.....	105
2.4.21	SPDOesGGIO1 .....	106
2.4.22	SPDOesGGIO2 .....	106
2.4.23	SPDOesGGIO3 .....	107
2.4.24	SPDOesGGIO4 .....	107
2.4.25	SPDOnsGGIO1 .....	107
2.4.26	SPDOnsGGIO2 .....	107
2.4.27	SPDOnsGGIO3 .....	108
2.4.28	SPDOnsGGIO4 .....	108
2.4.29	SPI64GGIO1.....	108
2.4.30	SPo32GGIO1 .....	112
2.4.31	V8GGIO1.....	114

# 1 Reyrolle -> IEC 61850

## 1.1 Device

Reyrolle	DOI	DA Group
LED Reset		
	CTRL.LLN0.LEDRs	stVal
Local Mode		
	PROT.CntDelGGIO1.Loc	stVal
	CTRL.LLN0.Loc	stVal
	CTRL.Q0CSWI1.Loc	stVal
	CTRL.Q0XCBR1.Loc	stVal
	CTRL.SPDOsGGIO1.Loc	stVal
	CTRL.SPDOsGGIO2.Loc	stVal
	CTRL.SPDOsGGIO3.Loc	stVal
	CTRL.SPDOsGGIO4.Loc	stVal
	CTRL.SPDOesGGIO1.Loc	stVal
	CTRL.SPDOesGGIO2.Loc	stVal
	CTRL.SPDOesGGIO3.Loc	stVal
	CTRL.SPDOesGGIO4.Loc	stVal
	CTRL.DPDOsGGIO1.Loc	stVal
	CTRL.DPDOsGGIO2.Loc	stVal
	CTRL.DPDOsGGIO3.Loc	stVal
	CTRL.DPDOsGGIO4.Loc	stVal
	CTRL.DPDOesGGIO1.Loc	stVal
	CTRL.DPDOesGGIO2.Loc	stVal
	CTRL.DPDOesGGIO3.Loc	stVal
	CTRL.DPDOesGGIO4.Loc	stVal
Non-Directional		
	PROT.A50BCLPTOC1.Str	dirGeneral
	PROT.A50BCLPTOC1.Str	dirPhsA
	PROT.A50BCLPTOC1.Str	dirPhsB
	PROT.A50BCLPTOC1.Str	dirPhsC
	PROT.A49PTTR1.Str	dirGeneral
	PROT.A14PTOC1.Str	dirGeneral
	PROT.A14PTOC1.Str	dirPhsA

	PROT.A14PTOC1.Str	dirPhsB
	PROT.A14PTOC1.Str	dirPhsC
	PROT.A14PTOC2.Str	dirGeneral
	PROT.A14PTOC2.Str	dirPhsA
	PROT.A14PTOC2.Str	dirPhsB
	PROT.A14PTOC2.Str	dirPhsC
	PROT.A14PTOC3.Str	dirGeneral
	PROT.A14PTOC3.Str	dirPhsA
	PROT.A14PTOC3.Str	dirPhsB
	PROT.A14PTOC3.Str	dirPhsC
	PROT.A14PTOC4.Str	dirGeneral
	PROT.A14PTOC4.Str	dirPhsA
	PROT.A14PTOC4.Str	dirPhsB
	PROT.A14PTOC4.Str	dirPhsC
	PROT.A37PTUC1.Str	dirGeneral
	PROT.A37PTUC1.Str	dirPhsA
	PROT.A37PTUC1.Str	dirPhsB
	PROT.A37PTUC1.Str	dirPhsC
	PROT.A37PTUC2.Str	dirGeneral
	PROT.A37PTUC2.Str	dirPhsA
	PROT.A37PTUC2.Str	dirPhsB
	PROT.A37PTUC2.Str	dirPhsC
	PROT.A87REFPTOC1.Str	dirGeneral
	PROT.A48PMSS1.Str	dirGeneral
	PROT.A48PMSS2.Str	dirGeneral
	PROT.A2759PTOV1.Str	dirGeneral
	PROT.A2759PTOV1.Str	dirPhsA
	PROT.A2759PTOV1.Str	dirPhsB
	PROT.A2759PTOV1.Str	dirPhsC
	PROT.A2759PTUV1.Str	dirGeneral
	PROT.A2759PTUV1.Str	dirPhsA
	PROT.A2759PTUV1.Str	dirPhsB
	PROT.A2759PTUV1.Str	dirPhsC
	PROT.A2759PTOV2.Str	dirGeneral
	PROT.A2759PTOV2.Str	dirPhsA
	PROT.A2759PTOV2.Str	dirPhsB

	PROT.A2759PTOV2.Str	dirPhsC
	PROT.A2759PTUV2.Str	dirGeneral
	PROT.A2759PTUV2.Str	dirPhsA
	PROT.A2759PTUV2.Str	dirPhsB
	PROT.A2759PTUV2.Str	dirPhsC
	PROT.A2759PTOV3.Str	dirGeneral
	PROT.A2759PTOV3.Str	dirPhsA
	PROT.A2759PTOV3.Str	dirPhsB
	PROT.A2759PTOV3.Str	dirPhsC
	PROT.A2759PTUV3.Str	dirGeneral
	PROT.A2759PTUV3.Str	dirPhsA
	PROT.A2759PTUV3.Str	dirPhsB
	PROT.A2759PTUV3.Str	dirPhsC
	PROT.A2759PTOV4.Str	dirGeneral
	PROT.A2759PTOV4.Str	dirPhsA
	PROT.A2759PTOV4.Str	dirPhsB
	PROT.A2759PTOV4.Str	dirPhsC
	PROT.A2759PTUV4.Str	dirGeneral
	PROT.A2759PTUV4.Str	dirPhsA
	PROT.A2759PTUV4.Str	dirPhsB
	PROT.A2759PTUV4.Str	dirPhsC
	PROT.A47PTOV1.Str	dirGeneral
	PROT.A47PTOV2.Str	dirGeneral
	PROT.A81PTOF1.Str	dirGeneral
	PROT.A81PTUF1.Str	dirGeneral
	PROT.A81PTOF2.Str	dirGeneral
	PROT.A81PTUF2.Str	dirGeneral
	PROT.A46PhRevPTOC1.Str	dirGeneral
	PROT.A50BfRBRF1.Str	dirGeneral
Out of Service		
	PROT.LLN0.Mod	stVal
	PROT.LLN0.Beh	stVal
	PROT.A50BCLPTOC1.Beh	stVal
	PROT.A49PTTR1.Beh	stVal
	PROT.A49PMRI1.Beh	stVal
	PROT.A14PTOC1.Beh	stVal

	PROT.A14PTOC2.Beh	stVal
	PROT.A14PTOC3.Beh	stVal
	PROT.A14PTOC4.Beh	stVal
	PROT.A46PUPTOC1.Beh	stVal
	PROT.A66PMRI1.Beh	stVal
	PROT.A37PTUC1.Beh	stVal
	PROT.A37PTUC2.Beh	stVal
	PROT.A51PTOC1.Beh	stVal
	PROT.A51PTOC2.Beh	stVal
	PROT.A50PTOC1.Beh	stVal
	PROT.A50PTOC2.Beh	stVal
	PROT.A51nPTOC1.Beh	stVal
	PROT.A51nPTOC2.Beh	stVal
	PROT.A50nPTOC1.Beh	stVal
	PROT.A50nPTOC2.Beh	stVal
	PROT.A51gPTOC1.Beh	stVal
	PROT.A51gPTOC2.Beh	stVal
	PROT.A50gPTOC1.Beh	stVal
	PROT.A50gPTOC2.Beh	stVal
	PROT.A87REFPTOC1.Beh	stVal
	PROT.A48PMSS1.Beh	stVal
	PROT.A48PMSS2.Beh	stVal
	PROT.A2759PTOV1.Beh	stVal
	PROT.A2759PTUV1.Beh	stVal
	PROT.A2759PTOV2.Beh	stVal
	PROT.A2759PTUV2.Beh	stVal
	PROT.A2759PTOV3.Beh	stVal
	PROT.A2759PTUV3.Beh	stVal
	PROT.A2759PTOV4.Beh	stVal
	PROT.A2759PTUV4.Beh	stVal
	PROT.A47PTOV1.Beh	stVal
	PROT.A47PTOV2.Beh	stVal
	PROT.A81PTOF1.Beh	stVal
	PROT.A81PTUF1.Beh	stVal
	PROT.A81PTOF2.Beh	stVal
	PROT.A81PTUF2.Beh	stVal

	PROT.A32PDOP1.Beh	stVal
	PROT.A32PDUP1.Beh	stVal
	PROT.A32PDOP2.Beh	stVal
	PROT.A32PDUP2.Beh	stVal
	PROT.A32SPDOP1.Beh	stVal
	PROT.A32SPDUP1.Beh	stVal
	PROT.A32SPDOP2.Beh	stVal
	PROT.A32SPDUP2.Beh	stVal
	PROT.A55PDOP1.Beh	stVal
	PROT.A55PDUP1.Beh	stVal
	PROT.A55PDOP2.Beh	stVal
	PROT.A55PDUP2.Beh	stVal
	PROT.A46PhRevPTOC1.Beh	stVal
	PROT.A50BfRBRF1.Beh	stVal
	PROT.CntDelGGIO1.Beh	stVal
	PROT.PTRC1.Beh	stVal
	CTRL.LLN0.Mod	stVal
	CTRL.LLN0.Beh	stVal
	CTRL.Q0CSWI1.Beh	stVal
	CTRL.Q0XCBR1.Beh	stVal
	CTRL.Q0CILO1.Beh	stVal
	CTRL.BI6GGIO1.Beh	stVal
	CTRL.BO8GGIO1.Beh	stVal
	CTRL.L9GGIO1.Beh	stVal
	CTRL.V8GGIO1.Beh	stVal
	CTRL.E4GGIO1.Beh	stVal
	CTRL.SPi64GGIO1.Beh	stVal
	CTRL.SPo32GGIO1.Beh	stVal
	CTRL.SPDOsGGIO1.Beh	stVal
	CTRL.SPDOsGGIO2.Beh	stVal
	CTRL.SPDOsGGIO3.Beh	stVal
	CTRL.SPDOsGGIO4.Beh	stVal
	CTRL.SPDOesGGIO1.Beh	stVal
	CTRL.SPDOesGGIO2.Beh	stVal
	CTRL.SPDOesGGIO3.Beh	stVal
	CTRL.SPDOesGGIO4.Beh	stVal

	CTRL.DPDOnsGGIO1.Beh	stVal
	CTRL.DPDOnsGGIO2.Beh	stVal
	CTRL.DPDOnsGGIO3.Beh	stVal
	CTRL.DPDOnsGGIO4.Beh	stVal
	CTRL.DPDOesGGIO1.Beh	stVal
	CTRL.DPDOesGGIO2.Beh	stVal
	CTRL.DPDOesGGIO3.Beh	stVal
	CTRL.DPDOesGGIO4.Beh	stVal
	CTRL.DPi8GGIO1.Beh	stVal
	CTRL.DPi8GGIO2.Beh	stVal
	CTRL.DPo8GGIO1.Beh	stVal
	CTRL.DPo8GGIO2.Beh	stVal
	MEAS.LLN0.Mod	stVal
	MEAS.LLN0.Beh	stVal
	MEAS.I_MSQI1.Beh	stVal
	MEAS.V_MSQI1.Beh	stVal
	MEAS.MeanMMXU1.Beh	stVal
	MEAS.MinMMXU1.Beh	stVal
	MEAS.MaxMMXU1.Beh	stVal
	MEAS.MMXU1.Beh	stVal
	DR.LLN0.Mod	stVal
	DR.LLN0.Beh	stVal
	DR.RDRE1.Beh	stVal
Protection Active		
	PROT.LLN0.Mod	stVal
	PROT.LLN0.Beh	stVal
	PROT.A49PTTR1.Beh	stVal
	PROT.A50BfRBFR1.Beh	stVal
	PROT.PTRC1.Mod	stVal
	PROT.PTRC1.Beh	stVal
Protection Healthy		
	PROT.LLN0.Health	stVal
	PROT.A50BCLPTOC1.Health	stVal
	PROT.A49PTTR1.Health	stVal
	PROT.A49PMRI1.Health	stVal
	PROT.A14PTOC1.Health	stVal

	PROT.A14PTOC2.Health	stVal
	PROT.A14PTOC3.Health	stVal
	PROT.A14PTOC4.Health	stVal
	PROT.A46PUPTOC1.Health	stVal
	PROT.A66PMRI1.Health	stVal
	PROT.A37PTUC1.Health	stVal
	PROT.A37PTUC2.Health	stVal
	PROT.A51PTOC1.Health	stVal
	PROT.A51PTOC2.Health	stVal
	PROT.A50PTOC1.Health	stVal
	PROT.A50PTOC2.Health	stVal
	PROT.A51nPTOC1.Health	stVal
	PROT.A51nPTOC2.Health	stVal
	PROT.A50nPTOC1.Health	stVal
	PROT.A50nPTOC2.Health	stVal
	PROT.A51gPTOC1.Health	stVal
	PROT.A51gPTOC2.Health	stVal
	PROT.A50gPTOC1.Health	stVal
	PROT.A50gPTOC2.Health	stVal
	PROT.A87REFPTOC1.Health	stVal
	PROT.A48PMSS1.Health	stVal
	PROT.A48PMSS2.Health	stVal
	PROT.A2759PTOV1.Health	stVal
	PROT.A2759PTUV1.Health	stVal
	PROT.A2759PTOV2.Health	stVal
	PROT.A2759PTUV2.Health	stVal
	PROT.A2759PTOV3.Health	stVal
	PROT.A2759PTUV3.Health	stVal
	PROT.A2759PTOV4.Health	stVal
	PROT.A2759PTUV4.Health	stVal
	PROT.A47PTOV1.Health	stVal
	PROT.A47PTOV2.Health	stVal
	PROT.A81PTOF1.Health	stVal
	PROT.A81PTUF1.Health	stVal
	PROT.A81PTOF2.Health	stVal
	PROT.A81PTUF2.Health	stVal

	PROT.A32PDOP1.Health	stVal
	PROT.A32PDUP1.Health	stVal
	PROT.A32PDOP2.Health	stVal
	PROT.A32PDUP2.Health	stVal
	PROT.A32SPDOP1.Health	stVal
	PROT.A32SPDUP1.Health	stVal
	PROT.A32SPDOP2.Health	stVal
	PROT.A32SPDUP2.Health	stVal
	PROT.A55PDOP1.Health	stVal
	PROT.A55PDUP1.Health	stVal
	PROT.A55PDOP2.Health	stVal
	PROT.A55PDUP2.Health	stVal
	PROT.A46PhRevPTOC1.Health	stVal
	PROT.A50BfRBRF1.Health	stVal
	PROT.CntDelGGIO1.Health	stVal
	PROT.PTRC1.Health	stVal
	CTRL.LLN0.Mod	stVal
	CTRL.LLN0.Beh	stVal
	CTRL.LLN0.Health	stVal
	CTRL.Q0CSWI1.Health	stVal
	CTRL.Q0XCBR1.Health	stVal
	CTRL.Q0CILO1.Health	stVal
	CTRL.BI6GGIO1.Health	stVal
	CTRL.BO8GGIO1.Health	stVal
	CTRL.L9GGIO1.Health	stVal
	CTRL.V8GGIO1.Health	stVal
	CTRL.E4GGIO1.Health	stVal
	CTRL.SPi64GGIO1.Health	stVal
	CTRL.SPo32GGIO1.Health	stVal
	CTRL.SPDOsGGIO1.Health	stVal
	CTRL.SPDOsGGIO2.Health	stVal
	CTRL.SPDOsGGIO3.Health	stVal
	CTRL.SPDOsGGIO4.Health	stVal
	CTRL.SPDOesGGIO1.Health	stVal
	CTRL.SPDOesGGIO2.Health	stVal
	CTRL.SPDOesGGIO3.Health	stVal

	CTRL.SPDOesGGIO4.Health	stVal
	CTRL.DPDOnsGGIO1.Health	stVal
	CTRL.DPDOnsGGIO2.Health	stVal
	CTRL.DPDOnsGGIO3.Health	stVal
	CTRL.DPDOnsGGIO4.Health	stVal
	CTRL.DPDOesGGIO1.Health	stVal
	CTRL.DPDOesGGIO2.Health	stVal
	CTRL.DPDOesGGIO3.Health	stVal
	CTRL.DPDOesGGIO4.Health	stVal
	CTRL.DPi8GGIO1.Health	stVal
	CTRL.DPi8GGIO2.Health	stVal
	CTRL.DPo8GGIO1.Health	stVal
	CTRL.DPo8GGIO2.Health	stVal
	MEAS.LLN0.Mod	stVal
	MEAS.LLN0.Beh	stVal
	MEAS.LLN0.Health	stVal
	MEAS.I_MSQI1.Health	stVal
	MEAS.V_MSQI1.Health	stVal
	MEAS.MeanMMXU1.Health	stVal
	MEAS.MinMMXU1.Health	stVal
	MEAS.MaxMMXU1.Health	stVal
	MEAS.MMXU1.Health	stVal
	DR.LLN0.Mod	stVal
	DR.LLN0.Beh	stVal
	DR.LLN0.Health	stVal
	DR.RDRE1.Mod	stVal
	DR.RDRE1.Beh	stVal
	DR.RDRE1.Health	stVal
Software Revision		
	PROT.LLN0.NamPlt	swRev
	CTRL.LLN0.NamPlt	swRev
	MEAS.LLN0.NamPlt	swRev
	DR.LLN0.NamPlt	swRev
Vendor Name		
	PROT.LLN0.NamPlt	vendor
	CTRL.LLN0.NamPlt	vendor

	MEAS.LLN0.NamPlt	vendor
	DR.LLN0.NamPlt	vendor

## 1.2

Reyrolle	DOI	DA Group

## 1.3 BREAK CAP MENU

Reyrolle	DOI	DA Group
50BCL Enabled		
	PROT.A50BCLPTOC1.Mod	stVal
	PROT.A50BCLPTOC1.Beh	stVal
50BCL Operated		
	PROT.A50BCLPTOC1.Op	general
50BCL PhA Pickup		
	PROT.A50BCLPTOC1.Str	general
	PROT.A50BCLPTOC1.Str	phsA
50BCL PhB Pickup		
	PROT.A50BCLPTOC1.Str	general
	PROT.A50BCLPTOC1.Str	phsB
50BCL PhC Pickup		
	PROT.A50BCLPTOC1.Str	general
	PROT.A50BCLPTOC1.Str	phsC
Inhibit 50BCL		
	PROT.A50BCLPTOC1.Mod	stVal
	PROT.A50BCLPTOC1.Beh	stVal

## 1.4 CB FAIL

Reyrolle	DOI	DA Group
50BF Enabled		
	PROT.A50BfRBRF1.Mod	stVal
	PROT.A50BfRBRF1.Beh	stVal
50BF Pickup		

	PROT.A50BfRBRF1.Str	general
50BF-1		
	PROT.A50BfRBRF1.Opln	general
50BF-2		
	PROT.A50BfRBRF1.OpEx	general
Inhibit 50BF		
	PROT.A50BfRBRF1.Mod	stVal
	PROT.A50BfRBRF1.Beh	stVal

## 1.5 Change Group

Reyrolle	DOI	DA Group
Active Setting Group 1		
	PROT.LLN0.SGCB	ActSG
	PROT.LLN0.SGCB	LActTm
Active Setting Group 2		
	PROT.LLN0.SGCB	ActSG
	PROT.LLN0.SGCB	LActTm
Active Setting Group 3		
	PROT.LLN0.SGCB	ActSG
	PROT.LLN0.SGCB	LActTm
Active Setting Group 4		
	PROT.LLN0.SGCB	ActSG
	PROT.LLN0.SGCB	LActTm
Number of 61850 Controllable Setting Groups		
	PROT.LLN0.SGCB	NumOfSG

## 1.6 CURRENT METERS

Reyrolle	DOI	DA Group
Sequence Components I Seq NPS		
	MEAS.I_MSQI1.SeqA	c2.instCVal.mag.f
	MEAS.I_MSQI1.SeqA	c2.cVal.mag.f
	MEAS.I_MSQI1.SeqA	c2.units.SIUnit

	MEAS.I_MSQI1.SeqA	c2.units.multiplier
Sequence Components I Seq PPS		
	MEAS.I_MSQI1.SeqA	c1.instCVal.mag.f
	MEAS.I_MSQI1.SeqA	c1.cVal.mag.f
	MEAS.I_MSQI1.SeqA	c1.units.SIUnit
	MEAS.I_MSQI1.SeqA	c1.units.multiplier
Sequence Components I Seq ZPS		
	MEAS.I_MSQI1.SeqA	c3.instCVal.mag.f
	MEAS.I_MSQI1.SeqA	c3.cVal.mag.f
	MEAS.I_MSQI1.SeqA	c3.units.SIUnit
	MEAS.I_MSQI1.SeqA	c3.units.multiplier

## 1.7 Delta Trip Counters

Reyrolle	DOI	DA Group
CB Delta Trip Count		
	PROT.CntDelGGIO1.ISCSO1	stVal
CB Delta Trip Count Enabled		
	PROT.CntDelGGIO1.Mod	stVal
	PROT.CntDelGGIO1.Beh	stVal
CB Delta Trip Count Operated		
	PROT.CntDelGGIO1.SPCSO	stVal
CB Delta Trip Count Target		
	PROT.CntDelGGIO1.ISCSO2	stVal

## 1.8 DERIVED EARTH FAULT MENU

Reyrolle	DOI	DA Group
50N-1 Dir Pickup		
	PROT.A50nPtoc1.Str	dirGeneral
50N-1 Enabled		
	PROT.A50nPtoc1.Mod	stVal
	PROT.A50nPtoc1.Beh	stVal
50N-1 Operated		
	PROT.A50nPtoc1.Op	general

50N-1 Pickup		
	PROT.A50nPTOC1.Str	general
50N-2 Dir Pickup		
	PROT.A50nPTOC2.Str	dirGeneral
50N-2 Enabled		
	PROT.A50nPTOC2.Mod	stVal
	PROT.A50nPTOC2.Beh	stVal
50N-2 Operated		
	PROT.A50nPTOC2.Op	general
50N-2 Pickup		
	PROT.A50nPTOC2.Str	general
51N-1 Dir Pickup		
	PROT.A51nPTOC1.Str	dirGeneral
51N-1 Enabled		
	PROT.A51nPTOC1.Mod	stVal
	PROT.A51nPTOC1.Beh	stVal
51N-1 Operated		
	PROT.A51nPTOC1.Op	general
51N-1 Pickup		
	PROT.A51nPTOC1.Str	general
51N-2 Dir Pickup		
	PROT.A51nPTOC2.Str	dirGeneral
51N-2 Enabled		
	PROT.A51nPTOC2.Mod	stVal
	PROT.A51nPTOC2.Beh	stVal
51N-2 Operated		
	PROT.A51nPTOC2.Op	general
51N-2 Pickup		
	PROT.A51nPTOC2.Str	general
Inhibit 50N-1		
	PROT.A50nPTOC1.Mod	stVal
	PROT.A50nPTOC1.Beh	stVal
Inhibit 50N-2		
	PROT.A50nPTOC2.Mod	stVal
	PROT.A50nPTOC2.Beh	stVal
Inhibit 51N-1		

	PROT.A51nPtoc1.Mod	stVal
	PROT.A51nPtoc1.Beh	stVal
Inhibit 51N-2		
	PROT.A51nPtoc2.Mod	stVal
	PROT.A51nPtoc2.Beh	stVal

## 1.9 Disturbance Recorder

Reyrolle	DOI	DA Group
Fault Number		
	DR.RDRE1.FltNum	stVal
Grid Fault Number		
	DR.RDRE1.GriFltNum	stVal
Recording Made		
	DR.RDRE1.RcdMade	stVal

## 1.10 Double Point Controls (Enhanced Security)

Reyrolle	DOI	DA Group
DPDOes 1 Control		
	CTRL.DPDOesGGIO1.DPCSO	Oper.ctlVal
DPDOes 1 Status		
	CTRL.DPDOesGGIO1.DPCSO	stVal
DPDOes 2 Control		
	CTRL.DPDOesGGIO2.DPCSO	Oper.ctlVal
DPDOes 2 Status		
	CTRL.DPDOesGGIO2.DPCSO	stVal
DPDOes 3 Control		
	CTRL.DPDOesGGIO3.DPCSO	Oper.ctlVal
DPDOes 3 Status		
	CTRL.DPDOesGGIO3.DPCSO	stVal
DPDOes 4 Control		
	CTRL.DPDOesGGIO4.DPCSO	Oper.ctlVal
DPDOes 4 Status		
	CTRL.DPDOesGGIO4.DPCSO	stVal

## 1.11 Double Point Controls (Normal Security)

Reyrolle	DOI	DA Group
DPDOns 1 Control		
	CTRL.DPDOnsGGIO1.DPCSO	Oper.ctlVal
DPDOns 1 Status		
	CTRL.DPDOnsGGIO1.DPCSO	stVal
DPDOns 2 Control		
	CTRL.DPDOnsGGIO2.DPCSO	Oper.ctlVal
DPDOns 2 Status		
	CTRL.DPDOnsGGIO2.DPCSO	stVal
DPDOns 3 Control		
	CTRL.DPDOnsGGIO3.DPCSO	Oper.ctlVal
DPDOns 3 Status		
	CTRL.DPDOnsGGIO3.DPCSO	stVal
DPDOns 4 Control		
	CTRL.DPDOnsGGIO4.DPCSO	Oper.ctlVal
DPDOns 4 Status		
	CTRL.DPDOnsGGIO4.DPCSO	stVal

## 1.12 Double Point Inputs

Reyrolle	DOI	DA Group
DPI8GGIO1 DPCSO 1		
	CTRL.DPI8GGIO1.DPCSO1	ctlVal
DPI8GGIO1 DPCSO 2		
	CTRL.DPI8GGIO1.DPCSO2	ctlVal
DPI8GGIO1 DPCSO 3		
	CTRL.DPI8GGIO1.DPCSO3	ctlVal
DPI8GGIO1 DPCSO 4		
	CTRL.DPI8GGIO1.DPCSO4	ctlVal
DPI8GGIO1 DPCSO 5		
	CTRL.DPI8GGIO1.DPCSO5	ctlVal
DPI8GGIO1 DPCSO 6		
	CTRL.DPI8GGIO1.DPCSO6	ctlVal
DPI8GGIO1 DPCSO 7		
	CTRL.DPI8GGIO1.DPCSO7	ctlVal
DPI8GGIO1 DPCSO 8		
	CTRL.DPI8GGIO1.DPCSO8	ctlVal
DPI8GGIO2 DPCSO 1		
	CTRL.DPI8GGIO2.DPCSO1	ctlVal
DPI8GGIO2 DPCSO 2		
	CTRL.DPI8GGIO2.DPCSO2	ctlVal
DPI8GGIO2 DPCSO 3		
	CTRL.DPI8GGIO2.DPCSO3	ctlVal
DPI8GGIO2 DPCSO 4		
	CTRL.DPI8GGIO2.DPCSO4	ctlVal
DPI8GGIO2 DPCSO 5		
	CTRL.DPI8GGIO2.DPCSO5	ctlVal
DPI8GGIO2 DPCSO 6		
	CTRL.DPI8GGIO2.DPCSO6	ctlVal
DPI8GGIO2 DPCSO 7		
	CTRL.DPI8GGIO2.DPCSO7	ctlVal
DPI8GGIO2 DPCSO 8		
	CTRL.DPI8GGIO2.DPCSO8	ctlVal

## 1.13 Double Point Outputs

Reyrolle	DOI	DA Group
DPo8GGIO1 Ind 1		
	CTRL.DPo8GGIO1.DPCSO1	stVal
DPo8GGIO1 Ind 2		
	CTRL.DPo8GGIO1.DPCSO2	stVal
DPo8GGIO1 Ind 3		
	CTRL.DPo8GGIO1.DPCSO3	stVal
DPo8GGIO1 Ind 4		
	CTRL.DPo8GGIO1.DPCSO4	stVal
DPo8GGIO1 Ind 5		
	CTRL.DPo8GGIO1.DPCSO5	stVal
DPo8GGIO1 Ind 6		
	CTRL.DPo8GGIO1.DPCSO6	stVal
DPo8GGIO1 Ind 7		
	CTRL.DPo8GGIO1.DPCSO7	stVal
DPo8GGIO1 Ind 8		
	CTRL.DPo8GGIO1.DPCSO8	stVal
DPo8GGIO2 Ind 1		
	CTRL.DPo8GGIO2.DPCSO1	stVal
DPo8GGIO2 Ind 2		
	CTRL.DPo8GGIO2.DPCSO2	stVal
DPo8GGIO2 Ind 3		
	CTRL.DPo8GGIO2.DPCSO3	stVal
DPo8GGIO2 Ind 4		
	CTRL.DPo8GGIO2.DPCSO4	stVal
DPo8GGIO2 Ind 5		
	CTRL.DPo8GGIO2.DPCSO5	stVal
DPo8GGIO2 Ind 6		
	CTRL.DPo8GGIO2.DPCSO6	stVal
DPo8GGIO2 Ind 7		
	CTRL.DPo8GGIO2.DPCSO7	stVal
DPo8GGIO2 Ind 8		
	CTRL.DPo8GGIO2.DPCSO8	stVal

## 1.14 General Trip Information

Reyrolle	DOI	DA Group
CB Trip		
	PROT.PTRC1.Tr	general
CB Trip Count		
	PROT.PTRC1.OpCntRs	stVal
General Operate		
	PROT.PTRC1.Op	general
General Pickup		
	PROT.PTRC1.Str	general
	PROT.PTRC1.Str	dirGeneral
General Pickup & Fwd Direction		
	PROT.PTRC1.Str	dirGeneral
General Pickup & Rev Direction		
	PROT.PTRC1.Str	dirGeneral
Set CB Trip Count		
	PROT.PTRC1.OpCntRs	Oper.ctlVal

## 1.15 MEASURED EARTH FAULT MENU

Reyrolle	DOI	DA Group
50G-1 Dir Pickup		
	PROT.A50gPTOC1.Str	dirGeneral
50G-1 Enabled		
	PROT.A50gPTOC1.Mod	stVal
	PROT.A50gPTOC1.Beh	stVal
50G-1 Operated		
	PROT.A50gPTOC1.Op	general
50G-1 Pickup		
	PROT.A50gPTOC1.Str	general
50G-2 Dir Pickup		
	PROT.A50gPTOC2.Str	dirGeneral
50G-2 Enabled		
	PROT.A50gPTOC2.Mod	stVal
	PROT.A50gPTOC2.Beh	stVal

50G-2 Operated		
	PROT.A50gPTOC2.Op	general
50G-2 Pickup		
	PROT.A50gPTOC2.Str	general
51G-1 Dir Pickup		
	PROT.A51gPTOC1.Str	dirGeneral
51G-1 Enabled		
	PROT.A51gPTOC1.Mod	stVal
	PROT.A51gPTOC1.Beh	stVal
51G-1 Operated		
	PROT.A51gPTOC1.Op	general
51G-1 Pickup		
	PROT.A51gPTOC1.Str	general
51G-2 Dir Pickup		
	PROT.A51gPTOC2.Str	dirGeneral
51G-2 Enabled		
	PROT.A51gPTOC2.Mod	stVal
	PROT.A51gPTOC2.Beh	stVal
51G-2 Operated		
	PROT.A51gPTOC2.Op	general
51G-2 Pickup		
	PROT.A51gPTOC2.Str	general
Inhibit 50G-1		
	PROT.A50gPTOC1.Mod	stVal
	PROT.A50gPTOC1.Beh	stVal
Inhibit 50G-2		
	PROT.A50gPTOC2.Mod	stVal
	PROT.A50gPTOC2.Beh	stVal
Inhibit 51G-1		
	PROT.A51gPTOC1.Mod	stVal
	PROT.A51gPTOC1.Beh	stVal
Inhibit 51G-2		
	PROT.A51gPTOC2.Mod	stVal
	PROT.A51gPTOC2.Beh	stVal

## 1.16 MEASUREMENT ()

Reyrolle	DOI	DA Group
Active Power(P) 3Phase		
	MEAS.MMXU1.TotW	mag.f
Active Power(P) Phase A		
	MEAS.MMXU1.W	phsA.cVal.mag.f
Active Power(P) Phase B		
	MEAS.MMXU1.W	phsB.cVal.mag.f
Active Power(P) Phase C		
	MEAS.MMXU1.W	phsC.cVal.mag.f
Apparent Power(S) 3Phase		
	MEAS.MMXU1.TotVA	mag.f
Apparent Power(S) Phase A		
	MEAS.MMXU1.VA	phsA.cVal.mag.f
Apparent Power(S) Phase B		
	MEAS.MMXU1.VA	phsB.cVal.mag.f
Apparent Power(S) Phase C		
	MEAS.MMXU1.VA	phsC.cVal.mag.f
Calculated Earth Current(In)		
	MEAS.MMXU1.A	res.cVal.mag.f
Calculated Earth Voltage (Vn)		
	MEAS.MMXU1.PhV	res.cVal.mag.f
Frequency(F)		
	MEAS.MMXU1.Hz	mag.f
Ia		
	MEAS.MMXU1.A	phsA.cVal.mag.f
Ib		
	MEAS.MMXU1.A	phsB.cVal.mag.f
Ic		
	MEAS.MMXU1.A	phsC.cVal.mag.f
Measured Earth Current(Ig)		
	MEAS.MMXU1.A	neut.cVal.mag.f
Power Factor(PF) 3Phase		
	MEAS.MMXU1.TotPF	mag.f
Power Factor(PF) Phase A		

	MEAS.MMXU1.PF	phsA.cVal.mag.f
Power Factor(PF) Phase B		
	MEAS.MMXU1.PF	phsB.cVal.mag.f
Power Factor(PF) Phase C		
	MEAS.MMXU1.PF	phsC.cVal.mag.f
Reactive Power(Q) 3Phase		
	MEAS.MMXU1.TotVAr	mag.f
Reactive Power(Q) Phase A		
	MEAS.MMXU1.VAr	phsA.cVal.mag.f
Reactive Power(Q) Phase B		
	MEAS.MMXU1.VAr	phsB.cVal.mag.f
Reactive Power(Q) Phase C		
	MEAS.MMXU1.VAr	phsC.cVal.mag.f
Va		
	MEAS.MMXU1.PhV	phsA.cVal.mag.f
Vab		
	MEAS.MMXU1.PPV	phsAB.cVal.mag.f
Vb		
	MEAS.MMXU1.PhV	phsB.cVal.mag.f
Vbc		
	MEAS.MMXU1.PPV	phsBC.cVal.mag.f
Vc		
	MEAS.MMXU1.PhV	phsC.cVal.mag.f
Vca		
	MEAS.MMXU1.PPV	phsCA.cVal.mag.f

## 1.17 MEASUREMENT (Max)

Reyrolle	DOI	DA Group
Max Active Power(P) 3Phase		
	MEAS.MaxMMXU1.TotW	mag.f
Max Apparent Power(S) 3Phase		
	MEAS.MaxMMXU1.TotVA	mag.f
Max Frequency(F)		
	MEAS.MaxMMXU1.Hz	mag.f
Max Ia		
	MEAS.MaxMMXU1.A	phsA.cVal.mag.f
Max Ib		
	MEAS.MaxMMXU1.A	phsB.cVal.mag.f
Max Ic		
	MEAS.MaxMMXU1.A	phsC.cVal.mag.f
Max Reactive Power(Q) 3Phase		
	MEAS.MaxMMXU1.TotVAr	mag.f
Max Va		
	MEAS.MaxMMXU1.PhV	phsA.cVal.mag.f
Max Vab		
	MEAS.MaxMMXU1.PPV	phsAB.cVal.mag.f
Max Vb		
	MEAS.MaxMMXU1.PhV	phsB.cVal.mag.f
Max Vbc		
	MEAS.MaxMMXU1.PPV	phsBC.cVal.mag.f
Max Vc		
	MEAS.MaxMMXU1.PhV	phsC.cVal.mag.f
Max Vca		
	MEAS.MaxMMXU1.PPV	phsCA.cVal.mag.f

## 1.18 MEASUREMENT (Mean)

Reyrolle	DOI	DA Group
Mean Active Power(P) 3Phase		
	MEAS.MeanMMXU1.TotW	mag.f
Mean Apparent Power(S) 3Phase		
	MEAS.MeanMMXU1.TotVA	mag.f
Mean Frequency(F)		
	MEAS.MeanMMXU1.Hz	mag.f
Mean Ia		
	MEAS.MeanMMXU1.A	phsA.cVal.mag.f
Mean Ib		
	MEAS.MeanMMXU1.A	phsB.cVal.mag.f
Mean Ic		
	MEAS.MeanMMXU1.A	phsC.cVal.mag.f
Mean Reactive Power(Q) 3Phase		
	MEAS.MeanMMXU1.TotVAr	mag.f
Mean Va		
	MEAS.MeanMMXU1.PhV	phsA.cVal.mag.f
Mean Vab		
	MEAS.MeanMMXU1.PPV	phsAB.cVal.mag.f
Mean Vb		
	MEAS.MeanMMXU1.PhV	phsB.cVal.mag.f
Mean Vbc		
	MEAS.MeanMMXU1.PPV	phsBC.cVal.mag.f
Mean Vc		
	MEAS.MeanMMXU1.PhV	phsC.cVal.mag.f
Mean Vca		
	MEAS.MeanMMXU1.PPV	phsCA.cVal.mag.f

## 1.19 MEASUREMENT (Min)

Reyrolle	DOI	DA Group
Min Active Power(P) 3Phase		
	MEAS.MinMMXU1.TotW	mag.f
Min Apparent Power(S) 3Phase		
	MEAS.MinMMXU1.TotVA	mag.f
Min Frequency(F)		
	MEAS.MinMMXU1.Hz	mag.f
Min Ia		
	MEAS.MinMMXU1.A	phsA.cVal.mag.f
Min Ib		
	MEAS.MinMMXU1.A	phsB.cVal.mag.f
Min Ic		
	MEAS.MinMMXU1.A	phsC.cVal.mag.f
Min Reactive Power(Q) 3Phase		
	MEAS.MinMMXU1.TotVAr	mag.f
Min Va		
	MEAS.MinMMXU1.PhV	phsA.cVal.mag.f
Min Vab		
	MEAS.MinMMXU1.PPV	phsAB.cVal.mag.f
Min Vb		
	MEAS.MinMMXU1.PhV	phsB.cVal.mag.f
Min Vbc		
	MEAS.MinMMXU1.PPV	phsBC.cVal.mag.f
Min Vc		
	MEAS.MinMMXU1.PhV	phsC.cVal.mag.f
Min Vca		
	MEAS.MinMMXU1.PPV	phsCA.cVal.mag.f

## 1.20 NPS OVERVOLTAGE

Reyrolle	DOI	DA Group
47-1 Enabled		
	PROT.A47PTOV1.Mod	stVal
	PROT.A47PTOV1.Beh	stVal
47-1 Operated		
	PROT.A47PTOV1.Op	general
47-1 Pickup		
	PROT.A47PTOV1.Str	general
47-2 Enabled		
	PROT.A47PTOV2.Mod	stVal
	PROT.A47PTOV2.Beh	stVal
47-2 Operated		
	PROT.A47PTOV2.Op	general
47-2 Pickup		
	PROT.A47PTOV2.Str	general
Inhibit 47-1		
	PROT.A47PTOV1.Mod	stVal
	PROT.A47PTOV1.Beh	stVal
Inhibit 47-2		
	PROT.A47PTOV2.Mod	stVal
	PROT.A47PTOV2.Beh	stVal

## 1.21 OVERCURRENT MENU

Reyrolle	DOI	DA Group
50-1 Enabled		
	PROT.A50PTOC1.Mod	stVal
	PROT.A50PTOC1.Beh	stVal
50-1 Operated		
	PROT.A50PTOC1.Op	general
50-1 PhA Dir Pickup		
	PROT.A50PTOC1.Str	dirGeneral
	PROT.A50PTOC1.Str	dirPhsA
50-1 PhA Pickup		

	PROT.A50PTOC1.Str	general
	PROT.A50PTOC1.Str	phsA
50-1 PhB Dir Pickup		
	PROT.A50PTOC1.Str	dirGeneral
	PROT.A50PTOC1.Str	dirPhsB
50-1 PhB Pickup		
	PROT.A50PTOC1.Str	general
	PROT.A50PTOC1.Str	phsB
50-1 PhC Dir Pickup		
	PROT.A50PTOC1.Str	dirGeneral
	PROT.A50PTOC1.Str	dirPhsC
50-1 PhC Pickup		
	PROT.A50PTOC1.Str	general
	PROT.A50PTOC1.Str	phsC
50-2 Enabled		
	PROT.A50PTOC2.Mod	stVal
	PROT.A50PTOC2.Beh	stVal
50-2 Operated		
	PROT.A50PTOC2.Op	general
50-2 PhA Dir Pickup		
	PROT.A50PTOC2.Str	dirGeneral
	PROT.A50PTOC2.Str	dirPhsA
50-2 PhA Pickup		
	PROT.A50PTOC2.Str	general
	PROT.A50PTOC2.Str	phsA
50-2 PhB Dir Pickup		
	PROT.A50PTOC2.Str	dirGeneral
	PROT.A50PTOC2.Str	dirPhsB
50-2 PhB Pickup		
	PROT.A50PTOC2.Str	general
	PROT.A50PTOC2.Str	phsB
50-2 PhC Dir Pickup		
	PROT.A50PTOC2.Str	dirGeneral
	PROT.A50PTOC2.Str	dirPhsC
50-2 PhC Pickup		
	PROT.A50PTOC2.Str	general

	PROT.A50PTOC2.Str	phsC
51-1 Enabled		
	PROT.A51PTOC1.Mod	stVal
	PROT.A51PTOC1.Beh	stVal
51-1 Operated		
	PROT.A51PTOC1.Op	general
51-1 PhA Dir Pickup		
	PROT.A51PTOC1.Str	dirGeneral
	PROT.A51PTOC1.Str	dirPhsA
51-1 PhA Pickup		
	PROT.A51PTOC1.Str	general
	PROT.A51PTOC1.Str	phsA
51-1 PhB Dir Pickup		
	PROT.A51PTOC1.Str	dirGeneral
	PROT.A51PTOC1.Str	dirPhsB
51-1 PhB Pickup		
	PROT.A51PTOC1.Str	general
	PROT.A51PTOC1.Str	phsB
51-1 PhC Dir Pickup		
	PROT.A51PTOC1.Str	dirGeneral
	PROT.A51PTOC1.Str	dirPhsC
51-1 PhC Pickup		
	PROT.A51PTOC1.Str	general
	PROT.A51PTOC1.Str	phsC
51-2 Enabled		
	PROT.A51PTOC2.Mod	stVal
	PROT.A51PTOC2.Beh	stVal
51-2 Operated		
	PROT.A51PTOC2.Op	general
51-2 PhA Dir Pickup		
	PROT.A51PTOC2.Str	dirGeneral
	PROT.A51PTOC2.Str	dirPhsA
51-2 PhA Pickup		
	PROT.A51PTOC2.Str	general
	PROT.A51PTOC2.Str	phsA
51-2 PhB Dir Pickup		

	PROT.A51PTOC2.Str	dirGeneral
	PROT.A51PTOC2.Str	dirPhsB
51-2 PhB Pickup		
	PROT.A51PTOC2.Str	general
	PROT.A51PTOC2.Str	phsB
51-2 PhC Dir Pickup		
	PROT.A51PTOC2.Str	dirGeneral
	PROT.A51PTOC2.Str	dirPhsC
51-2 PhC Pickup		
	PROT.A51PTOC2.Str	general
	PROT.A51PTOC2.Str	phsC
Inhibit 50-1		
	PROT.A50PTOC1.Mod	stVal
	PROT.A50PTOC1.Beh	stVal
Inhibit 50-2		
	PROT.A50PTOC2.Mod	stVal
	PROT.A50PTOC2.Beh	stVal
Inhibit 51-1		
	PROT.A51PTOC1.Mod	stVal
	PROT.A51PTOC1.Beh	stVal
Inhibit 51-2		
	PROT.A51PTOC2.Mod	stVal
	PROT.A51PTOC2.Beh	stVal

## 1.22 PHASE U/O VOLTAGE

Reyrolle	DOI	DA Group
27/59-1 Enabled		
	PROT.A2759PTOV1.Mod	stVal
	PROT.A2759PTOV1.Beh	stVal
	PROT.A2759PTUV1.Mod	stVal
	PROT.A2759PTUV1.Beh	stVal
27/59-1 Operated		
	PROT.A2759PTOV1.Op	general
	PROT.A2759PTUV1.Op	general
27/59-1 PhA Pickup		

	PROT.A2759PTOV1.Str	general
	PROT.A2759PTOV1.Str	phsA
	PROT.A2759PTUV1.Str	general
	PROT.A2759PTUV1.Str	phsA
27/59-1 PhB Pickup		
	PROT.A2759PTOV1.Str	general
	PROT.A2759PTOV1.Str	phsB
	PROT.A2759PTUV1.Str	general
	PROT.A2759PTUV1.Str	phsB
27/59-1 PhC Pickup		
	PROT.A2759PTOV1.Str	general
	PROT.A2759PTOV1.Str	phsC
	PROT.A2759PTUV1.Str	general
	PROT.A2759PTUV1.Str	phsC
27/59-2 Enabled		
	PROT.A2759PTOV2.Mod	stVal
	PROT.A2759PTOV2.Beh	stVal
	PROT.A2759PTUV2.Mod	stVal
	PROT.A2759PTUV2.Beh	stVal
27/59-2 Operated		
	PROT.A2759PTOV2.Op	general
	PROT.A2759PTUV2.Op	general
27/59-2 PhA Pickup		
	PROT.A2759PTOV2.Str	general
	PROT.A2759PTOV2.Str	phsA
	PROT.A2759PTUV2.Str	general
	PROT.A2759PTUV2.Str	phsA
27/59-2 PhB Pickup		
	PROT.A2759PTOV2.Str	general
	PROT.A2759PTOV2.Str	phsB
	PROT.A2759PTUV2.Str	general
	PROT.A2759PTUV2.Str	phsB
27/59-2 PhC Pickup		
	PROT.A2759PTOV2.Str	general
	PROT.A2759PTOV2.Str	phsC
	PROT.A2759PTUV2.Str	general

	PROT.A2759PTUV2.Str	phsC
27/59-3 Enabled		
	PROT.A2759PTOV3.Mod	stVal
	PROT.A2759PTOV3.Beh	stVal
	PROT.A2759PTUV3.Mod	stVal
	PROT.A2759PTUV3.Beh	stVal
27/59-3 Operated		
	PROT.A2759PTOV3.Op	general
	PROT.A2759PTUV3.Op	general
27/59-3 PhA Pickup		
	PROT.A2759PTOV3.Str	general
	PROT.A2759PTOV3.Str	phsA
	PROT.A2759PTUV3.Str	general
	PROT.A2759PTUV3.Str	phsA
27/59-3 PhB Pickup		
	PROT.A2759PTOV3.Str	general
	PROT.A2759PTOV3.Str	phsB
	PROT.A2759PTUV3.Str	general
	PROT.A2759PTUV3.Str	phsB
27/59-3 PhC Pickup		
	PROT.A2759PTOV3.Str	general
	PROT.A2759PTOV3.Str	phsC
	PROT.A2759PTUV3.Str	general
	PROT.A2759PTUV3.Str	phsC
27/59-4 Enabled		
	PROT.A2759PTOV4.Mod	stVal
	PROT.A2759PTOV4.Beh	stVal
	PROT.A2759PTUV4.Mod	stVal
	PROT.A2759PTUV4.Beh	stVal
27/59-4 Operated		
	PROT.A2759PTOV4.Op	general
	PROT.A2759PTUV4.Op	general
27/59-4 PhA Pickup		
	PROT.A2759PTOV4.Str	general
	PROT.A2759PTOV4.Str	phsA
	PROT.A2759PTUV4.Str	general

	PROT.A2759PTUV4.Str	phsA
27/59-4 PhB Pickup		
	PROT.A2759PTOV4.Str	general
	PROT.A2759PTOV4.Str	phsB
	PROT.A2759PTUV4.Str	general
	PROT.A2759PTUV4.Str	phsB
27/59-4 PhC Pickup		
	PROT.A2759PTOV4.Str	general
	PROT.A2759PTOV4.Str	phsC
	PROT.A2759PTUV4.Str	general
	PROT.A2759PTUV4.Str	phsC
Inhibit 27/59-1		
	PROT.A2759PTOV1.Mod	stVal
	PROT.A2759PTOV1.Beh	stVal
	PROT.A2759PTUV1.Mod	stVal
	PROT.A2759PTUV1.Beh	stVal
Inhibit 27/59-2		
	PROT.A2759PTOV2.Mod	stVal
	PROT.A2759PTOV2.Beh	stVal
	PROT.A2759PTUV2.Mod	stVal
	PROT.A2759PTUV2.Beh	stVal
Inhibit 27/59-3		
	PROT.A2759PTOV3.Mod	stVal
	PROT.A2759PTOV3.Beh	stVal
	PROT.A2759PTUV3.Mod	stVal
	PROT.A2759PTUV3.Beh	stVal
Inhibit 27/59-4		
	PROT.A2759PTOV4.Mod	stVal
	PROT.A2759PTOV4.Beh	stVal
	PROT.A2759PTUV4.Mod	stVal
	PROT.A2759PTUV4.Beh	stVal

## 1.23 PHASE UNBALANCE MENU

Reyrolle	DOI	DA Group
46 Enabled		
	PROT.A46PUPTOC1.Mod	stVal
	PROT.A46PUPTOC1.Beh	stVal
46 Operated		
	PROT.A46PUPTOC1.Op	general
46 Pickup		
	PROT.A46PUPTOC1.Str	general
Inhibit 46		
	PROT.A46PUPTOC1.Mod	stVal
	PROT.A46PUPTOC1.Beh	stVal

## 1.24 POWER FACTOR MENU

Reyrolle	DOI	DA Group
55-1 Enabled		
	PROT.A55PDOP1.Mod	stVal
	PROT.A55PDOP1.Beh	stVal
	PROT.A55PDUP1.Mod	stVal
	PROT.A55PDUP1.Beh	stVal
55-1 Operated		
	PROT.A55PDOP1.Op	general
	PROT.A55PDUP1.Op	general
55-1 PhA Dir Pickup		
	PROT.A55PDOP1.Str	dirGeneral
	PROT.A55PDOP1.Str	dirPhsA
	PROT.A55PDUP1.Str	dirGeneral
	PROT.A55PDUP1.Str	dirPhsA
55-1 PhA Pickup		
	PROT.A55PDOP1.Str	general
	PROT.A55PDOP1.Str	phsA
	PROT.A55PDUP1.Str	general
	PROT.A55PDUP1.Str	phsA
55-1 PhB Dir Pickup		

	PROT.A55PDOP1.Str	dirGeneral
	PROT.A55PDOP1.Str	dirPhsB
	PROT.A55PDUP1.Str	dirGeneral
	PROT.A55PDUP1.Str	dirPhsB
55-1 PhB Pickup		
	PROT.A55PDOP1.Str	general
	PROT.A55PDOP1.Str	phsB
	PROT.A55PDUP1.Str	general
	PROT.A55PDUP1.Str	phsB
55-1 PhC Dir Pickup		
	PROT.A55PDOP1.Str	dirGeneral
	PROT.A55PDOP1.Str	dirPhsC
	PROT.A55PDUP1.Str	dirGeneral
	PROT.A55PDUP1.Str	dirPhsC
55-1 PhC Pickup		
	PROT.A55PDOP1.Str	general
	PROT.A55PDOP1.Str	phsC
	PROT.A55PDUP1.Str	general
	PROT.A55PDUP1.Str	phsC
55-2 Enabled		
	PROT.A55PDOP2.Mod	stVal
	PROT.A55PDOP2.Beh	stVal
	PROT.A55PDUP2.Mod	stVal
	PROT.A55PDUP2.Beh	stVal
55-2 Operated		
	PROT.A55PDOP2.Op	general
	PROT.A55PDUP2.Op	general
55-2 PhA Dir Pickup		
	PROT.A55PDOP2.Str	dirGeneral
	PROT.A55PDOP2.Str	dirPhsA
	PROT.A55PDUP2.Str	dirGeneral
	PROT.A55PDUP2.Str	dirPhsA
55-2 PhA Pickup		
	PROT.A55PDOP2.Str	general
	PROT.A55PDOP2.Str	phsA
	PROT.A55PDUP2.Str	general

	PROT.A55PDUP2.Str	phsA
55-2 PhB Dir Pickup		
	PROT.A55PDOP2.Str	dirGeneral
	PROT.A55PDOP2.Str	dirPhsB
	PROT.A55PDUP2.Str	dirGeneral
	PROT.A55PDUP2.Str	dirPhsB
55-2 PhB Pickup		
	PROT.A55PDOP2.Str	general
	PROT.A55PDOP2.Str	phsB
	PROT.A55PDUP2.Str	general
	PROT.A55PDUP2.Str	phsB
55-2 PhC Dir Pickup		
	PROT.A55PDOP2.Str	dirGeneral
	PROT.A55PDOP2.Str	dirPhsC
	PROT.A55PDUP2.Str	dirGeneral
	PROT.A55PDUP2.Str	dirPhsC
55-2 PhC Pickup		
	PROT.A55PDOP2.Str	general
	PROT.A55PDOP2.Str	phsC
	PROT.A55PDUP2.Str	general
	PROT.A55PDUP2.Str	phsC
Inhibit 55-1		
	PROT.A55PDOP1.Mod	stVal
	PROT.A55PDOP1.Beh	stVal
	PROT.A55PDUP1.Mod	stVal
	PROT.A55PDUP1.Beh	stVal
Inhibit 55-2		
	PROT.A55PDOP2.Mod	stVal
	PROT.A55PDOP2.Beh	stVal
	PROT.A55PDUP2.Mod	stVal
	PROT.A55PDUP2.Beh	stVal

## 1.25 POWER MENU

Reyrolle	DOI	DA Group
32-1 Enabled		
	PROT.A32PDOP1.Mod	stVal
	PROT.A32PDOP1.Beh	stVal
	PROT.A32PDUP1.Mod	stVal
	PROT.A32PDUP1.Beh	stVal
32-1 Operated		
	PROT.A32PDOP1.Op	general
	PROT.A32PDUP1.Op	general
32-1 PhA Dir Pickup		
	PROT.A32PDOP1.Str	dirGeneral
	PROT.A32PDOP1.Str	dirPhsA
	PROT.A32PDUP1.Str	dirGeneral
	PROT.A32PDUP1.Str	dirPhsA
32-1 PhA Pickup		
	PROT.A32PDOP1.Str	general
	PROT.A32PDOP1.Str	phsA
	PROT.A32PDUP1.Str	general
	PROT.A32PDUP1.Str	phsA
32-1 PhB Dir Pickup		
	PROT.A32PDOP1.Str	dirGeneral
	PROT.A32PDOP1.Str	dirPhsB
	PROT.A32PDUP1.Str	dirGeneral
	PROT.A32PDUP1.Str	dirPhsB
32-1 PhB Pickup		
	PROT.A32PDOP1.Str	general
	PROT.A32PDOP1.Str	phsB
	PROT.A32PDUP1.Str	general
	PROT.A32PDUP1.Str	phsB
32-1 PhC Dir Pickup		
	PROT.A32PDOP1.Str	dirGeneral
	PROT.A32PDOP1.Str	dirPhsC
	PROT.A32PDUP1.Str	dirGeneral
	PROT.A32PDUP1.Str	dirPhsC

32-1 PhC Pickup		
	PROT.A32PDOP1.Str	general
	PROT.A32PDOP1.Str	phsC
	PROT.A32PDUP1.Str	general
	PROT.A32PDUP1.Str	phsC
32-2 Enabled		
	PROT.A32PDOP2.Mod	stVal
	PROT.A32PDOP2.Beh	stVal
	PROT.A32PDUP2.Mod	stVal
	PROT.A32PDUP2.Beh	stVal
32-2 Operated		
	PROT.A32PDOP2.Op	general
	PROT.A32PDUP2.Op	general
32-2 PhA Dir Pickup		
	PROT.A32PDOP2.Str	dirGeneral
	PROT.A32PDOP2.Str	dirPhsA
	PROT.A32PDUP2.Str	dirGeneral
	PROT.A32PDUP2.Str	dirPhsA
32-2 PhA Pickup		
	PROT.A32PDOP2.Str	general
	PROT.A32PDOP2.Str	phsA
	PROT.A32PDUP2.Str	general
	PROT.A32PDUP2.Str	phsA
32-2 PhB Dir Pickup		
	PROT.A32PDOP2.Str	dirGeneral
	PROT.A32PDOP2.Str	dirPhsB
	PROT.A32PDUP2.Str	dirGeneral
	PROT.A32PDUP2.Str	dirPhsB
32-2 PhB Pickup		
	PROT.A32PDOP2.Str	general
	PROT.A32PDOP2.Str	phsB
	PROT.A32PDUP2.Str	general
	PROT.A32PDUP2.Str	phsB
32-2 PhC Dir Pickup		
	PROT.A32PDOP2.Str	dirGeneral
	PROT.A32PDOP2.Str	dirPhsC

	PROT.A32PDUP2.Str	dirGeneral
	PROT.A32PDUP2.Str	dirPhsC
32-2 PhC Pickup		
	PROT.A32PDOP2.Str	general
	PROT.A32PDOP2.Str	phsC
	PROT.A32PDUP2.Str	general
	PROT.A32PDUP2.Str	phsC
Inhibit 32-1		
	PROT.A32PDOP1.Mod	stVal
	PROT.A32PDOP1.Beh	stVal
	PROT.A32PDUP1.Mod	stVal
	PROT.A32PDUP1.Beh	stVal
Inhibit 32-2		
	PROT.A32PDOP2.Mod	stVal
	PROT.A32PDOP2.Beh	stVal
	PROT.A32PDUP2.Mod	stVal
	PROT.A32PDUP2.Beh	stVal

## 1.26 RESTRICTED EARTH FAULT MENU

Reyrolle	DOI	DA Group
87REF Enabled		
	PROT.A87REFPTOC1.Mod	stVal
	PROT.A87REFPTOC1.Beh	stVal
87REF Operated		
	PROT.A87REFPTOC1.Op	general
87REF Pickup		
	PROT.A87REFPTOC1.Str	general
Inhibit 87REF		
	PROT.A87REFPTOC1.Mod	stVal
	PROT.A87REFPTOC1.Beh	stVal

## 1.27 SENSITIVE POWER MENU

Reyrolle	DOI	DA Group
32S-1 Dir Pickup		
	PROT.A32SPDOP1.Str	dirGeneral
	PROT.A32SPDUP1.Str	dirGeneral
32S-1 Enabled		
	PROT.A32SPDOP1.Mod	stVal
	PROT.A32SPDOP1.Beh	stVal
	PROT.A32SPDUP1.Mod	stVal
	PROT.A32SPDUP1.Beh	stVal
32S-1 Operated		
	PROT.A32SPDOP1.Op	general
	PROT.A32SPDUP1.Op	general
32S-1 Pickup		
	PROT.A32SPDOP1.Str	general
	PROT.A32SPDUP1.Str	general
32S-2 Dir Pickup		
	PROT.A32SPDOP2.Str	dirGeneral
	PROT.A32SPDUP2.Str	dirGeneral
32S-2 Enabled		
	PROT.A32SPDOP2.Mod	stVal
	PROT.A32SPDOP2.Beh	stVal
	PROT.A32SPDUP2.Mod	stVal
	PROT.A32SPDUP2.Beh	stVal
32S-2 Operated		
	PROT.A32SPDOP2.Op	general
	PROT.A32SPDUP2.Op	general
32S-2 Pickup		
	PROT.A32SPDOP2.Str	general
	PROT.A32SPDUP2.Str	general
Inhibit 32S-1		
	PROT.A32SPDOP1.Mod	stVal
	PROT.A32SPDOP1.Beh	stVal
	PROT.A32SPDUP1.Mod	stVal
	PROT.A32SPDUP1.Beh	stVal

Inhibit 32S-2		
	PROT.A32SPDOP2.Mod	stVal
	PROT.A32SPDOP2.Beh	stVal
	PROT.A32SPDUP2.Mod	stVal
	PROT.A32SPDUP2.Beh	stVal

## 1.28 Single Point Controls (Enhanced Security)

Reyrolle	DOI	DA Group
SPDOes 1 Control		
	CTRL.SPDOesGGIO1.SPCSO	Oper.ctlVal
SPDOes 1 Status		
	CTRL.SPDOesGGIO1.SPCSO	stVal
SPDOes 2 Control		
	CTRL.SPDOesGGIO2.SPCSO	Oper.ctlVal
SPDOes 2 Status		
	CTRL.SPDOesGGIO2.SPCSO	stVal
SPDOes 3 Control		
	CTRL.SPDOesGGIO3.SPCSO	Oper.ctlVal
SPDOes 3 Status		
	CTRL.SPDOesGGIO3.SPCSO	stVal
SPDOes 4 Control		
	CTRL.SPDOesGGIO4.SPCSO	Oper.ctlVal
SPDOes 4 Status		
	CTRL.SPDOesGGIO4.SPCSO	stVal

## 1.29 Single Point Controls (Normal Security)

Reyrolle	DOI	DA Group
SPDOns 1 Control		
	CTRL.SPDOnsGGIO1.SPCSO	Oper.ctlVal
SPDOns 1 Status		
	CTRL.SPDOnsGGIO1.SPCSO	stVal
SPDOns 2 Control		
	CTRL.SPDOnsGGIO2.SPCSO	Oper.ctlVal

SPDOns 2 Status		
	CTRL.SPDOnsGGIO2.SPCSO	stVal
SPDOns 3 Control		
	CTRL.SPDOnsGGIO3.SPCSO	Oper.ctlVal
SPDOns 3 Status		
	CTRL.SPDOnsGGIO3.SPCSO	stVal
SPDOns 4 Control		
	CTRL.SPDOnsGGIO4.SPCSO	Oper.ctlVal
SPDOns 4 Status		
	CTRL.SPDOnsGGIO4.SPCSO	stVal

### 1.30 Single Point Inputs

Reyrolle	DOI	DA Group
SPi64GGIO1 SPCSO 1		
	CTRL.SPi64GGIO1.SPCSO1	ctlVal
SPi64GGIO1 SPCSO 10		
	CTRL.SPi64GGIO1.SPCSO10	ctlVal
SPi64GGIO1 SPCSO 11		
	CTRL.SPi64GGIO1.SPCSO11	ctlVal
SPi64GGIO1 SPCSO 12		
	CTRL.SPi64GGIO1.SPCSO12	ctlVal
SPi64GGIO1 SPCSO 13		
	CTRL.SPi64GGIO1.SPCSO13	ctlVal
SPi64GGIO1 SPCSO 14		
	CTRL.SPi64GGIO1.SPCSO14	ctlVal
SPi64GGIO1 SPCSO 15		
	CTRL.SPi64GGIO1.SPCSO15	ctlVal
SPi64GGIO1 SPCSO 16		
	CTRL.SPi64GGIO1.SPCSO16	ctlVal
SPi64GGIO1 SPCSO 17		
	CTRL.SPi64GGIO1.SPCSO17	ctlVal
SPi64GGIO1 SPCSO 18		
	CTRL.SPi64GGIO1.SPCSO18	ctlVal
SPi64GGIO1 SPCSO 19		
	CTRL.SPi64GGIO1.SPCSO19	ctlVal

SPI64GGIO1_SPCSO_2		
	CTRL.SPI64GGIO1.SPCSO2	ctlVal
SPI64GGIO1_SPCSO_20		
	CTRL.SPI64GGIO1.SPCSO20	ctlVal
SPI64GGIO1_SPCSO_21		
	CTRL.SPI64GGIO1.SPCSO21	ctlVal
SPI64GGIO1_SPCSO_22		
	CTRL.SPI64GGIO1.SPCSO22	ctlVal
SPI64GGIO1_SPCSO_23		
	CTRL.SPI64GGIO1.SPCSO23	ctlVal
SPI64GGIO1_SPCSO_24		
	CTRL.SPI64GGIO1.SPCSO24	ctlVal
SPI64GGIO1_SPCSO_25		
	CTRL.SPI64GGIO1.SPCSO25	ctlVal
SPI64GGIO1_SPCSO_26		
	CTRL.SPI64GGIO1.SPCSO26	ctlVal
SPI64GGIO1_SPCSO_27		
	CTRL.SPI64GGIO1.SPCSO27	ctlVal
SPI64GGIO1_SPCSO_28		
	CTRL.SPI64GGIO1.SPCSO28	ctlVal
SPI64GGIO1_SPCSO_29		
	CTRL.SPI64GGIO1.SPCSO29	ctlVal
SPI64GGIO1_SPCSO_3		
	CTRL.SPI64GGIO1.SPCSO3	ctlVal
SPI64GGIO1_SPCSO_30		
	CTRL.SPI64GGIO1.SPCSO30	ctlVal
SPI64GGIO1_SPCSO_31		
	CTRL.SPI64GGIO1.SPCSO31	ctlVal
SPI64GGIO1_SPCSO_32		
	CTRL.SPI64GGIO1.SPCSO32	ctlVal
SPI64GGIO1_SPCSO_33		
	CTRL.SPI64GGIO1.SPCSO33	ctlVal
SPI64GGIO1_SPCSO_34		
	CTRL.SPI64GGIO1.SPCSO34	ctlVal
SPI64GGIO1_SPCSO_35		
	CTRL.SPI64GGIO1.SPCSO35	ctlVal

SPi64GGIO1 SPCSO 36		
	CTRL.SPi64GGIO1.SPCSO36	ctlVal
SPi64GGIO1 SPCSO 37		
	CTRL.SPi64GGIO1.SPCSO37	ctlVal
SPi64GGIO1 SPCSO 38		
	CTRL.SPi64GGIO1.SPCSO38	ctlVal
SPi64GGIO1 SPCSO 39		
	CTRL.SPi64GGIO1.SPCSO39	ctlVal
SPi64GGIO1 SPCSO 4		
	CTRL.SPi64GGIO1.SPCSO4	ctlVal
SPi64GGIO1 SPCSO 40		
	CTRL.SPi64GGIO1.SPCSO40	ctlVal
SPi64GGIO1 SPCSO 41		
	CTRL.SPi64GGIO1.SPCSO41	ctlVal
SPi64GGIO1 SPCSO 42		
	CTRL.SPi64GGIO1.SPCSO42	ctlVal
SPi64GGIO1 SPCSO 43		
	CTRL.SPi64GGIO1.SPCSO43	ctlVal
SPi64GGIO1 SPCSO 44		
	CTRL.SPi64GGIO1.SPCSO44	ctlVal
SPi64GGIO1 SPCSO 45		
	CTRL.SPi64GGIO1.SPCSO45	ctlVal
SPi64GGIO1 SPCSO 46		
	CTRL.SPi64GGIO1.SPCSO46	ctlVal
SPi64GGIO1 SPCSO 47		
	CTRL.SPi64GGIO1.SPCSO47	ctlVal
SPi64GGIO1 SPCSO 48		
	CTRL.SPi64GGIO1.SPCSO48	ctlVal
SPi64GGIO1 SPCSO 49		
	CTRL.SPi64GGIO1.SPCSO49	ctlVal
SPi64GGIO1 SPCSO 5		
	CTRL.SPi64GGIO1.SPCSO5	ctlVal
SPi64GGIO1 SPCSO 50		
	CTRL.SPi64GGIO1.SPCSO50	ctlVal
SPi64GGIO1 SPCSO 51		
	CTRL.SPi64GGIO1.SPCSO51	ctlVal

SPI64GGIO1_SPCSO_52		
	CTRL.SPi64GGIO1.SPCSO52	ctlVal
SPI64GGIO1_SPCSO_53		
	CTRL.SPi64GGIO1.SPCSO53	ctlVal
SPI64GGIO1_SPCSO_54		
	CTRL.SPi64GGIO1.SPCSO54	ctlVal
SPI64GGIO1_SPCSO_55		
	CTRL.SPi64GGIO1.SPCSO55	ctlVal
SPI64GGIO1_SPCSO_56		
	CTRL.SPi64GGIO1.SPCSO56	ctlVal
SPI64GGIO1_SPCSO_57		
	CTRL.SPi64GGIO1.SPCSO57	ctlVal
SPI64GGIO1_SPCSO_58		
	CTRL.SPi64GGIO1.SPCSO58	ctlVal
SPI64GGIO1_SPCSO_59		
	CTRL.SPi64GGIO1.SPCSO59	ctlVal
SPI64GGIO1_SPCSO_6		
	CTRL.SPi64GGIO1.SPCSO6	ctlVal
SPI64GGIO1_SPCSO_60		
	CTRL.SPi64GGIO1.SPCSO60	ctlVal
SPI64GGIO1_SPCSO_61		
	CTRL.SPi64GGIO1.SPCSO61	ctlVal
SPI64GGIO1_SPCSO_62		
	CTRL.SPi64GGIO1.SPCSO62	ctlVal
SPI64GGIO1_SPCSO_63		
	CTRL.SPi64GGIO1.SPCSO63	ctlVal
SPI64GGIO1_SPCSO_64		
	CTRL.SPi64GGIO1.SPCSO64	ctlVal
SPI64GGIO1_SPCSO_7		
	CTRL.SPi64GGIO1.SPCSO7	ctlVal
SPI64GGIO1_SPCSO_8		
	CTRL.SPi64GGIO1.SPCSO8	ctlVal
SPI64GGIO1_SPCSO_9		
	CTRL.SPi64GGIO1.SPCSO9	ctlVal

## 1.31 Single Point Outputs

Reyrolle	DOI	DA Group
SPo32GGIO1 Ind 1		
	CTRL.SPo32GGIO1.Ind1	stVal
SPo32GGIO1 Ind 10		
	CTRL.SPo32GGIO1.Ind10	stVal
SPo32GGIO1 Ind 11		
	CTRL.SPo32GGIO1.Ind11	stVal
SPo32GGIO1 Ind 12		
	CTRL.SPo32GGIO1.Ind12	stVal
SPo32GGIO1 Ind 13		
	CTRL.SPo32GGIO1.Ind13	stVal
SPo32GGIO1 Ind 14		
	CTRL.SPo32GGIO1.Ind14	stVal
SPo32GGIO1 Ind 15		
	CTRL.SPo32GGIO1.Ind15	stVal
SPo32GGIO1 Ind 16		
	CTRL.SPo32GGIO1.Ind16	stVal
SPo32GGIO1 Ind 17		
	CTRL.SPo32GGIO1.Ind17	stVal
SPo32GGIO1 Ind 18		
	CTRL.SPo32GGIO1.Ind18	stVal
SPo32GGIO1 Ind 19		
	CTRL.SPo32GGIO1.Ind19	stVal
SPo32GGIO1 Ind 2		
	CTRL.SPo32GGIO1.Ind2	stVal
SPo32GGIO1 Ind 20		
	CTRL.SPo32GGIO1.Ind20	stVal
SPo32GGIO1 Ind 21		
	CTRL.SPo32GGIO1.Ind21	stVal
SPo32GGIO1 Ind 22		
	CTRL.SPo32GGIO1.Ind22	stVal
SPo32GGIO1 Ind 23		
	CTRL.SPo32GGIO1.Ind23	stVal
SPo32GGIO1 Ind 24		

	CTRL.SPo32GGIO1.Ind24	stVal
SPo32GGIO1 Ind 25		
	CTRL.SPo32GGIO1.Ind25	stVal
SPo32GGIO1 Ind 26		
	CTRL.SPo32GGIO1.Ind26	stVal
SPo32GGIO1 Ind 27		
	CTRL.SPo32GGIO1.Ind27	stVal
SPo32GGIO1 Ind 28		
	CTRL.SPo32GGIO1.Ind28	stVal
SPo32GGIO1 Ind 29		
	CTRL.SPo32GGIO1.Ind29	stVal
SPo32GGIO1 Ind 3		
	CTRL.SPo32GGIO1.Ind3	stVal
SPo32GGIO1 Ind 30		
	CTRL.SPo32GGIO1.Ind30	stVal
SPo32GGIO1 Ind 31		
	CTRL.SPo32GGIO1.Ind31	stVal
SPo32GGIO1 Ind 32		
	CTRL.SPo32GGIO1.Ind32	stVal
SPo32GGIO1 Ind 4		
	CTRL.SPo32GGIO1.Ind4	stVal
SPo32GGIO1 Ind 5		
	CTRL.SPo32GGIO1.Ind5	stVal
SPo32GGIO1 Ind 6		
	CTRL.SPo32GGIO1.Ind6	stVal
SPo32GGIO1 Ind 7		
	CTRL.SPo32GGIO1.Ind7	stVal
SPo32GGIO1 Ind 8		
	CTRL.SPo32GGIO1.Ind8	stVal
SPo32GGIO1 Ind 9		
	CTRL.SPo32GGIO1.Ind9	stVal

## 1.32 STALLED ROTOR MENU

Reyrolle	DOI	DA Group
14-1 Enabled		
	PROT.A14PTOC1.Mod	stVal
	PROT.A14PTOC1.Beh	stVal
14-1 Operated		
	PROT.A14PTOC1.Op	general
14-1 PhA Pickup		
	PROT.A14PTOC1.Str	general
	PROT.A14PTOC1.Str	phsA
14-1 PhB Pickup		
	PROT.A14PTOC1.Str	general
	PROT.A14PTOC1.Str	phsB
14-1 PhC Pickup		
	PROT.A14PTOC1.Str	general
	PROT.A14PTOC1.Str	phsC
14-2 Enabled		
	PROT.A14PTOC2.Mod	stVal
	PROT.A14PTOC2.Beh	stVal
14-2 Operated		
	PROT.A14PTOC2.Op	general
14-2 PhA Pickup		
	PROT.A14PTOC2.Str	general
	PROT.A14PTOC2.Str	phsA
14-2 PhB Pickup		
	PROT.A14PTOC2.Str	general
	PROT.A14PTOC2.Str	phsB
14-2 PhC Pickup		
	PROT.A14PTOC2.Str	general
	PROT.A14PTOC2.Str	phsC
14-3 Enabled		
	PROT.A14PTOC3.Mod	stVal
	PROT.A14PTOC3.Beh	stVal
14-3 Operated		
	PROT.A14PTOC3.Op	general

14-3 PhA Pickup		
	PROT.A14PTOC3.Str	general
	PROT.A14PTOC3.Str	phsA
14-3 PhB Pickup		
	PROT.A14PTOC3.Str	general
	PROT.A14PTOC3.Str	phsB
14-3 PhC Pickup		
	PROT.A14PTOC3.Str	general
	PROT.A14PTOC3.Str	phsC
14-4 Enabled		
	PROT.A14PTOC4.Mod	stVal
	PROT.A14PTOC4.Beh	stVal
14-4 Operated		
	PROT.A14PTOC4.Op	general
14-4 PhA Pickup		
	PROT.A14PTOC4.Str	general
	PROT.A14PTOC4.Str	phsA
14-4 PhB Pickup		
	PROT.A14PTOC4.Str	general
	PROT.A14PTOC4.Str	phsB
14-4 PhC Pickup		
	PROT.A14PTOC4.Str	general
	PROT.A14PTOC4.Str	phsC
Inhibit 14-1		
	PROT.A14PTOC1.Mod	stVal
	PROT.A14PTOC1.Beh	stVal
Inhibit 14-2		
	PROT.A14PTOC2.Mod	stVal
	PROT.A14PTOC2.Beh	stVal
Inhibit 14-3		
	PROT.A14PTOC3.Mod	stVal
	PROT.A14PTOC3.Beh	stVal
Inhibit 14-4		
	PROT.A14PTOC4.Mod	stVal
	PROT.A14PTOC4.Beh	stVal

## 1.33 THERMAL MENU

Reyrolle	DOI	DA Group
49 Enabled		
	PROT.A49PTTR1.Mod	stVal
	PROT.A49PTTR1.Beh	stVal
49 Operated		
	PROT.A49PTTR1.Op	general
49 Pickup		
	PROT.A49PTTR1.Str	general
49 Thermal Alarm		
	PROT.A49PTTR1.AlmThm	stVal
Inhibit 49		
	PROT.A49PTTR1.Mod	stVal
	PROT.A49PTTR1.Beh	stVal

## 1.34 U/O FREQUENCY

Reyrolle	DOI	DA Group
81-1 Enabled		
	PROT.A81PTOF1.Mod	stVal
	PROT.A81PTOF1.Beh	stVal
	PROT.A81PTUF1.Mod	stVal
	PROT.A81PTUF1.Beh	stVal
81-1 Operated		
	PROT.A81PTOF1.Op	general
	PROT.A81PTUF1.Op	general
81-1 Pickup		
	PROT.A81PTOF1.Str	general
	PROT.A81PTUF1.Str	general
81-2 Enabled		
	PROT.A81PTOF2.Mod	stVal
	PROT.A81PTOF2.Beh	stVal
	PROT.A81PTUF2.Mod	stVal
	PROT.A81PTUF2.Beh	stVal
81-2 Operated		

	PROT.A81PTOF2.Op	general
	PROT.A81PTUF2.Op	general
81-2 Pickup		
	PROT.A81PTOF2.Str	general
	PROT.A81PTUF2.Str	general
Inhibit 81-1		
	PROT.A81PTOF1.Mod	stVal
	PROT.A81PTOF1.Beh	stVal
	PROT.A81PTUF1.Mod	stVal
	PROT.A81PTUF1.Beh	stVal
Inhibit 81-2		
	PROT.A81PTOF2.Mod	stVal
	PROT.A81PTOF2.Beh	stVal
	PROT.A81PTUF2.Mod	stVal
	PROT.A81PTUF2.Beh	stVal

## 1.35 UNDER CURRENT MENU

Reyrolle	DOI	DA Group
37-1 Enabled		
	PROT.A37PTUC1.Mod	stVal
	PROT.A37PTUC1.Beh	stVal
37-1 Operated		
	PROT.A37PTUC1.Op	general
37-1 PhA Pickup		
	PROT.A37PTUC1.Str	general
	PROT.A37PTUC1.Str	phsA
37-1 PhB Pickup		
	PROT.A37PTUC1.Str	general
	PROT.A37PTUC1.Str	phsB
37-1 PhC Pickup		
	PROT.A37PTUC1.Str	general
	PROT.A37PTUC1.Str	phsC
37-2 Enabled		
	PROT.A37PTUC2.Mod	stVal
	PROT.A37PTUC2.Beh	stVal
37-2 Operated		
	PROT.A37PTUC2.Op	general
37-2 PhA Pickup		
	PROT.A37PTUC2.Str	general
	PROT.A37PTUC2.Str	phsA
37-2 PhB Pickup		
	PROT.A37PTUC2.Str	general
	PROT.A37PTUC2.Str	phsB
37-2 PhC Pickup		
	PROT.A37PTUC2.Str	general
	PROT.A37PTUC2.Str	phsC
Inhibit 37-1		
	PROT.A37PTUC1.Mod	stVal
	PROT.A37PTUC1.Beh	stVal
Inhibit 37-2		
	PROT.A37PTUC2.Mod	stVal

	PROT.A37PTUC2.Beh	stVal
--	-------------------	-------

## 1.36 VOLTAGE METERS

Reyrolle	DOI	DA Group
Sequence Components V Seq NPS		
	MEAS.V_MSQI1.SeqV	c2.instCVal.mag.f
	MEAS.V_MSQI1.SeqV	c2.cVal.mag.f
	MEAS.V_MSQI1.SeqV	c2.units.SIUnit
	MEAS.V_MSQI1.SeqV	c2.units.multiplier
Sequence Components V Seq PPS		
	MEAS.V_MSQI1.SeqV	c1.instCVal.mag.f
	MEAS.V_MSQI1.SeqV	c1.cVal.mag.f
	MEAS.V_MSQI1.SeqV	c1.units.SIUnit
	MEAS.V_MSQI1.SeqV	c1.units.multiplier
Sequence Components V Seq ZPS		
	MEAS.V_MSQI1.SeqV	c3.instCVal.mag.f
	MEAS.V_MSQI1.SeqV	c3.cVal.mag.f
	MEAS.V_MSQI1.SeqV	c3.units.SIUnit
	MEAS.V_MSQI1.SeqV	c3.units.multiplier

## 2 IEC 61850 -> Reyrolle

### 2.1 PROT

#### 2.1.1 A14PTOC1

Beh		
	stVal	Out of Service
		Inhibit 14-1
		14-1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 14-1
		14-1 Enabled
Op		
	general	14-1 Operated
Str		
	dirGeneral	Non-Directional
	dirPhsA	Non-Directional
	dirPhsB	Non-Directional
	dirPhsC	Non-Directional
	general	14-1 PhA Pickup
		14-1 PhB Pickup
		14-1 PhC Pickup
	phsA	14-1 PhA Pickup
	phsB	14-1 PhB Pickup
	phsC	14-1 PhC Pickup

#### 2.1.2 A14PTOC2

Beh		
	stVal	Out of Service
		Inhibit 14-2
		14-2 Enabled
Health		
	stVal	Protection Healthy

Mod		
	stVal	Inhibit 14-2
		14-2 Enabled
Op		
	general	14-2 Operated
Str		
	dirGeneral	Non-Directional
	dirPhsA	Non-Directional
	dirPhsB	Non-Directional
	dirPhsC	Non-Directional
	general	14-2 PhA Pickup
		14-2 PhB Pickup
		14-2 PhC Pickup
	phsA	14-2 PhA Pickup
	phsB	14-2 PhB Pickup
	phsC	14-2 PhC Pickup

### 2.1.3 A14PTOC3

Beh		
	stVal	Out of Service
		Inhibit 14-3
		14-3 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 14-3
		14-3 Enabled
Op		
	general	14-3 Operated
Str		
	dirGeneral	Non-Directional
	dirPhsA	Non-Directional
	dirPhsB	Non-Directional
	dirPhsC	Non-Directional
	general	14-3 PhA Pickup
		14-3 PhB Pickup

		14-3 PhC Pickup
	phsA	14-3 PhA Pickup
	phsB	14-3 PhB Pickup
	phsC	14-3 PhC Pickup

**2.1.4 A14PTOC4**

Beh		
	stVal	Out of Service
		Inhibit 14-4
		14-4 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 14-4
		14-4 Enabled
Op		
	general	14-4 Operated
Str		
	dirGeneral	Non-Directional
	dirPhsA	Non-Directional
	dirPhsB	Non-Directional
	dirPhsC	Non-Directional
	general	14-4 PhA Pickup
		14-4 PhB Pickup
		14-4 PhC Pickup
	phsA	14-4 PhA Pickup
	phsB	14-4 PhB Pickup
	phsC	14-4 PhC Pickup

**2.1.5 A2759PTOV1**

Beh		
	stVal	Out of Service
		Inhibit 27/59-1
		27/59-1 Enabled
Health		

	stVal	Protection Healthy
Mod		
	stVal	Inhibit 27/59-1
		27/59-1 Enabled
Op		
	general	27/59-1 Operated
Str		
	dirGeneral	Non-Directional
	dirPhsA	Non-Directional
	dirPhsB	Non-Directional
	dirPhsC	Non-Directional
	general	27/59-1 PhA Pickup
		27/59-1 PhB Pickup
		27/59-1 PhC Pickup
	phsA	27/59-1 PhA Pickup
	phsB	27/59-1 PhB Pickup
	phsC	27/59-1 PhC Pickup

### 2.1.6 A2759PTOV2

Beh		
	stVal	Out of Service
		Inhibit 27/59-2
		27/59-2 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 27/59-2
		27/59-2 Enabled
Op		
	general	27/59-2 Operated
Str		
	dirGeneral	Non-Directional
	dirPhsA	Non-Directional
	dirPhsB	Non-Directional
	dirPhsC	Non-Directional
	general	27/59-2 PhA Pickup

		27/59-2 PhB Pickup
		27/59-2 PhC Pickup
	phsA	27/59-2 PhA Pickup
	phsB	27/59-2 PhB Pickup
	phsC	27/59-2 PhC Pickup

### 2.1.7 A2759PTOV3

Beh		
	stVal	Out of Service
		Inhibit 27/59-3
		27/59-3 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 27/59-3
		27/59-3 Enabled
Op		
	general	27/59-3 Operated
Str		
	dirGeneral	Non-Directional
	dirPhsA	Non-Directional
	dirPhsB	Non-Directional
	dirPhsC	Non-Directional
	general	27/59-3 PhA Pickup
		27/59-3 PhB Pickup
		27/59-3 PhC Pickup
	phsA	27/59-3 PhA Pickup
	phsB	27/59-3 PhB Pickup
	phsC	27/59-3 PhC Pickup

### 2.1.8 A2759PTOV4

Beh		
	stVal	Out of Service
		Inhibit 27/59-4
		27/59-4 Enabled

Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 27/59-4
		27/59-4 Enabled
Op		
	general	27/59-4 Operated
Str		
	dirGeneral	Non-Directional
	dirPhsA	Non-Directional
	dirPhsB	Non-Directional
	dirPhsC	Non-Directional
	general	27/59-4 PhA Pickup
		27/59-4 PhB Pickup
		27/59-4 PhC Pickup
	phsA	27/59-4 PhA Pickup
	phsB	27/59-4 PhB Pickup
	phsC	27/59-4 PhC Pickup

### 2.1.9 A2759PTUV1

Beh		
	stVal	Out of Service
		Inhibit 27/59-1
		27/59-1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 27/59-1
		27/59-1 Enabled
Op		
	general	27/59-1 Operated
Str		
	dirGeneral	Non-Directional
	dirPhsA	Non-Directional
	dirPhsB	Non-Directional
	dirPhsC	Non-Directional

	general	27/59-1 PhA Pickup
		27/59-1 PhB Pickup
		27/59-1 PhC Pickup
	phsA	27/59-1 PhA Pickup
	phsB	27/59-1 PhB Pickup
	phsC	27/59-1 PhC Pickup

### 2.1.10 A2759PTUV2

Beh		
	stVal	Out of Service
		Inhibit 27/59-2
		27/59-2 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 27/59-2
		27/59-2 Enabled
Op		
	general	27/59-2 Operated
Str		
	dirGeneral	Non-Directional
	dirPhsA	Non-Directional
	dirPhsB	Non-Directional
	dirPhsC	Non-Directional
	general	27/59-2 PhA Pickup
		27/59-2 PhB Pickup
		27/59-2 PhC Pickup
	phsA	27/59-2 PhA Pickup
	phsB	27/59-2 PhB Pickup
	phsC	27/59-2 PhC Pickup

### 2.1.11 A2759PTUV3

Beh		
	stVal	Out of Service
		Inhibit 27/59-3

		27/59-3 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 27/59-3
		27/59-3 Enabled
Op		
	general	27/59-3 Operated
Str		
	dirGeneral	Non-Directional
	dirPhsA	Non-Directional
	dirPhsB	Non-Directional
	dirPhsC	Non-Directional
	general	27/59-3 PhA Pickup
		27/59-3 PhB Pickup
		27/59-3 PhC Pickup
	phsA	27/59-3 PhA Pickup
	phsB	27/59-3 PhB Pickup
	phsC	27/59-3 PhC Pickup

### 2.1.12 A2759PTUV4

Beh		
	stVal	Out of Service
		Inhibit 27/59-4
		27/59-4 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 27/59-4
		27/59-4 Enabled
Op		
	general	27/59-4 Operated
Str		
	dirGeneral	Non-Directional
	dirPhsA	Non-Directional
	dirPhsB	Non-Directional

	dirPhsC	Non-Directional
	general	27/59-4 PhA Pickup
		27/59-4 PhB Pickup
		27/59-4 PhC Pickup
	phsA	27/59-4 PhA Pickup
	phsB	27/59-4 PhB Pickup
	phsC	27/59-4 PhC Pickup

### 2.1.13 A32PDOP1

Beh		
	stVal	Out of Service
		Inhibit 32-1
		32-1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 32-1
		32-1 Enabled
Op		
	general	32-1 Operated
Str		
	dirGeneral	32-1 PhA Dir Pickup
		32-1 PhB Dir Pickup
		32-1 PhC Dir Pickup
	dirPhsA	32-1 PhA Dir Pickup
	dirPhsB	32-1 PhB Dir Pickup
	dirPhsC	32-1 PhC Dir Pickup
	general	32-1 PhA Pickup
		32-1 PhB Pickup
		32-1 PhC Pickup
	phsA	32-1 PhA Pickup
	phsB	32-1 PhB Pickup
	phsC	32-1 PhC Pickup

**2.1.14 A32PDOP2**

Beh		
	stVal	Out of Service
		Inhibit 32-2
		32-2 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 32-2
		32-2 Enabled
Op		
	general	32-2 Operated
Str		
	dirGeneral	32-2 PhA Dir Pickup
		32-2 PhB Dir Pickup
		32-2 PhC Dir Pickup
	dirPhsA	32-2 PhA Dir Pickup
	dirPhsB	32-2 PhB Dir Pickup
	dirPhsC	32-2 PhC Dir Pickup
	general	32-2 PhA Pickup
		32-2 PhB Pickup
		32-2 PhC Pickup
	phsA	32-2 PhA Pickup
	phsB	32-2 PhB Pickup
	phsC	32-2 PhC Pickup

**2.1.15 A32PDUP1**

Beh		
	stVal	Out of Service
		Inhibit 32-1
		32-1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 32-1
		32-1 Enabled

Op		
	general	32-1 Operated
Str		
	dirGeneral	32-1 PhA Dir Pickup
		32-1 PhB Dir Pickup
		32-1 PhC Dir Pickup
	dirPhsA	32-1 PhA Dir Pickup
	dirPhsB	32-1 PhB Dir Pickup
	dirPhsC	32-1 PhC Dir Pickup
	general	32-1 PhA Pickup
		32-1 PhB Pickup
		32-1 PhC Pickup
	phsA	32-1 PhA Pickup
	phsB	32-1 PhB Pickup
	phsC	32-1 PhC Pickup

### 2.1.16 A32PDUP2

Beh		
	stVal	Out of Service
		Inhibit 32-2
		32-2 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 32-2
		32-2 Enabled
Op		
	general	32-2 Operated
Str		
	dirGeneral	32-2 PhA Dir Pickup
		32-2 PhB Dir Pickup
		32-2 PhC Dir Pickup
	dirPhsA	32-2 PhA Dir Pickup
	dirPhsB	32-2 PhB Dir Pickup
	dirPhsC	32-2 PhC Dir Pickup
	general	32-2 PhA Pickup

		32-2 PhB Pickup
		32-2 PhC Pickup
	phsA	32-2 PhA Pickup
	phsB	32-2 PhB Pickup
	phsC	32-2 PhC Pickup

### 2.1.17 A32SPDOP1

Beh		
	stVal	Out of Service
		Inhibit 32S-1
		32S-1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 32S-1
		32S-1 Enabled
Op		
	general	32S-1 Operated
Str		
	dirGeneral	32S-1 Dir Pickup
	general	32S-1 Pickup

### 2.1.18 A32SPDOP2

Beh		
	stVal	Out of Service
		Inhibit 32S-2
		32S-2 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 32S-2
		32S-2 Enabled
Op		
	general	32S-2 Operated
Str		

	dirGeneral	32S-2 Dir Pickup
	general	32S-2 Pickup

**2.1.19 A32SPDUP1**

Beh		
	stVal	Out of Service
		Inhibit 32S-1
		32S-1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 32S-1
		32S-1 Enabled
Op		
	general	32S-1 Operated
Str		
	dirGeneral	32S-1 Dir Pickup
	general	32S-1 Pickup

**2.1.20 A32SPDUP2**

Beh		
	stVal	Out of Service
		Inhibit 32S-2
		32S-2 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 32S-2
		32S-2 Enabled
Op		
	general	32S-2 Operated
Str		
	dirGeneral	32S-2 Dir Pickup
	general	32S-2 Pickup

**2.1.21 A37PTUC1**

Beh		
	stVal	Out of Service
		Inhibit 37-1
		37-1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 37-1
		37-1 Enabled
Op		
	general	37-1 Operated
Str		
	dirGeneral	Non-Directional
	dirPhsA	Non-Directional
	dirPhsB	Non-Directional
	dirPhsC	Non-Directional
	general	37-1 PhA Pickup
		37-1 PhB Pickup
		37-1 PhC Pickup
	phsA	37-1 PhA Pickup
	phsB	37-1 PhB Pickup
	phsC	37-1 PhC Pickup

**2.1.22 A37PTUC2**

Beh		
	stVal	Out of Service
		Inhibit 37-2
		37-2 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 37-2
		37-2 Enabled
Op		
	general	37-2 Operated

Str		
	dirGeneral	Non-Directional
	dirPhsA	Non-Directional
	dirPhsB	Non-Directional
	dirPhsC	Non-Directional
	general	37-2 PhA Pickup
		37-2 PhB Pickup
		37-2 PhC Pickup
	phsA	37-2 PhA Pickup
	phsB	37-2 PhB Pickup
	phsC	37-2 PhC Pickup

### 2.1.23 A46PhRevPTOC1

Beh		
	stVal	Out of Service
		Inhibit
		Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit
		Enabled
Op		
	general	Operated
Str		
	dirGeneral	Non-Directional
	general	Pickup

### 2.1.24 A46PUPTOC1

Beh		
	stVal	Out of Service
		Inhibit 46
		46 Enabled
Health		
	stVal	Protection Healthy

Mod		
	stVal	Inhibit 46
		46 Enabled
Op		
	general	46 Operated
Str		
	general	46 Pickup

### 2.1.25 A47PTOV1

Beh		
	stVal	Out of Service
		Inhibit 47-1
		47-1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 47-1
		47-1 Enabled
Op		
	general	47-1 Operated
Str		
	dirGeneral	Non-Directional
	general	47-1 Pickup

### 2.1.26 A47PTOV2

Beh		
	stVal	Out of Service
		Inhibit 47-2
		47-2 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 47-2
		47-2 Enabled
Op		

	general	47-2 Operated
Str		
	dirGeneral	Non-Directional
	general	47-2 Pickup

### 2.1.27 A48PMSS1

Beh		
	stVal	Out of Service
		Inhibit A48_1
		A48_1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit A48_1
		A48_1 Enabled
Op		
	general	A48_1 Operated
Str		
	dirGeneral	Non-Directional
	general	A48_1 Pickup

### 2.1.28 A48PMSS2

Beh		
	stVal	Out of Service
		Inhibit A48_1
		A48_1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit A48_1
		A48_1 Enabled
Op		
	general	A48_1 Operated
Str		
	dirGeneral	Non-Directional

	general	A48_1 Pickup

**2.1.29 A49PMRI1**

Beh		
	stVal	Out of Service
		Inhibit
		Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit
		Enabled
Op		
	general	Operated

**2.1.30 A49PTTR1**

AlmThm		
	stVal	49 Thermal Alarm
Beh		
	stVal	Inhibit 49
		49 Enabled
		Protection Active
		Out of Service
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 49
		49 Enabled
Op		
	general	49 Operated
Str		
	dirGeneral	Non-Directional
	general	49 Pickup

### 2.1.31 A50BCLPTOC1

Beh		
	stVal	Out of Service
		Inhibit 50BCL
		50BCL Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 50BCL
		50BCL Enabled
Op		
	general	50BCL Operated
Str		
	dirGeneral	Non-Directional
	dirPhsA	Non-Directional
	dirPhsB	Non-Directional
	dirPhsC	Non-Directional
	general	50BCL PhA Pickup
		50BCL PhB Pickup
		50BCL PhC Pickup
	phsA	50BCL PhA Pickup
	phsB	50BCL PhB Pickup
	phsC	50BCL PhC Pickup

### 2.1.32 A50BfRBRF1

Beh		
	stVal	Inhibit 50BF
		50BF Enabled
		Protection Active
		Out of Service
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 50BF
		50BF Enabled
OpEx		

	general	50BF-2
Opln		
	general	50BF-1
Str		
	dirGeneral	Non-Directional
	general	50BF Pickup

### 2.1.33 A50gPTOC1

Beh		
	stVal	Out of Service
		Inhibit 50G-1
		50G-1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 50G-1
		50G-1 Enabled
Op		
	general	50G-1 Operated
Str		
	dirGeneral	50G-1 Dir Pickup
	general	50G-1 Pickup

### 2.1.34 A50gPTOC2

Beh		
	stVal	Out of Service
		Inhibit 50G-2
		50G-2 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 50G-2
		50G-2 Enabled
Op		
	general	50G-2 Operated

Str		
	dirGeneral	50G-2 Dir Pickup
	general	50G-2 Pickup

### 2.1.35 A50nPTOC1

Beh		
	stVal	Out of Service
		Inhibit 50N-1
		50N-1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 50N-1
		50N-1 Enabled
Op		
	general	50N-1 Operated
Str		
	dirGeneral	50N-1 Dir Pickup
	general	50N-1 Pickup

### 2.1.36 A50nPTOC2

Beh		
	stVal	Out of Service
		Inhibit 50N-2
		50N-2 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 50N-2
		50N-2 Enabled
Op		
	general	50N-2 Operated
Str		
	dirGeneral	50N-2 Dir Pickup
	general	50N-2 Pickup

--	--	--

**2.1.37 A50PTOC1**

Beh		
	stVal	Out of Service
		Inhibit 50-1
		50-1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 50-1
		50-1 Enabled
Op		
	general	50-1 Operated
Str		
	dirGeneral	50-1 PhA Dir Pickup
		50-1 PhB Dir Pickup
		50-1 PhC Dir Pickup
	dirPhsA	50-1 PhA Dir Pickup
	dirPhsB	50-1 PhB Dir Pickup
	dirPhsC	50-1 PhC Dir Pickup
	general	50-1 PhA Pickup
		50-1 PhB Pickup
		50-1 PhC Pickup
	phsA	50-1 PhA Pickup
	phsB	50-1 PhB Pickup
	phsC	50-1 PhC Pickup

**2.1.38 A50PTOC2**

Beh		
	stVal	Out of Service
		Inhibit 50-2
		50-2 Enabled
Health		
	stVal	Protection Healthy
Mod		

	stVal	Inhibit 50-2
		50-2 Enabled
Op		
	general	50-2 Operated
Str		
	dirGeneral	50-2 PhA Dir Pickup
		50-2 PhB Dir Pickup
		50-2 PhC Dir Pickup
	dirPhsA	50-2 PhA Dir Pickup
	dirPhsB	50-2 PhB Dir Pickup
	dirPhsC	50-2 PhC Dir Pickup
	general	50-2 PhA Pickup
		50-2 PhB Pickup
		50-2 PhC Pickup
	phsA	50-2 PhA Pickup
	phsB	50-2 PhB Pickup
	phsC	50-2 PhC Pickup

### 2.1.39 A51gPTOC1

Beh		
	stVal	Out of Service
		Inhibit 51G-1
		51G-1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 51G-1
		51G-1 Enabled
Op		
	general	51G-1 Operated
Str		
	dirGeneral	51G-1 Dir Pickup
	general	51G-1 Pickup

**2.1.40 A51gPTOC2**

Beh		
	stVal	Out of Service
		Inhibit 51G-2
		51G-2 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 51G-2
		51G-2 Enabled
Op		
	general	51G-2 Operated
Str		
	dirGeneral	51G-2 Dir Pickup
	general	51G-2 Pickup

**2.1.41 A51nPTOC1**

Beh		
	stVal	Out of Service
		Inhibit 51N-1
		51N-1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 51N-1
		51N-1 Enabled
Op		
	general	51N-1 Operated
Str		
	dirGeneral	51N-1 Dir Pickup
	general	51N-1 Pickup

**2.1.42 A51nPTOC2**

Beh		
	stVal	Out of Service

		Inhibit 51N-2
		51N-2 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 51N-2
		51N-2 Enabled
Op		
	general	51N-2 Operated
Str		
	dirGeneral	51N-2 Dir Pickup
	general	51N-2 Pickup

**2.1.43 A51PTOC1**

Beh		
	stVal	Out of Service
		Inhibit 51-1
		51-1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 51-1
		51-1 Enabled
Op		
	general	51-1 Operated
Str		
	dirGeneral	51-1 PhA Dir Pickup
		51-1 PhB Dir Pickup
		51-1 PhC Dir Pickup
	dirPhsA	51-1 PhA Dir Pickup
	dirPhsB	51-1 PhB Dir Pickup
	dirPhsC	51-1 PhC Dir Pickup
	general	51-1 PhA Pickup
		51-1 PhB Pickup
		51-1 PhC Pickup
	phsA	51-1 PhA Pickup

	phsB	51-1 PhB Pickup
	phsC	51-1 PhC Pickup

**2.1.44 A51PTOC2**

Beh		
	stVal	Out of Service
		Inhibit 51-2
		51-2 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 51-2
		51-2 Enabled
Op		
	general	51-2 Operated
Str		
	dirGeneral	51-2 PhA Dir Pickup
		51-2 PhB Dir Pickup
		51-2 PhC Dir Pickup
	dirPhsA	51-2 PhA Dir Pickup
	dirPhsB	51-2 PhB Dir Pickup
	dirPhsC	51-2 PhC Dir Pickup
	general	51-2 PhA Pickup
		51-2 PhB Pickup
		51-2 PhC Pickup
	phsA	51-2 PhA Pickup
	phsB	51-2 PhB Pickup
	phsC	51-2 PhC Pickup

**2.1.45 A55PDOP1**

Beh		
	stVal	Out of Service
		Inhibit 55-1
		55-1 Enabled
Health		

	stVal	Protection Healthy
Mod		
	stVal	Inhibit 55-1
		55-1 Enabled
Op		
	general	55-1 Operated
Str		
	dirGeneral	55-1 PhA Dir Pickup
		55-1 PhB Dir Pickup
		55-1 PhC Dir Pickup
	dirPhsA	55-1 PhA Dir Pickup
	dirPhsB	55-1 PhB Dir Pickup
	dirPhsC	55-1 PhC Dir Pickup
	general	55-1 PhA Pickup
		55-1 PhB Pickup
		55-1 PhC Pickup
	phsA	55-1 PhA Pickup
	phsB	55-1 PhB Pickup
	phsC	55-1 PhC Pickup

#### 2.1.46 A55PDOP2

Beh		
	stVal	Out of Service
		Inhibit 55-2
		55-2 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 55-2
		55-2 Enabled
Op		
	general	55-2 Operated
Str		
	dirGeneral	55-2 PhA Dir Pickup
		55-2 PhB Dir Pickup
		55-2 PhC Dir Pickup

	dirPhsA	55-2 PhA Dir Pickup
	dirPhsB	55-2 PhB Dir Pickup
	dirPhsC	55-2 PhC Dir Pickup
	general	55-2 PhA Pickup
		55-2 PhB Pickup
		55-2 PhC Pickup
	phsA	55-2 PhA Pickup
	phsB	55-2 PhB Pickup
	phsC	55-2 PhC Pickup

### 2.1.47 A55PDUP1

Beh		
	stVal	Out of Service
		Inhibit 55-1
		55-1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 55-1
		55-1 Enabled
Op		
	general	55-1 Operated
Str		
	dirGeneral	55-1 PhA Dir Pickup
		55-1 PhB Dir Pickup
		55-1 PhC Dir Pickup
	dirPhsA	55-1 PhA Dir Pickup
	dirPhsB	55-1 PhB Dir Pickup
	dirPhsC	55-1 PhC Dir Pickup
	general	55-1 PhA Pickup
		55-1 PhB Pickup
		55-1 PhC Pickup
	phsA	55-1 PhA Pickup
	phsB	55-1 PhB Pickup
	phsC	55-1 PhC Pickup

**2.1.48 A55PDUP2**

Beh		
	stVal	Out of Service
		Inhibit 55-2
		55-2 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 55-2
		55-2 Enabled
Op		
	general	55-2 Operated
Str		
	dirGeneral	55-2 PhA Dir Pickup
		55-2 PhB Dir Pickup
		55-2 PhC Dir Pickup
	dirPhsA	55-2 PhA Dir Pickup
	dirPhsB	55-2 PhB Dir Pickup
	dirPhsC	55-2 PhC Dir Pickup
	general	55-2 PhA Pickup
		55-2 PhB Pickup
		55-2 PhC Pickup
	phsA	55-2 PhA Pickup
	phsB	55-2 PhB Pickup
	phsC	55-2 PhC Pickup

**2.1.49 A66PMRI1**

Beh		
	stVal	Out of Service
		Inhibit
		Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit
		Enabled

Op		
	general	Operated

**2.1.50 A81PTOF1**

Beh		
	stVal	Out of Service
		Inhibit 81-1
		81-1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 81-1
		81-1 Enabled
Op		
	general	81-1 Operated
Str		
	dirGeneral	Non-Directional
	general	81-1 Pickup

**2.1.51 A81PTOF2**

Beh		
	stVal	Out of Service
		Inhibit 81-2
		81-2 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 81-2
		81-2 Enabled
Op		
	general	81-2 Operated
Str		
	dirGeneral	Non-Directional
	general	81-2 Pickup

**2.1.52 A81PTUF1**

Beh		
	stVal	Out of Service
		Inhibit 81-1
		81-1 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 81-1
		81-1 Enabled
Op		
	general	81-1 Operated
Str		
	dirGeneral	Non-Directional
	general	81-1 Pickup

**2.1.53 A81PTUF2**

Beh		
	stVal	Out of Service
		Inhibit 81-2
		81-2 Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 81-2
		81-2 Enabled
Op		
	general	81-2 Operated
Str		
	dirGeneral	Non-Directional
	general	81-2 Pickup

**2.1.54 A87REFPTOC1**

Beh		
	stVal	Out of Service

		Inhibit 87REF
		87REF Enabled
Health		
	stVal	Protection Healthy
Mod		
	stVal	Inhibit 87REF
		87REF Enabled
Op		
	general	87REF Operated
Str		
	dirGeneral	Non-Directional
	general	87REF Pickup

### 2.1.55 CntDelGGIO1

Beh		
	stVal	CB Delta Trip Count Enabled
		Out of Service
Health		
	stVal	Protection Healthy
ISCSO1		
	stVal	CB Delta Trip Count
ISCSO2		
	stVal	CB Delta Trip Count Target
Loc		
	stVal	Local Mode
Mod		
	stVal	CB Delta Trip Count Enabled
SPCSO		
	stVal	CB Delta Trip Count Operated

### 2.1.56 LLN0

Beh		
	stVal	Protection Active
		Out of Service
Health		

	stVal	Protection Healthy
Mod		
	stVal	Protection Active
		Out of Service
NamPlt		
	swRev	Software Revision
	vendor	Vendor Name
SGCB		
	ActSG	Active Setting Group 1
		Active Setting Group 2
		Active Setting Group 3
		Active Setting Group 4
	LActTm	Active Setting Group 1
		Active Setting Group 2
		Active Setting Group 3
		Active Setting Group 4
	NumOfSG	Number of 61850 Controllable Setting Groups

### 2.1.57 PTRC1

Beh		
	stVal	Protection Active
		Out of Service
Health		
	stVal	Protection Healthy
Mod		
	stVal	Protection Active
Op		
	general	General Operate
OpCntRs		
	Oper.ctlVal	Set CB Trip Count
	stVal	CB Trip Count
Str		
	dirGeneral	General Pickup
		General Pickup & Fwd Direction
		General Pickup & Rev Direction

	general	General Pickup
Tr		
	general	CB Trip

## 2.2 MEAS

### 2.2.1 I\_MSQI1

Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
SeqA		
	c1.cVal.mag.f	Sequence Components I Seq PPS
	c1.instCVal.mag.f	Sequence Components I Seq PPS
	c1.units.multiplier	Sequence Components I Seq PPS
	c1.units.SIUnit	Sequence Components I Seq PPS
	c2.cVal.mag.f	Sequence Components I Seq NPS
	c2.instCVal.mag.f	Sequence Components I Seq NPS
	c2.units.multiplier	Sequence Components I Seq NPS
	c2.units.SIUnit	Sequence Components I Seq NPS
	c3.cVal.mag.f	Sequence Components I Seq ZPS
	c3.instCVal.mag.f	Sequence Components I Seq ZPS
	c3.units.multiplier	Sequence Components I Seq ZPS
	c3.units.SIUnit	Sequence Components I Seq ZPS

### 2.2.2 LLN0

Beh		
	stVal	Protection Healthy
		Out of Service
Health		

	stVal	Protection Healthy
Mod		
	stVal	Protection Healthy
		Out of Service
NamPlt		
	swRev	Software Revision
	vendor	Vendor Name

### 2.2.3 MaxMMXU1

A		
	phsA.cVal.mag.f	Max Ia
	phsB.cVal.mag.f	Max Ib
	phsC.cVal.mag.f	Max Ic
Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
Hz		
	mag.f	Max Frequency(F)
PhV		
	phsA.cVal.mag.f	Max Va
	phsB.cVal.mag.f	Max Vb
	phsC.cVal.mag.f	Max Vc
PPV		
	phsAB.cVal.mag.f	Max Vab
	phsBC.cVal.mag.f	Max Vbc
	phsCA.cVal.mag.f	Max Vca
TotVA		
	mag.f	Max Apparent Power(S) 3Phase
TotVAr		
	mag.f	Max Reactive Power(Q) 3Phase
TotW		
	mag.f	Max Active Power(P) 3Phase

## 2.2.4 MeanMMXU1

A		
	phsA.cVal.mag.f	Mean Ia
	phsB.cVal.mag.f	Mean Ib
	phsC.cVal.mag.f	Mean Ic
Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
Hz		
	mag.f	Mean Frequency(F)
PhV		
	phsA.cVal.mag.f	Mean Va
	phsB.cVal.mag.f	Mean Vb
	phsC.cVal.mag.f	Mean Vc
PPV		
	phsAB.cVal.mag.f	Mean Vab
	phsBC.cVal.mag.f	Mean Vbc
	phsCA.cVal.mag.f	Mean Vca
TotVA		
	mag.f	Mean Apparent Power(S) 3Phase
TotVAr		
	mag.f	Mean Reactive Power(Q) 3Phase
TotW		
	mag.f	Mean Active Power(P) 3Phase

## 2.2.5 MinMMXU1

A		
	phsA.cVal.mag.f	Min Ia
	phsB.cVal.mag.f	Min Ib
	phsC.cVal.mag.f	Min Ic
Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
Hz		

	mag.f	Min Frequency(F)
PhV		
	phsA.cVal.mag.f	Min Va
	phsB.cVal.mag.f	Min Vb
	phsC.cVal.mag.f	Min Vc
PPV		
	phsAB.cVal.mag.f	Min Vab
	phsBC.cVal.mag.f	Min Vbc
	phsCA.cVal.mag.f	Min Vca
TotVA		
	mag.f	Min Apparent Power(S) 3Phase
TotVAr		
	mag.f	Min Reactive Power(Q) 3Phase
TotW		
	mag.f	Min Active Power(P) 3Phase

## 2.2.6 MMXU1

A		
	neut.cVal.mag.f	Measured Earth Current(Ig)
	phsA.cVal.mag.f	Ia
	phsB.cVal.mag.f	Ib
	phsC.cVal.mag.f	Ic
	res.cVal.mag.f	Calculated Earth Current(In)
Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
Hz		
	mag.f	Frequency(F)
PF		
	phsA.cVal.mag.f	Power Factor(PF) Phase A
	phsB.cVal.mag.f	Power Factor(PF) Phase B
	phsC.cVal.mag.f	Power Factor(PF) Phase C
PhV		
	phsA.cVal.mag.f	Va
	phsB.cVal.mag.f	Vb

	phsC.cVal.mag.f	Vc
	res.cVal.mag.f	Calculated Earth Voltage (Vn)
PPV		
	phsAB.cVal.mag.f	Vab
	phsBC.cVal.mag.f	Vbc
	phsCA.cVal.mag.f	Vca
TotPF		
	mag.f	Power Factor(PF) 3Phase
TotVA		
	mag.f	Apparent Power(S) 3Phase
TotVAr		
	mag.f	Reactive Power(Q) 3Phase
TotW		
	mag.f	Active Power(P) 3Phase
VA		
	phsA.cVal.mag.f	Apparent Power(S) Phase A
	phsB.cVal.mag.f	Apparent Power(S) Phase B
	phsC.cVal.mag.f	Apparent Power(S) Phase C
Var		
	phsA.cVal.mag.f	Reactive Power(Q) Phase A
	phsB.cVal.mag.f	Reactive Power(Q) Phase B
	phsC.cVal.mag.f	Reactive Power(Q) Phase C
W		
	phsA.cVal.mag.f	Active Power(P) Phase A
	phsB.cVal.mag.f	Active Power(P) Phase B
	phsC.cVal.mag.f	Active Power(P) Phase C

## 2.2.7 V\_MSQI1

Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
SeqV		
	c1.cVal.mag.f	Sequence Components V Seq PPS
	c1.instCVal.mag.f	Sequence Components V Seq

		PPS
	c1.units.multiplier	Sequence Components V Seq PPS
	c1.units.SIUnit	Sequence Components V Seq PPS
	c2.cVal.mag.f	Sequence Components V Seq NPS
	c2.instCVal.mag.f	Sequence Components V Seq NPS
	c2.units.multiplier	Sequence Components V Seq NPS
	c2.units.SIUnit	Sequence Components V Seq NPS
	c3.cVal.mag.f	Sequence Components V Seq ZPS
	c3.instCVal.mag.f	Sequence Components V Seq ZPS
	c3.units.multiplier	Sequence Components V Seq ZPS
	c3.units.SIUnit	Sequence Components V Seq ZPS

## 2.3 DR

### 2.3.1 LLN0

Beh		
	stVal	Protection Healthy
		Out of Service
Health		
	stVal	Protection Healthy
Mod		
	stVal	Protection Healthy
		Out of Service
NamPlt		
	swRev	Software Revision
	vendor	Vendor Name

### 2.3.2 RDRE1

Beh		

	stVal	Protection Healthy
		Out of Service
FltNum		
	stVal	Fault Number
GriFltNum		
	stVal	Grid Fault Number
Health		
	stVal	Protection Healthy
Mod		
	stVal	Protection Healthy
RcdMade		
	stVal	Recording Made

## 2.4 CTRL

### 2.4.1 BI6GGIO1

Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
Ind1		
	stVal	1
Ind2		
	stVal	2
Ind3		
	stVal	3
Ind4		
	stVal	4
Ind5		
	stVal	5
Ind6		
	stVal	6

### 2.4.2 BO8GGIO1

Beh		

	stVal	Out of Service
Health		
	stVal	Protection Healthy
Ind1		
	stVal	1
Ind2		
	stVal	2
Ind3		
	stVal	3
Ind4		
	stVal	4
Ind5		
	stVal	5
Ind6		
	stVal	6
Ind7		
	stVal	7
Ind8		
	stVal	8

#### 2.4.3 DPDOesGGIO1

Beh		
	stVal	Out of Service
DPCSO		
	Oper.ctlVal	DPDOes 1 Control
	stVal	DPDOes 1 Status
Health		
	stVal	Protection Healthy
Loc		
	stVal	Local Mode

#### 2.4.4 DPDOesGGIO2

Beh		
	stVal	Out of Service
DPCSO		

	Oper.ctlVal	DPDOes 2 Control
	stVal	DPDOes 2 Status
Health		
	stVal	Protection Healthy
Loc		
	stVal	Local Mode

#### 2.4.5 DPDOesGGIO3

Beh		
	stVal	Out of Service
DPCSO		
	Oper.ctlVal	DPDOes 3 Control
	stVal	DPDOes 3 Status
Health		
	stVal	Protection Healthy
Loc		
	stVal	Local Mode

#### 2.4.6 DPDOesGGIO4

Beh		
	stVal	Out of Service
DPCSO		
	Oper.ctlVal	DPDOes 4 Control
	stVal	DPDOes 4 Status
Health		
	stVal	Protection Healthy
Loc		
	stVal	Local Mode

#### 2.4.7 DPDOnsGGIO1

Beh		
	stVal	Out of Service
DPCSO		
	Oper.ctlVal	DPDOns 1 Control
	stVal	DPDOns 1 Status

Health		
	stVal	Protection Healthy
Loc		
	stVal	Local Mode

#### 2.4.8 DPDOnsGGIO2

Beh		
	stVal	Out of Service
DPCSO		
	Oper.ctlVal	DPDOns 2 Control
	stVal	DPDOns 2 Status
Health		
	stVal	Protection Healthy
Loc		
	stVal	Local Mode

#### 2.4.9 DPDOnsGGIO3

Beh		
	stVal	Out of Service
DPCSO		
	Oper.ctlVal	DPDOns 3 Control
	stVal	DPDOns 3 Status
Health		
	stVal	Protection Healthy
Loc		
	stVal	Local Mode

#### 2.4.10 DPDOnsGGIO4

Beh		
	stVal	Out of Service
DPCSO		
	Oper.ctlVal	DPDOns 4 Control
	stVal	DPDOns 4 Status
Health		
	stVal	Protection Healthy

Loc		
	stVal	Local Mode

#### 2.4.11 DPi8GGIO1

Beh		
	stVal	Out of Service
DPCSO1		
	ctlVal	DPi8GGIO1 DPCSO 1
DPCSO2		
	ctlVal	DPi8GGIO1 DPCSO 2
DPCSO3		
	ctlVal	DPi8GGIO1 DPCSO 3
DPCSO4		
	ctlVal	DPi8GGIO1 DPCSO 4
DPCSO5		
	ctlVal	DPi8GGIO1 DPCSO 5
DPCSO6		
	ctlVal	DPi8GGIO1 DPCSO 6
DPCSO7		
	ctlVal	DPi8GGIO1 DPCSO 7
DPCSO8		
	ctlVal	DPi8GGIO1 DPCSO 8
Health		
	stVal	Protection Healthy

#### 2.4.12 DPi8GGIO2

Beh		
	stVal	Out of Service
DPCSO1		
	ctlVal	DPi8GGIO2 DPCSO 1
DPCSO2		
	ctlVal	DPi8GGIO2 DPCSO 2
DPCSO3		
	ctlVal	DPi8GGIO2 DPCSO 3
DPCSO4		

	ctlVal	DPi8GGIO2 DPCSO 4
DPCSO5		
	ctlVal	DPi8GGIO2 DPCSO 5
DPCSO6		
	ctlVal	DPi8GGIO2 DPCSO 6
DPCSO7		
	ctlVal	DPi8GGIO2 DPCSO 7
DPCSO8		
	ctlVal	DPi8GGIO2 DPCSO 8
Health		
	stVal	Protection Healthy

#### 2.4.13 DPo8GGIO1

Beh		
	stVal	Out of Service
DPCSO1		
	stVal	DPo8GGIO1 Ind 1
DPCSO2		
	stVal	DPo8GGIO1 Ind 2
DPCSO3		
	stVal	DPo8GGIO1 Ind 3
DPCSO4		
	stVal	DPo8GGIO1 Ind 4
DPCSO5		
	stVal	DPo8GGIO1 Ind 5
DPCSO6		
	stVal	DPo8GGIO1 Ind 6
DPCSO7		
	stVal	DPo8GGIO1 Ind 7
DPCSO8		
	stVal	DPo8GGIO1 Ind 8
Health		
	stVal	Protection Healthy

**2.4.14 DPo8GGIO2**

Beh		
	stVal	Out of Service
DPCSO1		
	stVal	DPo8GGIO2 Ind 1
DPCSO2		
	stVal	DPo8GGIO2 Ind 2
DPCSO3		
	stVal	DPo8GGIO2 Ind 3
DPCSO4		
	stVal	DPo8GGIO2 Ind 4
DPCSO5		
	stVal	DPo8GGIO2 Ind 5
DPCSO6		
	stVal	DPo8GGIO2 Ind 6
DPCSO7		
	stVal	DPo8GGIO2 Ind 7
DPCSO8		
	stVal	DPo8GGIO2 Ind 8
Health		
	stVal	Protection Healthy

**2.4.15 E4GGIO1**

Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
Ind1		
	stVal	1
Ind2		
	stVal	2
Ind3		
	stVal	3
Ind4		
	stVal	4

**2.4.16 L9GGIO1**

Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
Ind1		
	stVal	1
Ind2		
	stVal	2
Ind3		
	stVal	3
Ind4		
	stVal	4
Ind5		
	stVal	5
Ind6		
	stVal	6
Ind7		
	stVal	7
Ind8		
	stVal	8
Ind9		
	stVal	9

**2.4.17 LLN0**

Beh		
	stVal	Out of Service
		Protection Healthy
Health		
	stVal	Protection Healthy
LEDRs		
	stVal	LED Reset
Loc		
	stVal	Local Mode
Mod		
	stVal	Out of Service

		Protection Healthy
NamPlt		
	swRev	Software Revision
	vendor	Vendor Name

**2.4.18 Q0CILO1**

Beh		
	stVal	Out of Service
EnaCls		
	stVal	Not Close Block
EnaOpn		
	stVal	Not Open Block
Health		
	stVal	Protection Healthy

**2.4.19 Q0CSWI1**

Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
Loc		
	stVal	Local Mode
Pos		
	Oper.ctlVal	
	stVal	

**2.4.20 Q0XCBR1**

Beh		
	stVal	Out of Service
BlkCls		
	stVal	Close Block
BlkOpn		
	stVal	Open Block
Health		
	stVal	Protection Healthy

Loc		
	stVal	Local Mode
OpCnt		
	stVal	CB Operations Counter
Pos		
	stVal	
SumSwARs1		
	actVal	CB Wear PhA
SumSwARs2		
	actVal	CB Wear PhB
SumSwARs3		
	actVal	CB Wear PhC

#### 2.4.21 SPDOesGGIO1

Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
Loc		
	stVal	Local Mode
SPCSO		
	Oper.ctlVal	SPDOes 1 Control
	stVal	SPDOes 1 Status

#### 2.4.22 SPDOesGGIO2

Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
Loc		
	stVal	Local Mode
SPCSO		
	Oper.ctlVal	SPDOes 2 Control
	stVal	SPDOes 2 Status

**2.4.23 SPDOesGGIO3**

Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
Loc		
	stVal	Local Mode
SPCSO		
	Oper.ctlVal	SPDOes 3 Control
	stVal	SPDOes 3 Status

**2.4.24 SPDOesGGIO4**

Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
Loc		
	stVal	Local Mode
SPCSO		
	Oper.ctlVal	SPDOes 4 Control
	stVal	SPDOes 4 Status

**2.4.25 SPDOnsGGIO1**

Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
Loc		
	stVal	Local Mode
SPCSO		
	Oper.ctlVal	SPDOns 1 Control
	stVal	SPDOns 1 Status

**2.4.26 SPDOnsGGIO2**

Beh		

	stVal	Out of Service
Health		
	stVal	Protection Healthy
Loc		
	stVal	Local Mode
SPCSO		
	Oper.ctlVal	SPDOns 2 Control
	stVal	SPDOns 2 Status

**2.4.27 SPDOnsGGIO3**

Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
Loc		
	stVal	Local Mode
SPCSO		
	Oper.ctlVal	SPDOns 3 Control
	stVal	SPDOns 3 Status

**2.4.28 SPDOnsGGIO4**

Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
Loc		
	stVal	Local Mode
SPCSO		
	Oper.ctlVal	SPDOns 4 Control
	stVal	SPDOns 4 Status

**2.4.29 SPi64GGIO1**

Beh		
	stVal	Out of Service
Health		

	stVal	Protection Healthy
SPCSO1		
	ctlVal	SPi64GGIO1 SPCSO 1
SPCSO10		
	ctlVal	SPi64GGIO1 SPCSO 10
SPCSO11		
	ctlVal	SPi64GGIO1 SPCSO 11
SPCSO12		
	ctlVal	SPi64GGIO1 SPCSO 12
SPCSO13		
	ctlVal	SPi64GGIO1 SPCSO 13
SPCSO14		
	ctlVal	SPi64GGIO1 SPCSO 14
SPCSO15		
	ctlVal	SPi64GGIO1 SPCSO 15
SPCSO16		
	ctlVal	SPi64GGIO1 SPCSO 16
SPCSO17		
	ctlVal	SPi64GGIO1 SPCSO 17
SPCSO18		
	ctlVal	SPi64GGIO1 SPCSO 18
SPCSO19		
	ctlVal	SPi64GGIO1 SPCSO 19
SPCSO2		
	ctlVal	SPi64GGIO1 SPCSO 2
SPCSO20		
	ctlVal	SPi64GGIO1 SPCSO 20
SPCSO21		
	ctlVal	SPi64GGIO1 SPCSO 21
SPCSO22		
	ctlVal	SPi64GGIO1 SPCSO 22
SPCSO23		
	ctlVal	SPi64GGIO1 SPCSO 23
SPCSO24		
	ctlVal	SPi64GGIO1 SPCSO 24
SPCSO25		

	ctlVal	SPi64GGIO1 SPCSO 25
SPCSO26		
	ctlVal	SPi64GGIO1 SPCSO 26
SPCSO27		
	ctlVal	SPi64GGIO1 SPCSO 27
SPCSO28		
	ctlVal	SPi64GGIO1 SPCSO 28
SPCSO29		
	ctlVal	SPi64GGIO1 SPCSO 29
SPCSO3		
	ctlVal	SPi64GGIO1 SPCSO 3
SPCSO30		
	ctlVal	SPi64GGIO1 SPCSO 30
SPCSO31		
	ctlVal	SPi64GGIO1 SPCSO 31
SPCSO32		
	ctlVal	SPi64GGIO1 SPCSO 32
SPCSO33		
	ctlVal	SPi64GGIO1 SPCSO 33
SPCSO34		
	ctlVal	SPi64GGIO1 SPCSO 34
SPCSO35		
	ctlVal	SPi64GGIO1 SPCSO 35
SPCSO36		
	ctlVal	SPi64GGIO1 SPCSO 36
SPCSO37		
	ctlVal	SPi64GGIO1 SPCSO 37
SPCSO38		
	ctlVal	SPi64GGIO1 SPCSO 38
SPCSO39		
	ctlVal	SPi64GGIO1 SPCSO 39
SPCSO4		
	ctlVal	SPi64GGIO1 SPCSO 4
SPCSO40		
	ctlVal	SPi64GGIO1 SPCSO 40
SPCSO41		

	ctlVal	SPi64GGIO1 SPCSO 41
SPCSO42		
	ctlVal	SPi64GGIO1 SPCSO 42
SPCSO43		
	ctlVal	SPi64GGIO1 SPCSO 43
SPCSO44		
	ctlVal	SPi64GGIO1 SPCSO 44
SPCSO45		
	ctlVal	SPi64GGIO1 SPCSO 45
SPCSO46		
	ctlVal	SPi64GGIO1 SPCSO 46
SPCSO47		
	ctlVal	SPi64GGIO1 SPCSO 47
SPCSO48		
	ctlVal	SPi64GGIO1 SPCSO 48
SPCSO49		
	ctlVal	SPi64GGIO1 SPCSO 49
SPCSO5		
	ctlVal	SPi64GGIO1 SPCSO 5
SPCSO50		
	ctlVal	SPi64GGIO1 SPCSO 50
SPCSO51		
	ctlVal	SPi64GGIO1 SPCSO 51
SPCSO52		
	ctlVal	SPi64GGIO1 SPCSO 52
SPCSO53		
	ctlVal	SPi64GGIO1 SPCSO 53
SPCSO54		
	ctlVal	SPi64GGIO1 SPCSO 54
SPCSO55		
	ctlVal	SPi64GGIO1 SPCSO 55
SPCSO56		
	ctlVal	SPi64GGIO1 SPCSO 56
SPCSO57		
	ctlVal	SPi64GGIO1 SPCSO 57
SPCSO58		

	ctlVal	SPi64GGIO1 SPCSO 58
SPCSO59		
	ctlVal	SPi64GGIO1 SPCSO 59
SPCSO6		
	ctlVal	SPi64GGIO1 SPCSO 6
SPCSO60		
	ctlVal	SPi64GGIO1 SPCSO 60
SPCSO61		
	ctlVal	SPi64GGIO1 SPCSO 61
SPCSO62		
	ctlVal	SPi64GGIO1 SPCSO 62
SPCSO63		
	ctlVal	SPi64GGIO1 SPCSO 63
SPCSO64		
	ctlVal	SPi64GGIO1 SPCSO 64
SPCSO7		
	ctlVal	SPi64GGIO1 SPCSO 7
SPCSO8		
	ctlVal	SPi64GGIO1 SPCSO 8
SPCSO9		
	ctlVal	SPi64GGIO1 SPCSO 9

#### 2.4.30 SPo32GGIO1

Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
Ind1		
	stVal	SPo32GGIO1 Ind 1
Ind10		
	stVal	SPo32GGIO1 Ind 10
Ind11		
	stVal	SPo32GGIO1 Ind 11
Ind12		
	stVal	SPo32GGIO1 Ind 12
Ind13		

	stVal	SPo32GGIO1 Ind 13
Ind14		
	stVal	SPo32GGIO1 Ind 14
Ind15		
	stVal	SPo32GGIO1 Ind 15
Ind16		
	stVal	SPo32GGIO1 Ind 16
Ind17		
	stVal	SPo32GGIO1 Ind 17
Ind18		
	stVal	SPo32GGIO1 Ind 18
Ind19		
	stVal	SPo32GGIO1 Ind 19
Ind2		
	stVal	SPo32GGIO1 Ind 2
Ind20		
	stVal	SPo32GGIO1 Ind 20
Ind21		
	stVal	SPo32GGIO1 Ind 21
Ind22		
	stVal	SPo32GGIO1 Ind 22
Ind23		
	stVal	SPo32GGIO1 Ind 23
Ind24		
	stVal	SPo32GGIO1 Ind 24
Ind25		
	stVal	SPo32GGIO1 Ind 25
Ind26		
	stVal	SPo32GGIO1 Ind 26
Ind27		
	stVal	SPo32GGIO1 Ind 27
Ind28		
	stVal	SPo32GGIO1 Ind 28
Ind29		
	stVal	SPo32GGIO1 Ind 29
Ind3		

	stVal	SPo32GGIO1 Ind 3
Ind30		
	stVal	SPo32GGIO1 Ind 30
Ind31		
	stVal	SPo32GGIO1 Ind 31
Ind32		
	stVal	SPo32GGIO1 Ind 32
Ind4		
	stVal	SPo32GGIO1 Ind 4
Ind5		
	stVal	SPo32GGIO1 Ind 5
Ind6		
	stVal	SPo32GGIO1 Ind 6
Ind7		
	stVal	SPo32GGIO1 Ind 7
Ind8		
	stVal	SPo32GGIO1 Ind 8
Ind9		
	stVal	SPo32GGIO1 Ind 9

#### 2.4.31 V8GGIO1

Beh		
	stVal	Out of Service
Health		
	stVal	Protection Healthy
Ind1		
	stVal	1
Ind2		
	stVal	2
Ind3		
	stVal	3
Ind4		
	stVal	4
Ind5		
	stVal	5
Ind6		

	stVal	6
Ind7		
	stVal	7
Ind8		
	stVal	8