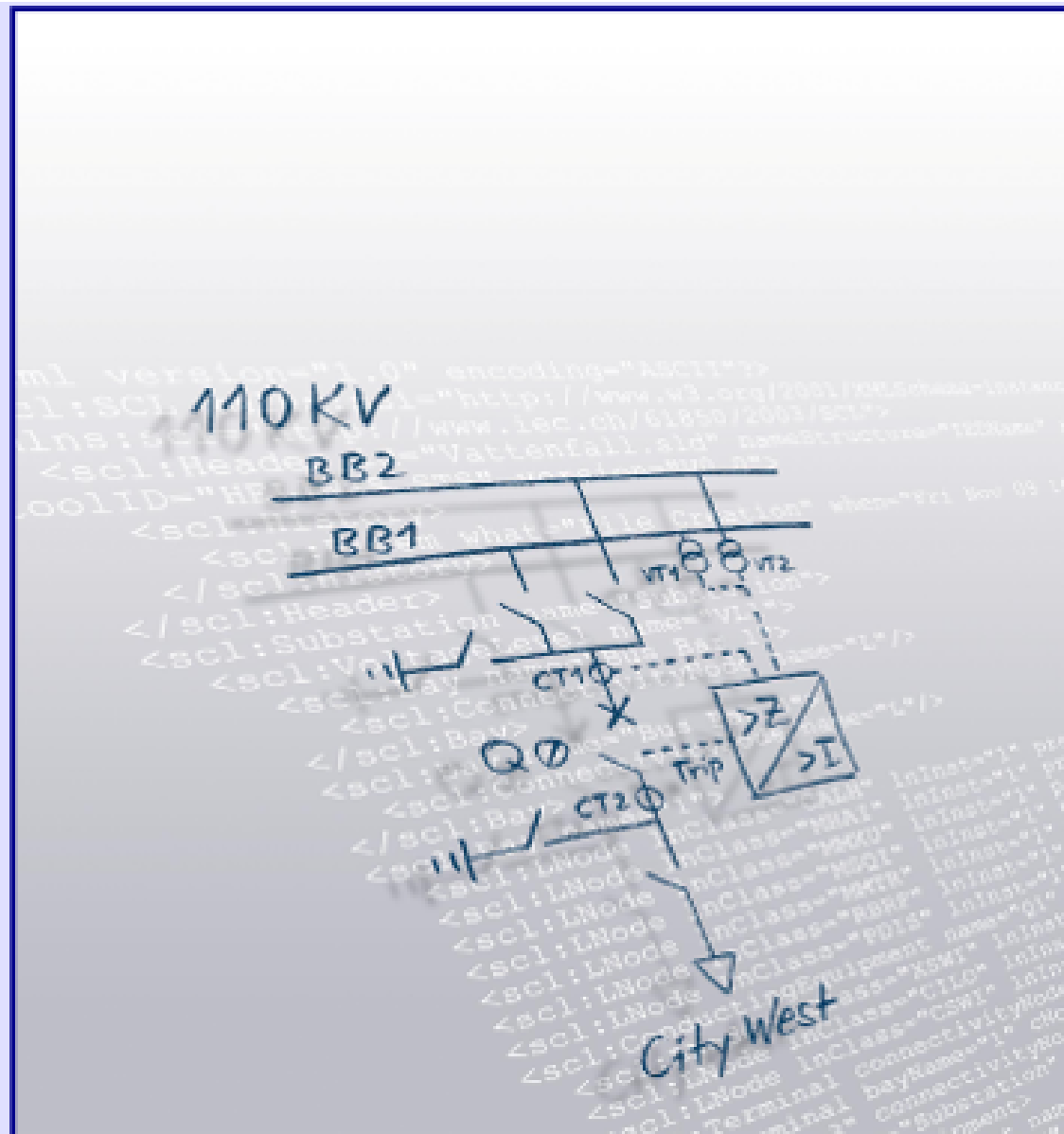


Helinks Project Report

ZAPHIR



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Table of Contents

1. SCD History	1
2. General Specification	2
3. ZAPHIR Single Line and Functions	3
3.1. ZAPHIR	3
3.2. Application Schemes	4
3.2.1. GOOSEApplication	4
3.3. Voltage Level ZAPHIR/J	4
3.3.1. Bay ZAPHIR/J/01	5
3.3.2. Bay ZAPHIR/J/02	7
3.3.3. Bay ZAPHIR/J/03	10
3.3.4. Bay ZAPHIR/J/04	11
3.4. Voltage Level ZAPHIR/E	14
3.4.1. Bay ZAPHIR/E/01	14
3.5. Transformers	14
3.5.1. PWT	14
3.6. Data Attribute Glossary	14
3.6.1. Loc	14
3.6.2. Pos	14
3.6.3. OpCnt	14
3.6.4. BlkOpn	14
3.6.5. BlkCls	15
3.6.6. A	15
3.6.7. EnaOpn	15
3.6.8. EnaCls	15
3.6.9. Health	15
3.6.10. ParOp	15
3.6.11. CtlV	16
3.6.12. Str	16
3.6.13. Op	16
3.6.14. Tr	16
3.6.15. EEHealth	16
4. System Communication Diagram	17

4.1. Subnetwork 17

4.2. IED Overview 18

 4.2.1. IED Summary 18

4.3. Communication 19

 4.3.1. Reports 19

 4.3.2. Unused Report Control Blocks 43

 4.3.3. Goose Messages 45

List of Figures

1. Single Line 3

2. GOOSEApplication 4

3. Bay Function Diagram of bay: 01 5

4. Bay Function Diagram of bay: 02 8

5. Bay Function Diagram of bay: 04 12

6. System Diagram 17

1. SCD History

Revision	Version	What	When	Who	Why
R 001	V 0	History file created	Thu Mar 30 05:55:53 CEST 2017	System	History reset
R000	V 1	Example for Siemens	Fri Apr 06 11:40:20 CEST 2018	JR	Workshop
R000	V 2	ABB 630 added	Wed Oct 24 10:48:52 CEST 2018	JR	Demo
R000	V 3	Isio added	Mon Nov 12 14:46:46 CET 2018	JR	Demo
R000	V 4	StreamBridge added	Thu Feb 21 11:14:48 CET 2019	JR	PUCTW 2019
R000	V 5	Demo Starting Point	Tue May 19 08:59:16 CEST 2020	JR	Demo Elvia
R000	V 6	New IEDs and fixes for Ewe Demo	Wed Sep 23 00:16:13 CEST 2020	JR	DEmo

Table 1. SCD History

2. General Specification

3. ZAPHIR Single Line and Functions

3.1. ZAPHIR

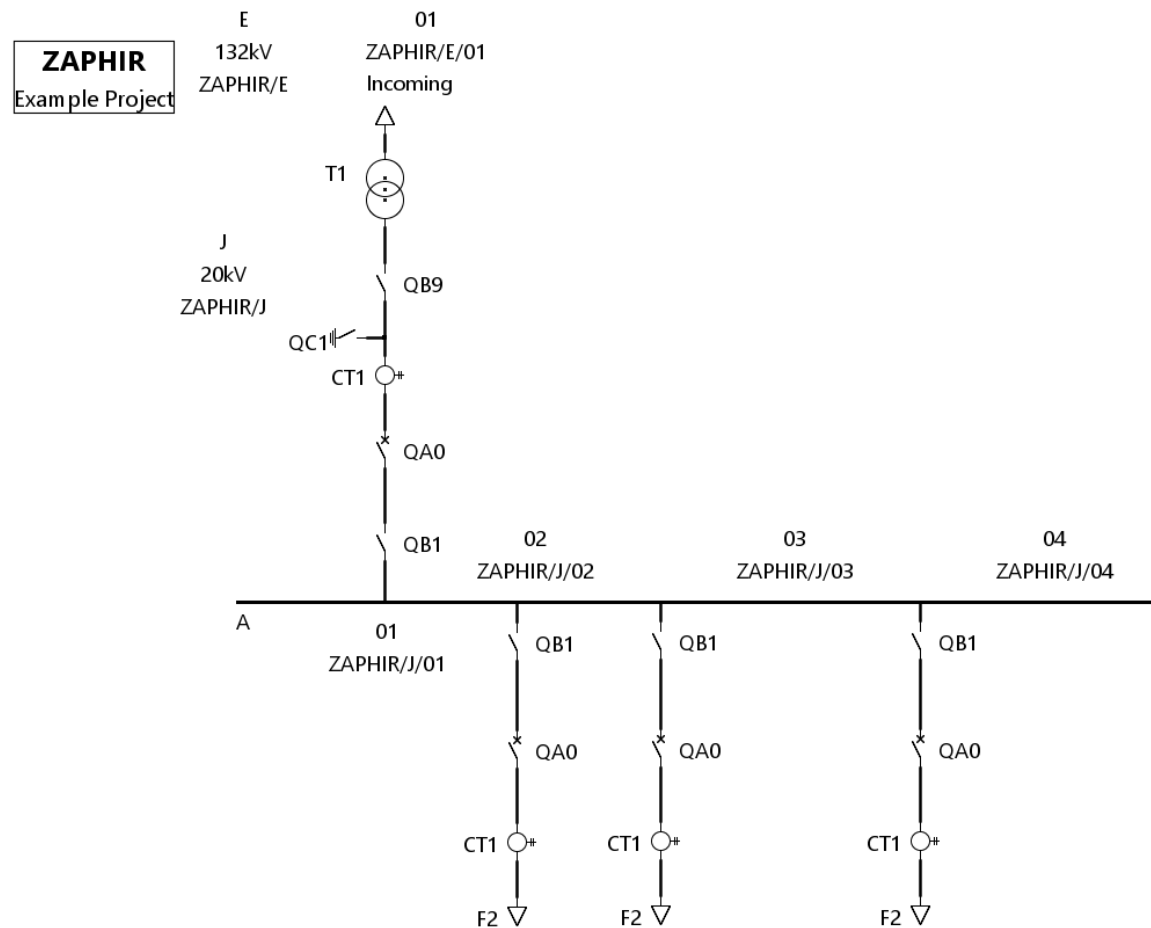


Figure 1. Single Line

3.2. Application Schemes

3.2.1. GOOSEApplication

GOOSEApplication Scheme

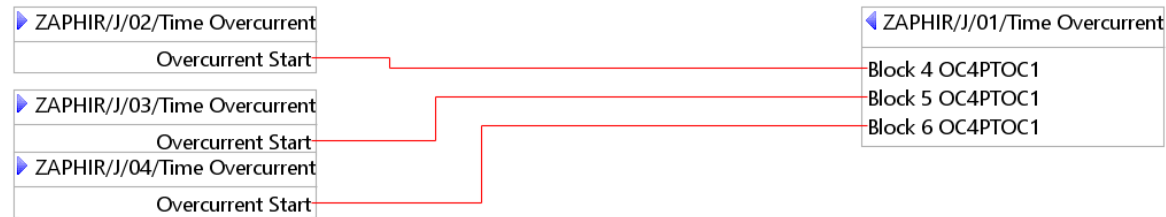


Figure 2. GOOSEApplication

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Overcurrent Start	ZAPHIR/J/02	OcpPTOC1.Str.general[ST]	ZAPHIR/J/01/Time Overcurrent	OC4.PTOC.1
Overcurrent Start	ZAPHIR/J/03	ILPTOC1.Str.general[ST]	ZAPHIR/J/01/Time Overcurrent	OC4.PTOC.1
Overcurrent Start	ZAPHIR/J/04	PHHPTOC1.Str.general[ST]	ZAPHIR/J/01/Time Overcurrent	OC4.PTOC.1

Table 2. GOOSE Message :Fast GOOSE Priority: High

Signal Name	Publisher	Data Attribute	Goose Control Block	Subscriber	Client LN	Internal Routing
Str.general[ST]	J02BPU	Protection.OcpPTOC1.Str.general[ST]	gcb01	J01BPU	LD0.LLN0	
Str.general[ST]	J03BPU	PROT.ILPTOC1.Str.general[ST]	gcb_f1	J01BPU	LD0.LLN0	
Str.general[ST]	J04BPU	LD0.PHHPTOC1.Str.general[ST]	gcb_f1	J01BPU	LD0.LLN0	

Table 3. GOOSE Message :Fast GOOSE Priority: High

3.3. Voltage Level ZAPHIR/J

20kV

Voltage Level description is missing.

Bay Name	Description	IEDs
A	Busbar-	-

Bay Name	Description	IEDs
01	Transformer	BCU: J01BCU Siprotec-7SJ6xx, BPU: J01BPU IED670, TCC: J01TCC REG
02	Line Feeder	BCU: J02BCU 6MU85, BPU: J02BPU P44
03	Line Feeder	BCU: J03BCU C60, BPU: J03BPU Sprecon
04	Line Feeder	BCU: J04BCU SEL_487E, BPU: J04BPU REF62

3.3.1. Bay ZAPHIR/J/01

Transformer

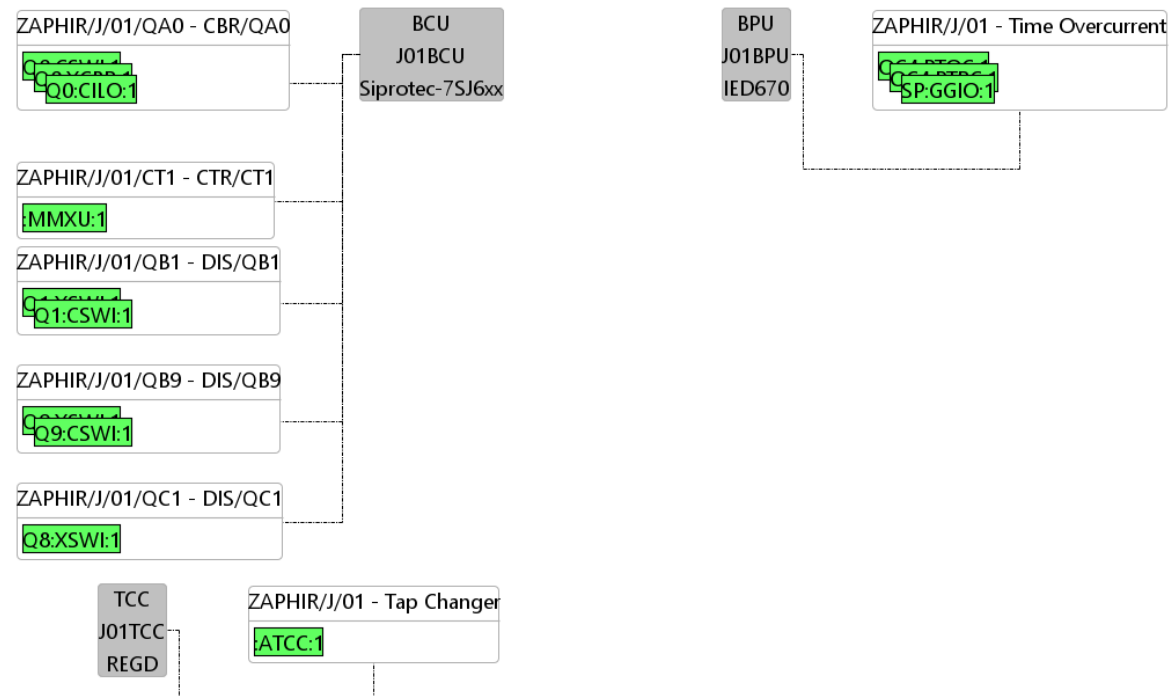


Figure 3. Bay Function Diagram of bay: 01

Role	Name	Type	Description
BCU	J01BCU	Siprotec-7SJ6xx	-

Table 4. Specification for BCU

Role	Name	Type	Description
BPU	J01BPU	IED670	-

Table 5. Specification for BPU

Role	Name	Type	Description
TCC	J01TCC	REGD	-

Table 6. Specification for TCC

Function	Process Name	Functional Name	Logical Device	Description
DIS/Q B9	Local operation	ZAPHIR/J/01/Q9XSWI1.Loc.stVal[ST]	J01BCUCTRL/Q9.XSWI.1	Section 3.6.1
DIS/Q B9	Switch position	ZAPHIR/J/01/Q9XSWI1.Pos.stVal[ST]	J01BCUCTRL/Q9.XSWI.1	Section 3.6.2
DIS/Q B9	Operation Counter	ZAPHIR/J/01/Q9XSWI1.OpCnt.stVal[ST]	J01BCUCTRL/Q9.XSWI.1	Section 3.6.3
DIS/Q B9	Block Open	ZAPHIR/J/01/Q9XSWI1.BlkOpn.stVal[ST]	J01BCUCTRL/Q9.XSWI.1	Section 3.6.4
DIS/Q B9	Block Close	ZAPHIR/J/01/Q9XSWI1.BlkCls.stVal[ST]	J01BCUCTRL/Q9.XSWI.1	Section 3.6.5
DIS/Q B9	Operate Comand	ZAPHIR/J/01/Q9CSWI1.Pos.Oper.ctlVal[CO]	J01BCUCTRL/Q9.CSWI.1	Section 3.6.2
DIS/Q B9	Select Command	ZAPHIR/J/01/Q9CSWI1.Pos.SBOw.ctlVal[CO]	J01BCUCTRL/Q9.CSWI.1	Section 3.6.2
DIS/Q B9	Originator	ZAPHIR/J/01/Q9CSWI1.Pos.SBOw.origin.orCat[CO]	J01BCUCTRL/Q9.CSWI.1	Section 3.6.2
DIS/Q C1	Switch position	ZAPHIR/J/01/Q8XSWI1.Pos.stVal[ST]	J01BCUCTRL/Q8.XSWI.1	Section 3.6.2
CTR/C T1	I L1	ZAPHIR/J/01/MMXU1.A.phsA.cVal.mag.f[MX]	J01BCUMEAS/MMXU.1	Section 3.6.6
CTR/C T1	I L2	ZAPHIR/J/01/MMXU1.A.phsB.cVal.mag.f[MX]	J01BCUMEAS/MMXU.1	Section 3.6.6
CTR/C T1	I L3	ZAPHIR/J/01/MMXU1.A.phsC.cVal.mag.f[MX]	J01BCUMEAS/MMXU.1	Section 3.6.6
CBR/Q A0	Operate Comand	ZAPHIR/J/01/Q0CSWI1.Pos.Oper.ctlVal[CO]	J01BCUCTRL/Q0.CSWI.1	Section 3.6.2
CBR/Q A0	Select Command	ZAPHIR/J/01/Q0CSWI1.Pos.SBOw.ctlVal[CO]	J01BCUCTRL/Q0.CSWI.1	Section 3.6.2
CBR/Q A0	Originator	ZAPHIR/J/01/Q0CSWI1.Pos.SBOw.origin.orCat[CO]	J01BCUCTRL/Q0.CSWI.1	Section 3.6.2
CBR/Q A0	Local operation	ZAPHIR/J/01/Q0XCBRI1.Loc.stVal[ST]	J01BCUCTRL/Q0.XCBRI.1	Section 3.6.1
CBR/Q A0	CBR position	ZAPHIR/J/01/Q0XCBRI1.Pos.stVal[ST]	J01BCUCTRL/Q0.XCBRI.1	Section 3.6.2

Function	Process Name	Functional Name	Logical Device	Description
CBR/Q A0	Operation Counter	ZAPHIR/J/01/Q0XCBR1.OpCnt.stVal[ST]	J01BCUCTRL/Q0.XCBR.1	Section 3.6.3
CBR/Q A0	Block Open	ZAPHIR/J/01/Q0XCBR1.BlkOpn.stVal[ST]	J01BCUCTRL/Q0.XCBR.1	Section 3.6.4
CBR/Q A0	Block Close	ZAPHIR/J/01/Q0XCBR1.BlkCls.stVal[ST]	J01BCUCTRL/Q0.XCBR.1	Section 3.6.5
CBR/Q A0	Enable Open	ZAPHIR/J/01/Q0CILO1.EnaOpn.stVal[ST]	J01BCUCTRL/Q0.CILO.1	Section 3.6.7
CBR/Q A0	Enable Close	ZAPHIR/J/01/Q0CILO1.EnaCls.stVal[ST]	J01BCUCTRL/Q0.CILO.1	Section 3.6.8
DIS/Q B1	Local operation	ZAPHIR/J/01/Q1XSWI1.Loc.stVal[ST]	J01BCUCTRL/Q1.XSWI.1	Section 3.6.1
DIS/Q B1	Switch position	ZAPHIR/J/01/Q1XSWI1.Pos.stVal[ST]	J01BCUCTRL/Q1.XSWI.1	Section 3.6.2
DIS/Q B1	Operation Counter	ZAPHIR/J/01/Q1XSWI1.OpCnt.stVal[ST]	J01BCUCTRL/Q1.XSWI.1	Section 3.6.3
DIS/Q B1	Switch Health	ZAPHIR/J/01/Q1XSWI1.Health.stVal[ST]	J01BCUCTRL/Q1.XSWI.1	Section 3.6.9
DIS/Q B1	Block Open	ZAPHIR/J/01/Q1XSWI1.BlkOpn.stVal[ST]	J01BCUCTRL/Q1.XSWI.1	Section 3.6.4
DIS/Q B1	Block Close	ZAPHIR/J/01/Q1XSWI1.BlkCls.stVal[ST]	J01BCUCTRL/Q1.XSWI.1	Section 3.6.5
DIS/Q B1	Operate Comand	ZAPHIR/J/01/Q1CSWI1.Pos.Oper.ctlVal[CO]	J01BCUCTRL/Q1.CSWI.1	Section 3.6.2
DIS/Q B1	Select Command	ZAPHIR/J/01/Q1CSWI1.Pos.SBOw.ctlVal[CO]	J01BCUCTRL/Q1.CSWI.1	Section 3.6.2
DIS/Q B1	Originator	ZAPHIR/J/01/Q1CSWI1.Pos.SBOw.origin.orCat[CO]	J01BCUCTRL/Q1.CSWI.1	Section 3.6.2
Tap C hange r	Local operation	ZAPHIR/J/01/ATCC1.Loc.stVal[ST]	J01TCCA/ATCC.1	Section 3.6.1
Tap C hange r	Parallel or Independent Op.	ZAPHIR/J/01/ATCC1.ParOp.stVal[ST]	J01TCCA/ATCC.1	Section 3.6.10
Tap C hange r	Control Voltage	ZAPHIR/J/01/ATCC1.CtV.mag[MX]	J01TCCA/ATCC.1	Section 3.6.11
Time Overc urren t	Overcurrent Start	ZAPHIR/J/01/OC4PTOC1.Str.general[ST]	J01BPUOC4_1/OC4.PTOC.1	Section 3.6.12
Time Overc urren t	Directional Start	ZAPHIR/J/01/OC4PTOC1.Str.dirGeneral[ST]	J01BPUOC4_1/OC4.PTOC.1	Section 3.6.12
Time Overc urren t	Overcurrent Operate	ZAPHIR/J/01/OC4PTOC1.Op.general[ST]	J01BPUOC4_1/OC4.PTOC.1	Section 3.6.13
Time Overc urren t	Trip	ZAPHIR/J/01/OC4PTRC1.Op.general[ST]	J01BPUOC4_1/OC4.PTRC.1	Section 3.6.13
Time Overc urren t	Trip Start	ZAPHIR/J/01/OC4PTRC1.Str.general[ST]	J01BPUOC4_1/OC4.PTRC.1	Section 3.6.12

Table 7. Signals of 01

3.3.2. Bay ZAPHIR/J/02

Line Feeder

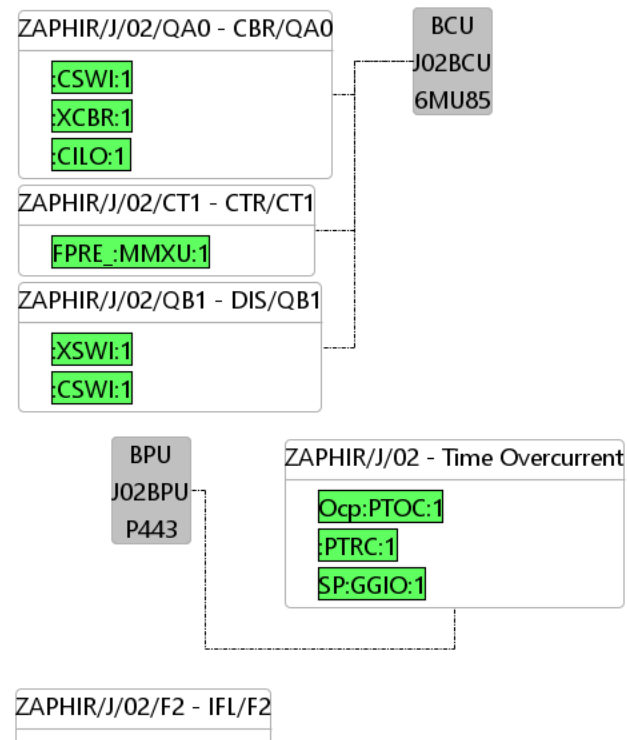


Figure 4. Bay Function Diagram of bay: 02

Role	Name	Type	Description
BCU	J02BCU	6MU85	-

Table 8. Specification for BCU

Role	Name	Type	Description
BPU	J02BPU	P443	-

Table 9. Specification for BPU

Function	Process Name	Functional Name	Logical Device	Description
Time Overc urren t	Overcurrent Start	ZAPHIR/J/02/OcpPTOC1.Str.general[ST]	J02BPUProtection/Ocp.PTOC.1	Section 3.6.12
Time Overc urren t	Directional Start	ZAPHIR/J/02/OcpPTOC1.Str.dirGeneral[ST]	J02BPUProtection/Ocp.PTOC.1	Section 3.6.12
Time Overc urren t	Overcurrent Operate	ZAPHIR/J/02/OcpPTOC1.Op.general[ST]	J02BPUProtection/Ocp.PTOC.1	Section 3.6.13
Time Overc urren t	Trip	ZAPHIR/J/02/PTRC1.Tr.general[ST]	J02BPUProtection/PTRC.1	Section 3.6.14
Time Overc urren t	Trip Start	ZAPHIR/J/02/PTRC1.Str.general[ST]	J02BPUProtection/PTRC.1	Section 3.6.12
DIS/Q B1	Local operation	ZAPHIR/J/02/XSWI1.Loc.stVal[ST]	J02BCUAKS/XSWI.1	Section 3.6.1
DIS/Q B1	Switch position	ZAPHIR/J/02/XSWI1.Pos.stVal[ST]	J02BCUAKS/XSWI.1	Section 3.6.2
DIS/Q B1	Operation Counter	ZAPHIR/J/02/XSWI1.OpCnt.stVal[ST]	J02BCUAKS/XSWI.1	Section 3.6.3
DIS/Q B1	Switch Health	ZAPHIR/J/02/XSWI1.EEHealth.stVal[ST]	J02BCUAKS/XSWI.1	Section 3.6.15
DIS/Q B1	Block Open	ZAPHIR/J/02/XSWI1.BlkOpn.stVal[ST]	J02BCUAKS/XSWI.1	Section 3.6.4
DIS/Q B1	Block Close	ZAPHIR/J/02/XSWI1.BlkCls.stVal[ST]	J02BCUAKS/XSWI.1	Section 3.6.5
DIS/Q B1	Operate Comand	ZAPHIR/J/02/CSWI1.Pos.Oper.ctlVal[CO]	J02BCUAKS/CSWI.1	Section 3.6.2
CBR/Q A0	Operate Comand	ZAPHIR/J/02/CSWI1.Pos.Oper.ctlVal[CO]	J02BCUAKS/CSWI.1	Section 3.6.2
CBR/Q A0	Select Command	ZAPHIR/J/02/CSWI1.Pos.SBOw.ctlVal[CO]	J02BCUAKS/CSWI.1	Section 3.6.2
CBR/Q A0	Originator	ZAPHIR/J/02/CSWI1.Pos.SBOw.origin.orCat[CO]	J02BCUAKS/CSWI.1	Section 3.6.2
CBR/Q A0	Local operation	ZAPHIR/J/02/XCBR1.Loc.stVal[ST]	J02BCUVS10/XCBR.1	Section 3.6.1
CBR/Q A0	CBR position	ZAPHIR/J/02/XCBR1.Pos.stVal[ST]	J02BCUVS10/XCBR.1	Section 3.6.2
CBR/Q A0	Operation Counter	ZAPHIR/J/02/XCBR1.OpCnt.stVal[ST]	J02BCUVS10/XCBR.1	Section 3.6.3
CBR/Q A0	Block Open	ZAPHIR/J/02/XCBR1.BlkOpn.stVal[ST]	J02BCUVS10/XCBR.1	Section 3.6.4
CBR/Q A0	Block Close	ZAPHIR/J/02/XCBR1.BlkCls.stVal[ST]	J02BCUVS10/XCBR.1	Section 3.6.5
CBR/Q A0	Enable Open	ZAPHIR/J/02/CILO1.EnaOpn.stVal[ST]	J02BCUAKS/CILO.1	Section 3.6.7
CBR/Q A0	Enable Close	ZAPHIR/J/02/CILO1.EnaCls.stVal[ST]	J02BCUAKS/CILO.1	Section 3.6.8
CTR/C T1	I L1	ZAPHIR/J/02/FPRE_MMxu1.A.phsA.cVal.mag.f[MX]	J02BCUVI3p1_FundSymComp/FPRE_.MMxu.1	Section 3.6.6
CTR/C T1	I L2	ZAPHIR/J/02/FPRE_MMxu1.A.phsB.cVal.mag.f[MX]	J02BCUVI3p1_FundSymComp/FPRE_.MMxu.1	Section 3.6.6
CTR/C T1	I L3	ZAPHIR/J/02/FPRE_MMxu1.A.phsC.cVal.mag.f[MX]	J02BCUVI3p1_FundSymComp/FPRE_.MMxu.1	Section 3.6.6

Table 10. Signals of 02

3.3.3. Bay ZAPHIR/J/03

Line Feeder

Role	Name	Type	Description
BCU	J03BCU	C60	-

Table 11. Specification for BCU

Role	Name	Type	Description
BPU	J03BPU	Sprecon P	-

Table 12. Specification for BPU

Function	Process Name	Functional Name	Logical Device	Description
Time Overc urren t	Overcurrent Start	ZAPHIR/J/03/ILPTOC1.Str.general[ST]	J03BPUPROT/IL.PTOC.1	Section 3.6.12
Time Overc urren t	Directional Start	ZAPHIR/J/03/ILPTOC1.Str.dirGeneral[ST]	J03BPUPROT/IL.PTOC.1	Section 3.6.12
Time Overc urren t	Overcurrent Operate	ZAPHIR/J/03/ILPTOC1.Op.general[ST]	J03BPUPROT/IL.PTOC.1	Section 3.6.13
Time Overc urren t	Trip	ZAPHIR/J/03/GENERALPTRC1.Tr.general[ST]	J03BPUPROT/GENERAL.PTRC.1	Section 3.6.14
Time Overc urren t	Trip Start	ZAPHIR/J/03/GENERALPTRC1.Str.general[ST]	J03BPUPROT/GENERAL.PTRC.1	Section 3.6.12
DIS/Q B1	Local operation	ZAPHIR/J/03/Disc0XSWI1.Loc.stVal[ST]	J03BCUSystem/Disc0.XSWI.1	Section 3.6.1
DIS/Q B1	Switch position	ZAPHIR/J/03/Disc0XSWI1.Pos.stVal[ST]	J03BCUSystem/Disc0.XSWI.1	Section 3.6.2
DIS/Q B1	Operation Counter	ZAPHIR/J/03/Disc0XSWI1.OpCnt.stVal[ST]	J03BCUSystem/Disc0.XSWI.1	Section 3.6.3
DIS/Q B1	Switch Health	ZAPHIR/J/03/Disc0XSWI1.EEHealth.stVal[ST]	J03BCUSystem/Disc0.XSWI.1	Section 3.6.15
DIS/Q B1	Block Open	ZAPHIR/J/03/Disc0XSWI1.BlkOpn.stVal[ST]	J03BCUSystem/Disc0.XSWI.1	Section 3.6.4
DIS/Q B1	Block Close	ZAPHIR/J/03/Disc0XSWI1.BlkCls.stVal[ST]	J03BCUSystem/Disc0.XSWI.1	Section 3.6.5
DIS/Q B1	Operate Comand	ZAPHIR/J/03/DiscCSWI2.Pos.Oper.ctlVal[CO]	J03BCUSystem/Disc.CSWI.2	Section 3.6.2
CBR/Q A0	Operate Comand	ZAPHIR/J/03/BkrCSWI1.Pos.Oper.ctlVal[CO]	J03BCUSystem/Bkr.CSWI.1	Section 3.6.2
CBR/Q A0	Select Command	ZAPHIR/J/03/BkrCSWI1.Pos.SBOw.ctlVal[CO]	J03BCUSystem/Bkr.CSWI.1	Section 3.6.2
CBR/Q A0	Originator	ZAPHIR/J/03/BkrCSWI1.Pos.SBOw.origin.orCat[CO]	J03BCUSystem/Bkr.CSWI.1	Section 3.6.2
CBR/Q A0	Local operation	ZAPHIR/J/03/Bkr0XCBR1.Loc.stVal[ST]	J03BCUSystem/Bkr0.XCBR.1	Section 3.6.1
CBR/Q A0	CBR position	ZAPHIR/J/03/Bkr0XCBR1.Pos.stVal[ST]	J03BCUSystem/Bkr0.XCBR.1	Section 3.6.2
CBR/Q A0	Operation Counter	ZAPHIR/J/03/Bkr0XCBR1.OpCnt.stVal[ST]	J03BCUSystem/Bkr0.XCBR.1	Section 3.6.3

Function	Process Name	Functional Name	Logical Device	Description
CBR/Q A0	Block Open	ZAPHIR/J/03/Bkr0XCBR1.BlkOpn.stVal[ST]	J03BCUSystem/Bkr0.XCBR.1	Section 3.6.4
CBR/Q A0	Block Close	ZAPHIR/J/03/Bkr0XCBR1.BlkCls.stVal[ST]	J03BCUSystem/Bkr0.XCBR.1	Section 3.6.5
CBR/Q A0	Enable Open	ZAPHIR/J/03/BkrCILO1.EnaOpn.stVal[ST]	J03BCUSystem/Bkr.CILO.1	Section 3.6.7
CBR/Q A0	Enable Close	ZAPHIR/J/03/BkrCILO1.EnaCls.stVal[ST]	J03BCUSystem/Bkr.CILO.1	Section 3.6.8
CTR/C T1	I L1	ZAPHIR/J/03/ACsrcMMXU1.A.phsA.cVal.mag.f[MX]	J03BCUMeter/ACsrc.MMXU.1	Section 3.6.6
CTR/C T1	I L2	ZAPHIR/J/03/ACsrcMMXU1.A.phsB.cVal.mag.f[MX]	J03BCUMeter/ACsrc.MMXU.1	Section 3.6.6
CTR/C T1	I L3	ZAPHIR/J/03/ACsrcMMXU1.A.phsC.cVal.mag.f[MX]	J03BCUMeter/ACsrc.MMXU.1	Section 3.6.6

Table 13. Signals of 03

3.3.4. Bay ZAPHIR/J/04

Line Feeder

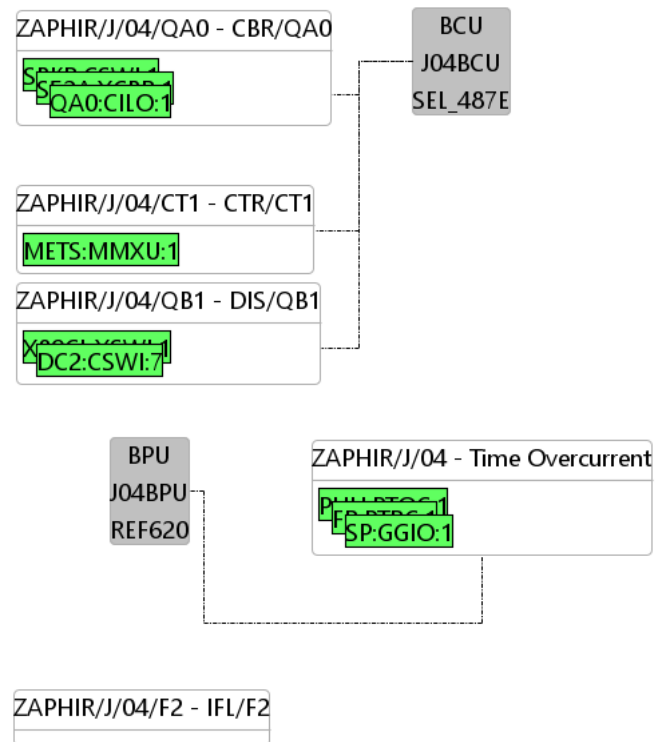


Figure 5. Bay Function Diagram of bay: 04

Role	Name	Type	Description
BCU	J04BCU	SEL_487E	-

Table 14. Specification for BCU

Role	Name	Type	Description
BPU	J04BPU	REF620	-

Table 15. Specification for BPU

Function	Process Name	Functional Name	Logical Device	Description
Time Overc urren t	Overcurrent Start	ZAPHIR/J/04/PHHPTOC1.Str.general[ST]	J04BPULD0/PHH.PTOC.1	Section 3.6.12
Time Overc urren t	Directional Start	ZAPHIR/J/04/PHHPTOC1.Str.dirGeneral[ST]	J04BPULD0/PHH.PTOC.1	Section 3.6.12
Time Overc urren t	Overcurrent Operate	ZAPHIR/J/04/PHHPTOC1.Op.general[ST]	J04BPULD0/PHH.PTOC.1	Section 3.6.13
Time Overc urren t	Trip	ZAPHIR/J/04/FRPTRC1.Op.general[ST]	J04BPULD0/FR.PTRC.1	Section 3.6.13
Time Overc urren t	Trip Start	ZAPHIR/J/04/FRPTRC1.Str.general[ST]	J04BPULD0/FR.PTRC.1	Section 3.6.12
DIS/Q B1	Local operation	ZAPHIR/J/04/X89CLXSWI1.Loc.stVal[ST]	J04BCUPRO/X89CL.XSWI.1	Section 3.6.1
DIS/Q B1	Switch position	ZAPHIR/J/04/X89CLXSWI1.Pos.stVal[ST]	J04BCUPRO/X89CL.XSWI.1	Section 3.6.2
DIS/Q B1	Operation Counter	ZAPHIR/J/04/X89CLXSWI1.OpCnt.stVal[ST]	J04BCUPRO/X89CL.XSWI.1	Section 3.6.3
DIS/Q B1	Switch Health	ZAPHIR/J/04/X89CLXSWI1.EEHealth.stVal[ST]	J04BCUPRO/X89CL.XSWI.1	Section 3.6.15
DIS/Q B1	Block Open	ZAPHIR/J/04/X89CLXSWI1.BlkOpn.stVal[ST]	J04BCUPRO/X89CL.XSWI.1	Section 3.6.4
DIS/Q B1	Block Close	ZAPHIR/J/04/X89CLXSWI1.BlkCls.stVal[ST]	J04BCUPRO/X89CL.XSWI.1	Section 3.6.5
DIS/Q B1	Operate Comand	ZAPHIR/J/04/DC2CSWI7.Pos.Oper.ctlVal[CO]	J04BCUPRO/DC2.CSWI.7	Section 3.6.2
CBR/Q A0	Operate Comand	ZAPHIR/J/04/SBKRCSWI1.Pos.Oper.ctlVal[CO]	J04BCUPRO/SBKRC.SWI.1	Section 3.6.2
CBR/Q A0	Select Command	ZAPHIR/J/04/SBKRCSWI1.Pos.SBOw.ctlVal[CO]	J04BCUPRO/SBKRC.SWI.1	Section 3.6.2
CBR/Q A0	Originator	ZAPHIR/J/04/SBKRCSWI1.Pos.SBOw.origin.orCat[CO]	J04BCUPRO/SBKRC.SWI.1	Section 3.6.2
CBR/Q A0	Local operation	ZAPHIR/J/04/S52AXCBR1.Loc.stVal[ST]	J04BCUPRO/S52A.XCBR.1	Section 3.6.1
CBR/Q A0	CBR position	ZAPHIR/J/04/S52AXCBR1.Pos.stVal[ST]	J04BCUPRO/S52A.XCBR.1	Section 3.6.2
CBR/Q A0	Operation Counter	ZAPHIR/J/04/S52AXCBR1.OpCnt.stVal[ST]	J04BCUPRO/S52A.XCBR.1	Section 3.6.3
CBR/Q A0	Block Open	ZAPHIR/J/04/S52AXCBR1.BlkOpn.stVal[ST]	J04BCUPRO/S52A.XCBR.1	Section 3.6.4
CBR/Q A0	Block Close	ZAPHIR/J/04/S52AXCBR1.BlkCls.stVal[ST]	J04BCUPRO/S52A.XCBR.1	Section 3.6.5
CBR/Q A0	Enable Open	ZAPHIR/J/04/QA0CILO1.EnaOpn.stVal[ST]		Section 3.6.7
CBR/Q A0	Enable Close	ZAPHIR/J/04/QA0CILO1.EnaCls.stVal[ST]		Section 3.6.8
CTR/C T1	I L1	ZAPHIR/J/04/METSMMXU1.A1.phsA.cVal.mag.f[MX]	J04BCUMET/METS.MMXU.1	No Link
CTR/C T1	I L2	ZAPHIR/J/04/METSMMXU1.A1.phsB.instCVal.mag.f[MX]	J04BCUMET/METS.MMXU.1	No Link
CTR/C T1	I L3	ZAPHIR/J/04/METSMMXU1.A1.phsC.cVal.mag.f[MX]	J04BCUMET/METS.MMXU.1	No Link

Table 16. Signals of 04

3.4. Voltage Level ZAPHIR/E

132kV

Voltage Level description is missing.

Bay Name	Description	IEDs
01	-	-

3.4.1. Bay ZAPHIR/E/01

Bay description is missing. Please add a short description of this bay at the Single Line diagram.

3.5. Transformers

3.5.1. PWT

Name	Description	W1:VL	W2:VL	W3:VL	IED Name	Logical Device Instance	Logical Node
T1	-	W1:E	W2:J	-			

3.6. Data Attribute Glossary

3.6.1. Loc

This data object describes the control behavior of the related LN. (FALSE =not allowed at this level, TRUE = allowed at this level).(see also annex B).

3.6.2. Pos

This data object is accessed to verify the switch status or position. When this data object is also used for a hand-operated switch, the (optional) CtlVal attribute in IEC 61850-7-3 does not exist. Possible states for position are: intermediate state | off | on | bad state.

3.6.3. OpCnt

This data object represents a count of operations that is not resettable. In general, this type of counter is included in the following LNs: XCBR, XSWI, and YLTC. The counter shall not be reset from remote but maybe from local.

3.6.4. BlkOpn

This data object is used to block ‘open operation’ (for example to XCBR, XSWI, YPSH) from another logical node such as a protection node or from a local/remote switch. An example may be the blocking of the buscoupler also for trips during busbar transfer. Block opening is not reflected in operating capability. TRUE = block operation ‘open circuit breaker’.

3.6.5. BlkCls

This data object is used to block ‘close operation’ (for example, for XCBR, XSWI, YPSH) from another logical node such as a protection node or from a local/remote switch. An example may be the low insulation gas density. Block closing is not reflected in operating capability. TRUE = block operation ‘close circuit breaker’.

3.6.6. A

Phase currents (IL1, IL2, IL3)

3.6.7. EnaOpn

The interlocking function itself determines the status of this data object and thus permits the opening of the device when TRUE. The control service checks this value before he controls “Open/Off” a switch.

3.6.8. EnaCls

The interlocking function itself determines the status of this data object and thus permits the closing of the device when TRUE. The control service checks this value before he controls “Close/On” a switch.

3.6.9. Health

This information reflects the state of the logical node related HW and SW. More detailed information related to the source of the problem may be provided by specific Data Objects. For LLN0, this data object reflects the worst value of “Health” of the logical nodes that are part of the logical device associated with LLN0.

Health State	Value
OK ("green") - no problems, normal operation	1
Warning ("yellow") - minor problems, but in safe operation mode	2
Alarm ("red") - severe problem, no operation possible	3

Health states 1 (“green”) and 3 (“red”) are unambiguous by definition. The detailed meaning of Health state 2 (“yellow”) is a local issue depending from the dedicated function/device.

3.6.10. ParOp

Transformers or suppression coils are operating in parallel.

3.6.11. CtlV

Voltage on secondary of transformer as used for voltage control.

3.6.12. Str

Start (Common Data Classes ACD) indicates the detection of a fault or an unacceptable condition. Str may contain phase and directional information.

3.6.13. Op

Operate (Common Data Classes ACT) indicates the trip decision of a protection function (LN). The trip itself is issued by PTRC.

3.6.14. Tr

Trip is the command to open the breaker when issued in case of fault by PTRC.

3.6.15. EEHealth

This information reflects the state of external equipment, for example circuit breaker controlled by the logical node XCBR. The values are the same as for the Health.

4. System Communication Diagram

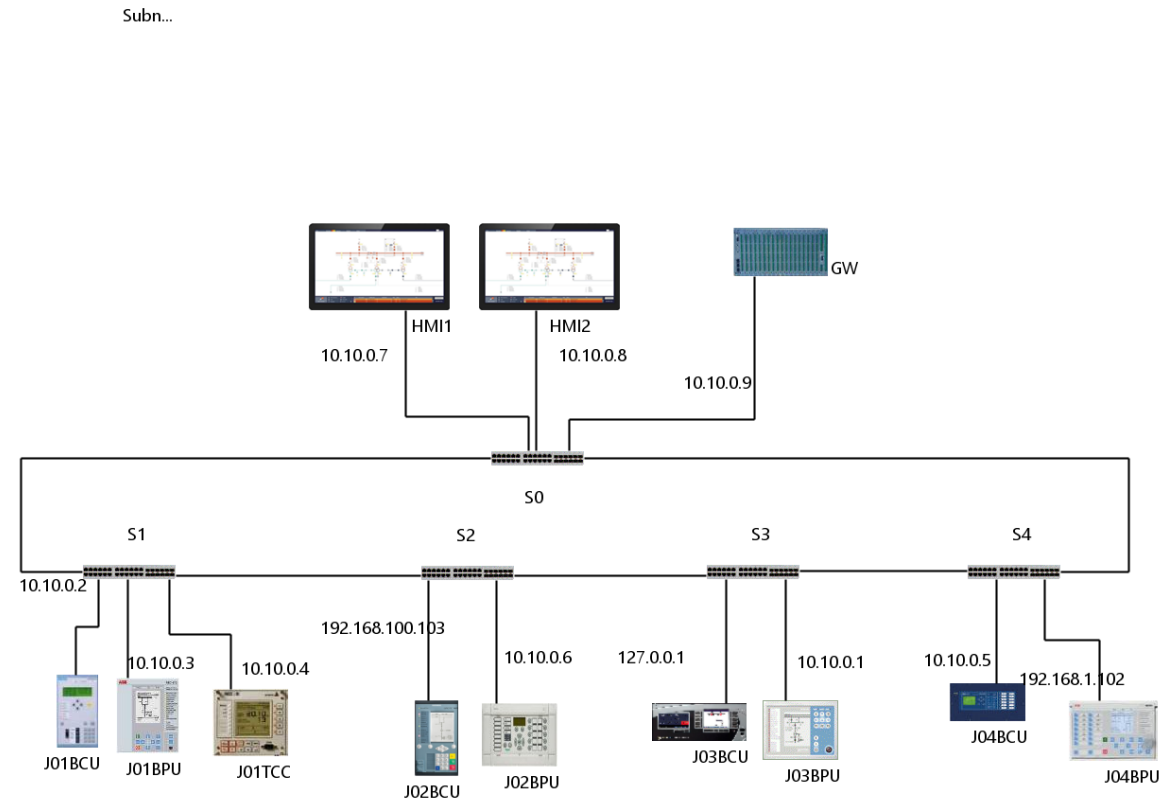


Figure 6. System Diagram

4.1. Subnetwork

Name	Type
Subnet1	8-MMS

IED	Access Point	IP Address	IP Subnet	IP Gateway
J01BCU	P1	10.10.0.2	255.255.255.0	0.0.0.0
J01BPU	S1	10.10.0.3	255.255.255.0	0.0.0.0
J04BCU	S1	10.10.0.5	255.255.255.0	-
J03BPU	AP1	10.10.0.1	255.255.255.0	0.0.0.0
J01TCC	P1	10.10.0.4	255.255.255.0	-
HMI2	S1	10.10.0.8	255.255.255.0	0.0.0.0
HMI1	S1	10.10.0.7	255.255.255.0	0.0.0.0
J02BPU	AP1	10.10.0.6	255.255.255.0	10.10.0.1
GW	AP1	10.10.0.9	255.255.255.0	10.10.0.1
J03BCU	S1	127.0.0.1	255.255.255.0	127.0.0.0
J02BCU	E	192.168.100.103	255.255.255.0	192.168.100.1
J04BPU	LD0	192.168.1.102	255.255.255.0	192.168.2.1

Table 17. Connected Access Points

4.2. IED Overview

4.2.1. IED Summary

Name	IED Type	Manufacturer	Used in Bays
J01BCU	Siprotec-7SJ6xx	SIEMENS	01
J01BPU	IED670	ABB	01
J04BCU	SEL_487E	SEL	04
HMI1	ZENON	Copa-Data	ZAPHIR
J03BPU	Sprecon P	Sprecher Automation	03
J01TCC	REGD	A.EBERLE	01
HMI2	ZENON	Copa-Data	ZAPHIR
J02BPU	P443	ALSTOM	02
GW	gateway	no manufacturer	ZAPHIR

Name	IED Type	Manufacturer	Used in Bays
J03BCU	C60	GE Multilin	03
J02BCU	6MU85	SIEMENS	02
J04BPU	REF620	ABB	04

Table 18. 12 IEDs

4.3. Communication

4.3.1. Reports

Report Control: J01BCUPROT/LLN0.RCB.brcbA

Attribute	Value	Attribute	Value	Attribute	Value
IED	J01BCU	Logical Device	PROT	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcbA	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J01BCUCTRL/Q9XSW11.Loc[ST]	GW, GW
J01BCUCTRL/Q9XSW11.Pos[ST]	GW, GW
J01BCUCTRL/Q9XSW11.OpCnt[ST]	GW, GW
J01BCUCTRL/Q9XSW11.BlkOpn[ST]	GW, GW
J01BCUCTRL/Q9XSW11.BlkCls[ST]	GW, GW
J01BCUCTRL/Q8XSW11.Pos[ST]	GW, GW
J01BCUCTRL/Q0XCBR1.Loc[ST]	GW, GW
J01BCUCTRL/Q0XCBR1.Pos[ST]	GW, GW
J01BCUCTRL/Q0XCBR1.OpCnt[ST]	GW, GW

Source Data Attribute	Client
J01BCUCTRL/Q0XCBR1.BlkOpn[ST]	GW, GW
J01BCUCTRL/Q0XCBR1.BlkCls[ST]	GW, GW
J01BCUCTRL/Q0CILO1.EnaOpn[ST]	GW, GW
J01BCUCTRL/Q0CILO1.EnaCls[ST]	GW, GW
J01BCUCTRL/Q1XSWI1.Loc[ST]	GW, GW
J01BCUCTRL/Q1XSWI1.Pos[ST]	GW, GW
J01BCUCTRL/Q1XSWI1.OpCnt[ST]	GW, GW
J01BCUCTRL/Q1XSWI1.Health[ST]	GW, GW
J01BCUCTRL/Q1XSWI1.BlkOpn[ST]	GW, GW
J01BCUCTRL/Q1XSWI1.BlkCls[ST]	GW, GW

Report Control: J01BCUMEAS/LLN0.RCB.urcbA

Attribute	Value	Attribute	Value	Attribute	Value
IED	J01BCU	Logical Device	MEAS	Data Set	ds_urcb1
buffered	false	buffered Time	0	report confRev	10000
intg Pd	0	rpt ID	urcbA	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	false
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J01BCUMEAS/MMXU1.A.phsA[MX]	HMI1, HMI1, HMI2
J01BCUMEAS/MMXU1.A.phsB[MX]	HMI1, HMI1, HMI2
J01BCUMEAS/MMXU1.A.phsC[MX]	HMI1, HMI1, HMI2

Report Control: J01BCUMEAS/LLN0.RCB.urcbB

Attribute	Value	Attribute	Value	Attribute	Value
IED	J01BCU	Logical Device	MEAS	Data Set	ds_urcb1
buffered	false	buffered Time	0	report confRev	10000
intg Pd	0	rpt ID	urcbB	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	false
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J01BCUMEAS/MMXU1.A.phsA[MX]	HMI2, HMI1, HMI2
J01BCUMEAS/MMXU1.A.phsB[MX]	HMI2, HMI1, HMI2
J01BCUMEAS/MMXU1.A.phsC[MX]	HMI2, HMI1, HMI2

Report Control: J01BCUMEAS/LLN0.RCB.urcbC

Attribute	Value	Attribute	Value	Attribute	Value
IED	J01BCU	Logical Device	MEAS	Data Set	ds_urcb2
buffered	false	buffered Time	0	report confRev	10000
intg Pd	0	rpt ID	urcbC	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	false
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J01BCUMEAS/MMXU1.A.phsA[MX]	GW, GW
J01BCUMEAS/MMXU1.A.phsB[MX]	GW, GW
J01BCUMEAS/MMXU1.A.phsC[MX]	GW, GW

Report Control: J01BCUCTRL/LLN0.RCB.brcbA

Attribute	Value	Attribute	Value	Attribute	Value
IED	J01BCU	Logical Device	CTRL	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcbA	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J01BCUCTRL/Q9XSW11.Loc[ST]	HMI1, HMI1, HMI2
J01BCUCTRL/Q9XSW11.Pos[ST]	HMI1, HMI1, HMI2
J01BCUCTRL/Q9XSW11.OpCnt[ST]	HMI1, HMI1, HMI2
J01BCUCTRL/Q9XSW11.BlkOpn[ST]	HMI1, HMI1, HMI2
J01BCUCTRL/Q9XSW11.BlkCls[ST]	HMI1, HMI1, HMI2
J01BCUCTRL/Q8XSW11.Pos[ST]	HMI1, HMI1, HMI2
J01BCUCTRL/Q0XCBR1.Loc[ST]	HMI1, HMI1, HMI2
J01BCUCTRL/Q0XCBR1.Pos[ST]	HMI1, HMI1, HMI2
J01BCUCTRL/Q0XCBR1.OpCnt[ST]	HMI1, HMI1, HMI2
J01BCUCTRL/Q0XCBR1.BlkOpn[ST]	HMI1, HMI1, HMI2
J01BCUCTRL/Q0XCBR1.BlkCls[ST]	HMI1, HMI1, HMI2
J01BCUCTRL/Q0CILO1.EnaOpn[ST]	HMI1, HMI1, HMI2
J01BCUCTRL/Q0CILO1.EnaCls[ST]	HMI1, HMI1, HMI2
J01BCUCTRL/Q1XSW11.Loc[ST]	HMI1, HMI1, HMI2
J01BCUCTRL/Q1XSW11.Pos[ST]	HMI1, HMI1, HMI2
J01BCUCTRL/Q1XSW11.OpCnt[ST]	HMI1, HMI1, HMI2
J01BCUCTRL/Q1XSW11.Health[ST]	HMI1, HMI1, HMI2

Source Data Attribute	Client
J01BCUCTRL/Q1XSWI1.BlkOpn[ST]	HMI1, HMI1, HMI2
J01BCUCTRL/Q1XSWI1.BlkCls[ST]	HMI1, HMI1, HMI2

Report Control: J01BCUCTRL/LLN0.RCB.brcbB

Attribute	Value	Attribute	Value	Attribute	Value
IED	J01BCU	Logical Device	CTRL	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcbB	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J01BCUCTRL/Q9XSWI1.Loc[ST]	HMI2, HMI1, HMI2
J01BCUCTRL/Q9XSWI1.Pos[ST]	HMI2, HMI1, HMI2
J01BCUCTRL/Q9XSWI1.OpCnt[ST]	HMI2, HMI1, HMI2
J01BCUCTRL/Q9XSWI1.BlkOpn[ST]	HMI2, HMI1, HMI2
J01BCUCTRL/Q9XSWI1.BlkCls[ST]	HMI2, HMI1, HMI2
J01BCUCTRL/Q8XSWI1.Pos[ST]	HMI2, HMI1, HMI2
J01BCUCTRL/Q0XCBR1.Loc[ST]	HMI2, HMI1, HMI2
J01BCUCTRL/Q0XCBR1.Pos[ST]	HMI2, HMI1, HMI2
J01BCUCTRL/Q0XCBR1.OpCnt[ST]	HMI2, HMI1, HMI2
J01BCUCTRL/Q0XCBR1.BlkOpn[ST]	HMI2, HMI1, HMI2
J01BCUCTRL/Q0XCBR1.BlkCls[ST]	HMI2, HMI1, HMI2
J01BCUCTRL/Q0CILO1.EnaOpn[ST]	HMI2, HMI1, HMI2
J01BCUCTRL/Q0CILO1.EnaCls[ST]	HMI2, HMI1, HMI2

Source Data Attribute	Client
J01BCUCTRL/Q1XSWI1.Loc[ST]	HMI2, HMI1, HMI2
J01BCUCTRL/Q1XSWI1.Pos[ST]	HMI2, HMI1, HMI2
J01BCUCTRL/Q1XSWI1.OpCnt[ST]	HMI2, HMI1, HMI2
J01BCUCTRL/Q1XSWI1.Health[ST]	HMI2, HMI1, HMI2
J01BCUCTRL/Q1XSWI1.BlkOpn[ST]	HMI2, HMI1, HMI2
J01BCUCTRL/Q1XSWI1.BlkCls[ST]	HMI2, HMI1, HMI2

Report Control: J01BPULD0/LLN0.RCB.brcb1

Attribute	Value	Attribute	Value	Attribute	Value
IED	J01BPU	Logical Device	LD0	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcb1	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J01BPUOC4_1/OC4PTOC1.Str[ST]	HMI1, HMI1, HMI2
J01BPUOC4_1/OC4PTOC1.Op[ST]	HMI1, HMI1, HMI2
J01BPUOC4_1/OC4PTRC1.Op[ST]	HMI1, HMI1, HMI2
J01BPUOC4_1/OC4PTRC1.Str[ST]	HMI1, HMI1, HMI2

Report Control: J01BPULD0/LLN0.RCB.brcb2

Attribute	Value	Attribute	Value	Attribute	Value
IED	J01BPU	Logical Device	LD0	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcb2	Dchg	true

Attribute	Value	Attribute	Value	Attribute	Value
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J01BPUOC4_1/OC4PTOC1.Str[ST]	HMI2, HMI1, HMI2
J01BPUOC4_1/OC4PTOC1.Op[ST]	HMI2, HMI1, HMI2
J01BPUOC4_1/OC4PTRC1.Op[ST]	HMI2, HMI1, HMI2
J01BPUOC4_1/OC4PTRC1.Str[ST]	HMI2, HMI1, HMI2

Report Control: J01BPULD0/LLN0.RCB.brcb3

Attribute	Value	Attribute	Value	Attribute	Value
IED	J01BPU	Logical Device	LD0	Data Set	ds_brcb2
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcb3	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J01BPUOC4_1/OC4PTOC1.Str[ST]	GW, GW
J01BPUOC4_1/OC4PTOC1.Op[ST]	GW, GW
J01BPUOC4_1/OC4PTRC1.Op[ST]	GW, GW
J01BPUOC4_1/OC4PTRC1.Str[ST]	GW, GW

Report Control: J04BCUCFG/LLN0.RCB.brcb1

Attribute	Value	Attribute	Value	Attribute	Value
IED	J04BCU	Logical Device	CFG	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcb1	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J04BCUPRO/X89CLXSWI1.Loc[ST]	HMI1, HMI1, HMI2
J04BCUPRO/X89CLXSWI1.Pos[ST]	HMI1, HMI1, HMI2
J04BCUPRO/X89CLXSWI1.OpCnt[ST]	HMI1, HMI1, HMI2
J04BCUPRO/X89CLXSWI1.BlkOpn[ST]	HMI1, HMI1, HMI2
J04BCUPRO/X89CLXSWI1.BlkCls[ST]	HMI1, HMI1, HMI2
J04BCUPRO/S52AXCBR1.Loc[ST]	HMI1, HMI1, HMI2
J04BCUPRO/S52AXCBR1.Pos[ST]	HMI1, HMI1, HMI2
J04BCUPRO/S52AXCBR1.OpCnt[ST]	HMI1, HMI1, HMI2
J04BCUPRO/S52AXCBR1.BlkOpn[ST]	HMI1, HMI1, HMI2
J04BCUPRO/S52AXCBR1.BlkCls[ST]	HMI1, HMI1, HMI2

Report Control: J04BCUCFG/LLN0.RCB.brcb2

Attribute	Value	Attribute	Value	Attribute	Value
IED	J04BCU	Logical Device	CFG	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcb2	Dchg	true
Dupd	false	Period	false	Qchg	true

Attribute	Value	Attribute	Value	Attribute	Value
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J04BCUPRO/X89CLXSWI1.Loc[ST]	HMI2, HMI1, HMI2
J04BCUPRO/X89CLXSWI1.Pos[ST]	HMI2, HMI1, HMI2
J04BCUPRO/X89CLXSWI1.OpCnt[ST]	HMI2, HMI1, HMI2
J04BCUPRO/X89CLXSWI1.BlkOpn[ST]	HMI2, HMI1, HMI2
J04BCUPRO/X89CLXSWI1.BlkCls[ST]	HMI2, HMI1, HMI2
J04BCUPRO/S52AXCBR1.Loc[ST]	HMI2, HMI1, HMI2
J04BCUPRO/S52AXCBR1.Pos[ST]	HMI2, HMI1, HMI2
J04BCUPRO/S52AXCBR1.OpCnt[ST]	HMI2, HMI1, HMI2
J04BCUPRO/S52AXCBR1.BlkOpn[ST]	HMI2, HMI1, HMI2
J04BCUPRO/S52AXCBR1.BlkCls[ST]	HMI2, HMI1, HMI2

Report Control: J04BCUCFG/LLN0.RCB.brcb3

Attribute	Value	Attribute	Value	Attribute	Value
IED	J04BCU	Logical Device	CFG	Data Set	ds_brcb2
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcb3	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J04BCUPRO/X89CLXSWI1.Loc[ST]	GW, GW

Source Data Attribute	Client
J04BCUPRO/X89CLXSWI1.Pos[ST]	GW, GW
J04BCUPRO/X89CLXSWI1.OpCnt[ST]	GW, GW
J04BCUPRO/X89CLXSWI1.BlkOpn[ST]	GW, GW
J04BCUPRO/X89CLXSWI1.BlkCls[ST]	GW, GW
J04BCUPRO/S52AXCBR1.Loc[ST]	GW, GW
J04BCUPRO/S52AXCBR1.Pos[ST]	GW, GW
J04BCUPRO/S52AXCBR1.OpCnt[ST]	GW, GW
J04BCUPRO/S52AXCBR1.BlkOpn[ST]	GW, GW
J04BCUPRO/S52AXCBR1.BlkCls[ST]	GW, GW

Report Control: J04BCUCFG/LLN0.RCB.urcb1

Attribute	Value	Attribute	Value	Attribute	Value
IED	J04BCU	Logical Device	CFG	Data Set	ds_urcb1
buffered	false	buffered Time	0	report confRev	10000
intg Pd	0	rpt ID	urcb1	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	false
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J04BCUMET/METSMMXU1.A1.phsA[MX]	HMI1, HMI1, HMI2
J04BCUMET/METSMMXU1.A1.phsB[MX]	HMI1, HMI1, HMI2
J04BCUMET/METSMMXU1.A1.phsC[MX]	HMI1, HMI1, HMI2

Report Control: J04BCUCFG/LLN0.RCB.urcb2

Attribute	Value	Attribute	Value	Attribute	Value
IED	J04BCU	Logical Device	CFG	Data Set	ds_urcb1

Attribute	Value	Attribute	Value	Attribute	Value
buffered	false	buffered Time	0	report confRev	10000
intg Pd	0	rpt ID	urcb2	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	false
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J04BCUMET/METSMMXU1.A1.phsA[MX]	HMI2, HMI1, HMI2
J04BCUMET/METSMMXU1.A1.phsB[MX]	HMI2, HMI1, HMI2
J04BCUMET/METSMMXU1.A1.phsC[MX]	HMI2, HMI1, HMI2

Report Control: J04BCUCFG/LLN0.RCB.urcb3

Attribute	Value	Attribute	Value	Attribute	Value
IED	J04BCU	Logical Device	CFG	Data Set	ds_urcb2
buffered	false	buffered Time	0	report confRev	10000
intg Pd	0	rpt ID	urcb3	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	false
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J04BCUMET/METSMMXU1.A1.phsA[MX]	GW, GW
J04BCUMET/METSMMXU1.A1.phsB[MX]	GW, GW
J04BCUMET/METSMMXU1.A1.phsC[MX]	GW, GW

Report Control: J03BPUGENERAL/LLN0.RCB.brcb1

Attribute	Value	Attribute	Value	Attribute	Value
IED	J03BPU	Logical Device	GENERAL	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcb1	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J03BPUPROT/ILPTOC1.Str[ST]	HMI1, HMI2
J03BPUPROT/ILPTOC1.Op[ST]	HMI1, HMI2
J03BPUPROT/GENERALPTRC1.Tr[ST]	HMI1, HMI2
J03BPUPROT/GENERALPTRC1.Str[ST]	HMI1, HMI2

Report Control: J03BPUGENERAL/LLN0.RCB.brcb2

Attribute	Value	Attribute	Value	Attribute	Value
IED	J03BPU	Logical Device	GENERAL	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcb2	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J03BPUPROT/ILPTOC1.Str[ST]	HMI1, HMI2
J03BPUPROT/ILPTOC1.Op[ST]	HMI1, HMI2

Source Data Attribute	Client
J03BPUPROT/GENERALPTRC1.Tr[ST]	HMI1, HMI2
J03BPUPROT/GENERALPTRC1.Str[ST]	HMI1, HMI2

Report Control: J03BPUGENERAL/LLN0.RCB.brcb3

Attribute	Value	Attribute	Value	Attribute	Value
IED	J03BPU	Logical Device	GENERAL	Data Set	ds_brcb2
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcb3	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J03BPUPROT/ILPTOC1.Str[ST]	GW
J03BPUPROT/ILPTOC1.Op[ST]	GW
J03BPUPROT/GENERALPTRC1.Tr[ST]	GW
J03BPUPROT/GENERALPTRC1.Str[ST]	GW

Report Control: J02BPUSystem/LLN0.RCB.brcbA

Created by HELINKS STS

Attribute	Value	Attribute	Value	Attribute	Value
IED	J02BPU	Logical Device	System	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcbA	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true

Attribute	Value	Attribute	Value	Attribute	Value
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J02BPUProtection/OcpPTOC1.Str[ST]	HMI1, HMI1, HMI2
J02BPUProtection/OcpPTOC1.Op[ST]	HMI1, HMI1, HMI2
J02BPUProtection/PTRC1.Tr[ST]	HMI1, HMI1, HMI2
J02BPUProtection/PTRC1.Str[ST]	HMI1, HMI1, HMI2

Report Control: J02BPUSystem/LLN0.RCB.brcbB

Created by HELINKS STS

Attribute	Value	Attribute	Value	Attribute	Value
IED	J02BPU	Logical Device	System	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcbB	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J02BPUProtection/OcpPTOC1.Str[ST]	HMI2, HMI1, HMI2
J02BPUProtection/OcpPTOC1.Op[ST]	HMI2, HMI1, HMI2
J02BPUProtection/PTRC1.Tr[ST]	HMI2, HMI1, HMI2
J02BPUProtection/PTRC1.Str[ST]	HMI2, HMI1, HMI2

Report Control: J02BPUSystem/LLN0.RCB.brcbC

System Logical Device Report Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	J02BPU	Logical Device	System	Data Set	ds_brcb2
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcbC	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J02BPUProtection/OcpPTOC1.Str[ST]	GW, GW
J02BPUProtection/OcpPTOC1.Op[ST]	GW, GW
J02BPUProtection/PTRC1.Tr[ST]	GW, GW
J02BPUProtection/PTRC1.Str[ST]	GW, GW

Report Control: J03BCUMaster/LLN0.RCB.BRCB01

Attribute	Value	Attribute	Value	Attribute	Value
IED	J03BCU	Logical Device	Master	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	BRCB01	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J03BCUSystem/Disc0XSW11.Loc.stVal[ST]	HMI1, HMI1, HMI2
J03BCUSystem/Disc0XSW11.Pos.stVal[ST]	HMI1, HMI1, HMI2
J03BCUSystem/Disc0XSW11.OpCnt.stVal[ST]	HMI1, HMI1, HMI2

Source Data Attribute	Client
J03BCUSystem/Disc0XSW11.EEHealth.stVal[ST]	HMI1, HMI1, HMI2
J03BCUSystem/Disc0XSW11.BlkOpn.stVal[ST]	HMI1, HMI1, HMI2
J03BCUSystem/Disc0XSW11.BlkCls.stVal[ST]	HMI1, HMI1, HMI2
J03BCUSystem/Bkr0XCBR1.Loc.stVal[ST]	HMI1, HMI1, HMI2
J03BCUSystem/Bkr0XCBR1.Pos.stVal[ST]	HMI1, HMI1, HMI2
J03BCUSystem/Bkr0XCBR1.OpCnt.stVal[ST]	HMI1, HMI1, HMI2
J03BCUSystem/Bkr0XCBR1.BlkOpn.stVal[ST]	HMI1, HMI1, HMI2
J03BCUSystem/Bkr0XCBR1.BlkCls.stVal[ST]	HMI1, HMI1, HMI2
J03BCUSystem/BkrCILO1.EnaOpn.stVal[ST]	HMI1, HMI1, HMI2
J03BCUSystem/BkrCILO1.EnaCls.stVal[ST]	HMI1, HMI1, HMI2

Report Control: J03BCUMaster/LLN0.RCB.BRCB02

Attribute	Value	Attribute	Value	Attribute	Value
IED	J03BCU	Logical Device	Master	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	BRCB02	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J03BCUSystem/Disc0XSW11.Loc.stVal[ST]	HMI2, HMI1, HMI2
J03BCUSystem/Disc0XSW11.Pos.stVal[ST]	HMI2, HMI1, HMI2
J03BCUSystem/Disc0XSW11.OpCnt.stVal[ST]	HMI2, HMI1, HMI2
J03BCUSystem/Disc0XSW11.EEHealth.stVal[ST]	HMI2, HMI1, HMI2
J03BCUSystem/Disc0XSW11.BlkOpn.stVal[ST]	HMI2, HMI1, HMI2

Source Data Attribute	Client
J03BCUSystem/Disc0XSW11.BlkCls.stVal[ST]	HMI2, HMI1, HMI2
J03BCUSystem/Bkr0XCBR1.Loc.stVal[ST]	HMI2, HMI1, HMI2
J03BCUSystem/Bkr0XCBR1.Pos.stVal[ST]	HMI2, HMI1, HMI2
J03BCUSystem/Bkr0XCBR1.OpCnt.stVal[ST]	HMI2, HMI1, HMI2
J03BCUSystem/Bkr0XCBR1.BlkOpn.stVal[ST]	HMI2, HMI1, HMI2
J03BCUSystem/Bkr0XCBR1.BlkCls.stVal[ST]	HMI2, HMI1, HMI2
J03BCUSystem/BkrCILO1.EnaOpn.stVal[ST]	HMI2, HMI1, HMI2
J03BCUSystem/BkrCILO1.EnaCls.stVal[ST]	HMI2, HMI1, HMI2

Report Control: J03BCUMaster/LLN0.RCB.BRCB03

Attribute	Value	Attribute	Value	Attribute	Value
IED	J03BCU	Logical Device	Master	Data Set	ds_brcb2
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	BRCB03	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J03BCUSystem/Disc0XSW11.Loc.stVal[ST]	GW, GW
J03BCUSystem/Disc0XSW11.Pos.stVal[ST]	GW, GW
J03BCUSystem/Disc0XSW11.OpCnt.stVal[ST]	GW, GW
J03BCUSystem/Disc0XSW11.EEHealth.stVal[ST]	GW, GW
J03BCUSystem/Disc0XSW11.BlkOpn.stVal[ST]	GW, GW
J03BCUSystem/Disc0XSW11.BlkCls.stVal[ST]	GW, GW
J03BCUSystem/Bkr0XCBR1.Loc.stVal[ST]	GW, GW

Source Data Attribute	Client
J03BCUSystem/Bkr0XCBR1.Pos.stVal[ST]	GW, GW
J03BCUSystem/Bkr0XCBR1.OpCnt.stVal[ST]	GW, GW
J03BCUSystem/Bkr0XCBR1.BlkOpn.stVal[ST]	GW, GW
J03BCUSystem/Bkr0XCBR1.BlkCls.stVal[ST]	GW, GW
J03BCUSystem/BkrCILO1.EnaOpn.stVal[ST]	GW, GW
J03BCUSystem/BkrCILO1.EnaCls.stVal[ST]	GW, GW

Report Control: J03BCUMaster/LLN0.RCB.URCB01

Attribute	Value	Attribute	Value	Attribute	Value
IED	J03BCU	Logical Device	Master	Data Set	ds_urcb1
buffered	false	buffered Time	0	report confRev	10000
intg Pd	0	rpt ID	URCB01	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	false
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J03BCUMeter/ACsrcMMXU1.A.phsA.cVal.mag.f[MX]	HMI1, HMI1, HMI2
J03BCUMeter/ACsrcMMXU1.A.phsB.cVal.mag.f[MX]	HMI1, HMI1, HMI2
J03BCUMeter/ACsrcMMXU1.A.phsC.cVal.mag.f[MX]	HMI1, HMI1, HMI2

Report Control: J03BCUMaster/LLN0.RCB.URCB02

Attribute	Value	Attribute	Value	Attribute	Value
IED	J03BCU	Logical Device	Master	Data Set	ds_urcb1
buffered	false	buffered Time	0	report confRev	10000
intg Pd	0	rpt ID	URCB02	Dchg	true
Dupd	false	Period	false	Qchg	true

Attribute	Value	Attribute	Value	Attribute	Value
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	false
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J03BCUMeter/ACsrcMMXU1.A.phsA.cVal.mag.f[MX]	HMI2, HMI1, HMI2
J03BCUMeter/ACsrcMMXU1.A.phsB.cVal.mag.f[MX]	HMI2, HMI1, HMI2
J03BCUMeter/ACsrcMMXU1.A.phsC.cVal.mag.f[MX]	HMI2, HMI1, HMI2

Report Control: J03BCUMaster/LLN0.RCB.URCB03

Attribute	Value	Attribute	Value	Attribute	Value
IED	J03BCU	Logical Device	Master	Data Set	ds_urcb2
buffered	false	buffered Time	0	report confRev	10000
intg Pd	0	rpt ID	URCB03	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	false
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J03BCUMeter/ACsrcMMXU1.A.phsA.cVal.mag.f[MX]	GW, GW
J03BCUMeter/ACsrcMMXU1.A.phsB.cVal.mag.f[MX]	GW, GW
J03BCUMeter/ACsrcMMXU1.A.phsC.cVal.mag.f[MX]	GW, GW

Report Control: J02BCUAKS/LLN0.RCB.brcb1

Attribute	Value	Attribute	Value	Attribute	Value
IED	J02BCU	Logical Device	AKS	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000

Attribute	Value	Attribute	Value	Attribute	Value
intg Pd	0	rpt ID	brcb1	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J02BCUAKS/XSWI1.Loc[ST]	HMI1, HMI1, HMI2
J02BCUAKS/XSWI1.Pos[ST]	HMI1, HMI1, HMI2
J02BCUAKS/XSWI1.OpCnt[ST]	HMI1, HMI1, HMI2
J02BCUAKS/XSWI1.BlkOpn[ST]	HMI1, HMI1, HMI2
J02BCUAKS/XSWI1.BlkCls[ST]	HMI1, HMI1, HMI2
J02BCUVS10/XCBR1.Loc[ST]	HMI1, HMI1, HMI2
J02BCUVS10/XCBR1.Pos[ST]	HMI1, HMI1, HMI2
J02BCUVS10/XCBR1.OpCnt[ST]	HMI1, HMI1, HMI2
J02BCUVS10/XCBR1.BlkOpn[ST]	HMI1, HMI1, HMI2
J02BCUVS10/XCBR1.BlkCls[ST]	HMI1, HMI1, HMI2
J02BCUAKS/CILO1.EnaOpn[ST]	HMI1, HMI1, HMI2
J02BCUAKS/CILO1.EnaCls[ST]	HMI1, HMI1, HMI2

Report Control: J02BCUAKS/LLN0.RCB.brCb2

Attribute	Value	Attribute	Value	Attribute	Value
IED	J02BCU	Logical Device	AKS	Data Set	ds_brCb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brCb2	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true

Attribute	Value	Attribute	Value	Attribute	Value
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J02BCUAKS/XSWI1.Loc[ST]	HMI2, HMI1, HMI2
J02BCUAKS/XSWI1.Pos[ST]	HMI2, HMI1, HMI2
J02BCUAKS/XSWI1.OpCnt[ST]	HMI2, HMI1, HMI2
J02BCUAKS/XSWI1.BlkOpn[ST]	HMI2, HMI1, HMI2
J02BCUAKS/XSWI1.BlkCls[ST]	HMI2, HMI1, HMI2
J02BCUVS10/XCBR1.Loc[ST]	HMI2, HMI1, HMI2
J02BCUVS10/XCBR1.Pos[ST]	HMI2, HMI1, HMI2
J02BCUVS10/XCBR1.OpCnt[ST]	HMI2, HMI1, HMI2
J02BCUVS10/XCBR1.BlkOpn[ST]	HMI2, HMI1, HMI2
J02BCUVS10/XCBR1.BlkCls[ST]	HMI2, HMI1, HMI2
J02BCUAKS/CILO1.EnaOpn[ST]	HMI2, HMI1, HMI2
J02BCUAKS/CILO1.EnaCls[ST]	HMI2, HMI1, HMI2

Report Control: J02BCUAKS/LLN0.RCB.brcb3

Attribute	Value	Attribute	Value	Attribute	Value
IED	J02BCU	Logical Device	AKS	Data Set	ds_brcb2
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcb3	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J02BCUAKS/XSWI1.Loc[ST]	GW, GW
J02BCUAKS/XSWI1.Pos[ST]	GW, GW
J02BCUAKS/XSWI1.OpCnt[ST]	GW, GW
J02BCUAKS/XSWI1.BlkOpn[ST]	GW, GW
J02BCUAKS/XSWI1.BlkCls[ST]	GW, GW
J02BCUVS10/XCBR1.Loc[ST]	GW, GW
J02BCUVS10/XCBR1.Pos[ST]	GW, GW
J02BCUVS10/XCBR1.OpCnt[ST]	GW, GW
J02BCUVS10/XCBR1.BlkOpn[ST]	GW, GW
J02BCUVS10/XCBR1.BlkCls[ST]	GW, GW
J02BCUAKS/CILO1.EnaOpn[ST]	GW, GW
J02BCUAKS/CILO1.EnaCls[ST]	GW, GW

Report Control: J02BCUAKS/LLN0.RCB.urcb1

Attribute	Value	Attribute	Value	Attribute	Value
IED	J02BCU	Logical Device	AKS	Data Set	ds_urcb1
buffered	false	buffered Time	0	report confRev	10000
intg Pd	0	rpt ID	urcb1	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	false
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J02BCUVI3p1_FundSymComp/FPRE_MMXU1.A.phsA[MX]	HMI1, HMI1, HMI2
J02BCUVI3p1_FundSymComp/FPRE_MMXU1.A.phsB[MX]	HMI1, HMI1, HMI2
J02BCUVI3p1_FundSymComp/FPRE_MMXU1.A.phsC[MX]	HMI1, HMI1, HMI2

Report Control: J02BCUAKS/LLN0.RCB.urcb2

Attribute	Value	Attribute	Value	Attribute	Value
IED	J02BCU	Logical Device	AKS	Data Set	ds_urcb1
buffered	false	buffered Time	0	report confRev	10000
intg Pd	0	rpt ID	urcb2	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	false
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J02BCUVI3p1_FundSymComp/FPRE_MMXU1.A.phsA[MX]	HMI2, HMI1, HMI2
J02BCUVI3p1_FundSymComp/FPRE_MMXU1.A.phsB[MX]	HMI2, HMI1, HMI2
J02BCUVI3p1_FundSymComp/FPRE_MMXU1.A.phsC[MX]	HMI2, HMI1, HMI2

Report Control: J02BCUAKS/LLN0.RCB.urcb3

Attribute	Value	Attribute	Value	Attribute	Value
IED	J02BCU	Logical Device	AKS	Data Set	ds_urcb2
buffered	false	buffered Time	0	report confRev	10000
intg Pd	0	rpt ID	urcb3	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	false
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J02BCUVI3p1_FundSymComp/FPRE_MMXU1.A.phsA[MX]	GW, GW
J02BCUVI3p1_FundSymComp/FPRE_MMXU1.A.phsB[MX]	GW, GW
J02BCUVI3p1_FundSymComp/FPRE_MMXU1.A.phsC[MX]	GW, GW

Report Control: J04BPULD0/LLN0.RCB.brcb1

Attribute	Value	Attribute	Value	Attribute	Value
IED	J04BPU	Logical Device	LD0	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcb1	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J04BPULD0/PHHPTOC1.Str[ST]	HMI1, HMI1, HMI2
J04BPULD0/PHHPTOC1.Op[ST]	HMI1, HMI1, HMI2
J04BPULD0/FRPTRC1.Op[ST]	HMI1, HMI1, HMI2
J04BPULD0/FRPTRC1.Str[ST]	HMI1, HMI1, HMI2

Report Control: J04BPULD0/LLN0.RCB.brcb2

Attribute	Value	Attribute	Value	Attribute	Value
IED	J04BPU	Logical Device	LD0	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcb2	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J04BPULD0/PHHPTOC1.Str[ST]	HMI2, HMI1, HMI2
J04BPULD0/PHHPTOC1.Op[ST]	HMI2, HMI1, HMI2

Source Data Attribute	Client
J04BPULD0/FRPTRC1.Op[ST]	HMI2, HMI1, HMI2
J04BPULD0/FRPTRC1.Str[ST]	HMI2, HMI1, HMI2

Report Control: J04BPULD0/LLN0.RCB.brcb3

Attribute	Value	Attribute	Value	Attribute	Value
IED	J04BPU	Logical Device	LD0	Data Set	ds_brcb2
buffered	true	buffered Time	100	report confRev	10000
intg Pd	0	rpt ID	brcb3	Dchg	true
Dupd	false	Period	false	Qchg	true
config Ref	true	Data Ref	false	Data Set	true
Entry ID	false	Reason Code	false	Seq Num	true
Time Stamp	true	-	-	-	-

Source Data Attribute	Client
J04BPULD0/PHHPTOC1.Str[ST]	GW, GW
J04BPULD0/PHHPTOC1.Op[ST]	GW, GW
J04BPULD0/FRPTRC1.Op[ST]	GW, GW
J04BPULD0/FRPTRC1.Str[ST]	GW, GW

4.3.2. Unused Report Control Blocks

IED Name	Logical Device	Report ID	Buffered
J02BPU	System	urcbA	false
J02BPU	System	urcbB	false
J02BPU	System	urcbC	false
J02BPU	System	urcbD	false
J02BPU	System	urcbE	false
J02BPU	System	urcbF	false
J02BPU	System	urcbG	false

IED Name	Logical Device	Report ID	Buffered
J02BPU	System	urcbH	false
J02BPU	System	urcbI	false
J02BPU	System	urcbJ	false
J02BPU	System	urcbK	false
J02BPU	System	urcbL	false
J02BPU	System	urcbM	false
J02BPU	System	urcbN	false
J02BPU	System	urcbO	false
J02BPU	System	urcbP	false
J02BPU	System	brcbD	true
J02BPU	System	brcbE	true
J02BPU	System	brcbF	true
J02BPU	System	brcbG	true
J02BPU	System	brcbH	true
J03BCU	Master	BRCB04	true
J03BCU	Master	BRCB05	true
J03BCU	Master	BRCB06	true
J03BCU	Master	BRCB07	true
J03BCU	Master	BRCB08	true
J03BCU	Master	BRCB09	true
J03BCU	Master	BRCB10	true
J03BCU	Master	BRCB11	true
J03BCU	Master	BRCB12	true
J03BCU	Master	BRCB13	true
J03BCU	Master	BRCB14	true
J03BCU	Master	BRCB15	true

IED Name	Logical Device	Report ID	Buffered
J03BCU	Master	BRCB16	true
J03BCU	Master	BRCB17	true
J03BCU	Master	BRCB18	true
J03BCU	Master	BRCB19	true
J03BCU	Master	BRCB20	true
J03BCU	Master	URCB04	false
J03BCU	Master	URCB05	false
J03BCU	Master	URCB06	false
J03BCU	Master	URCB07	false
J03BCU	Master	URCB08	false
J03BCU	Master	URCB09	false
J03BCU	Master	URCB10	false
J03BCU	Master	URCB11	false
J03BCU	Master	URCB12	false
J03BCU	Master	URCB13	false
J03BCU	Master	URCB14	false

4.3.3. Goose Messages

Publisher	GOOSE ID	Subscribers
J03BPU	gcb_f1	J01BPU
J02BPU	gcb01	J01BPU
J04BPU	gcb_f1	J01BPU

Table 19. GOOSE Messages Overview

GOOSE Message Details

Goose Control:J03BPUGENERAL/LLN0.GCB.gcb_f1

GOOSEApplication

Attribute	Value	Attribute	Value	Attribute	Value
IED	J03BPU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	GENERAL	DataSet Description	-	Goose appID	J03BPUGENERAL/LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: J03BPUPROT/ILPTOC1.Str.general[ST]	Internal Address
J01BPULD0/LLN0	-

Table 20. Subscribers to: J03BPU

Goose Control:J02BPUSystem/LLN0.GCB.gcb01

GOOSEApplication

Attribute	Value	Attribute	Value	Attribute	Value
IED	J02BPU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	System	DataSet Description	-	Goose appID	J02BPUSystem/LLN0gcb01
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: J02BPUProtection/OcpPTOC1.Str.general[ST]	Internal Address
J01BPULD0/LLN0	-

Table 21. Subscribers to: J02BPU

Goose Control:J04BPULD0/LLN0.GCB.gcb_f1

GOOSEApplication

Attribute	Value	Attribute	Value	Attribute	Value
IED	J04BPU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	LD0	DataSet Description	-	Goose appID	J04BPULD0/LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: J04BPULD0/PHHPTOC1.Str.general[ST]	Internal Address
J01BPULD0/LLN0	-

Table 22. Subscribers to: J04BPU