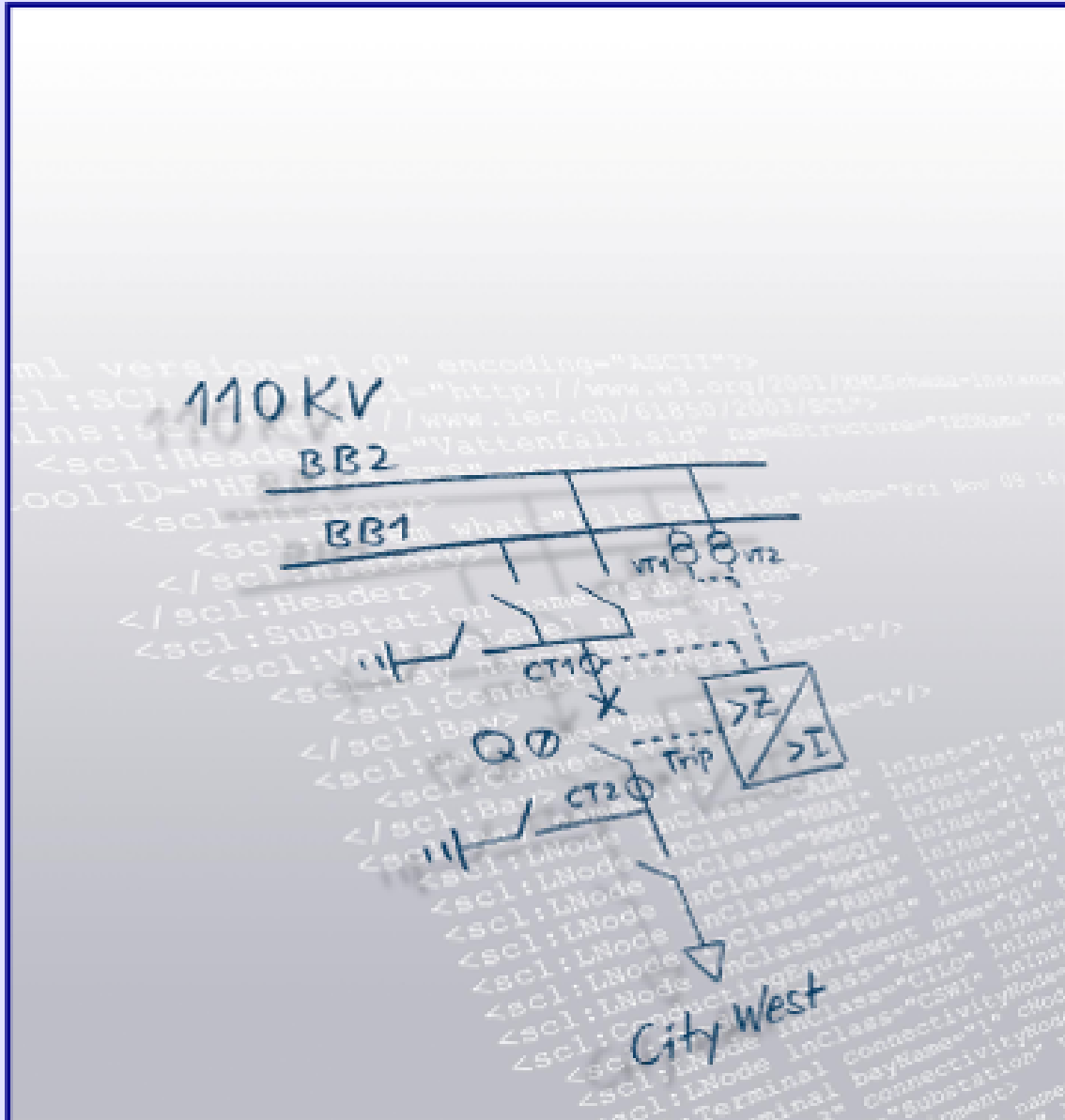


# Helinks Project Report

Berlin



Chollerstrasse 3  
CH - 6300 Zug  
Switzerland  
[www.helinks.com](http://www.helinks.com)  
[contact@helinks.com](mailto:contact@helinks.com)  
Phone: +41 76 340 80 89

# Table of Contents

1. SCD History .....	1
2. General Specification .....	2
3. Berlin Single Line and Functions .....	3
3.1. Berlin .....	3
3.2. Application Schemes .....	3
3.2.1. ....	3
3.2.2. ....	10
3.2.3. ....	11
3.2.4. ....	12
3.2.5. ....	14
3.2.6. ....	17
3.3. Voltage Level Berlin/E .....	19
3.3.1. Bus Bar Berlin/E/BB .....	19
3.3.2. Bay Berlin/E/01 .....	19
3.3.3. Bay Berlin/E/02 .....	23
3.3.4. Bay Berlin/E/03 .....	25
3.3.5. Bay Berlin/E/04 .....	28
3.3.6. Bay Berlin/E/05 .....	31
3.3.7. Bay Berlin/E/06 .....	33
3.4. Transformers .....	36
3.4.1. PWT .....	36
4. System Communication Diagram .....	37
4.1. Subnetwork .....	37
4.2. IED Overview .....	38
4.2.1. IED Summary .....	38
4.3. Communication .....	39
4.3.1. Reports .....	39
4.3.2. Unused Report Control Blocks .....	60
4.3.3. Goose Messages .....	63
4.3.4. SMV Messages .....	78

List of Figures

1. Single Line ..... 3

2. Bay Function Diagram of bay: 01 ..... 20

3. System Diagram ..... 37

# 1. SCD History

Revision	Version	What	When	Who	Why
R000	V1	Starting Point	Tue Mar 07 12:46:42 CET 2023	JR	Helinks STS Top Down Demo

Table 1. SCD History

## 2. General Specification

---

## 3. Berlin Single Line and Functions

### 3.1. Berlin

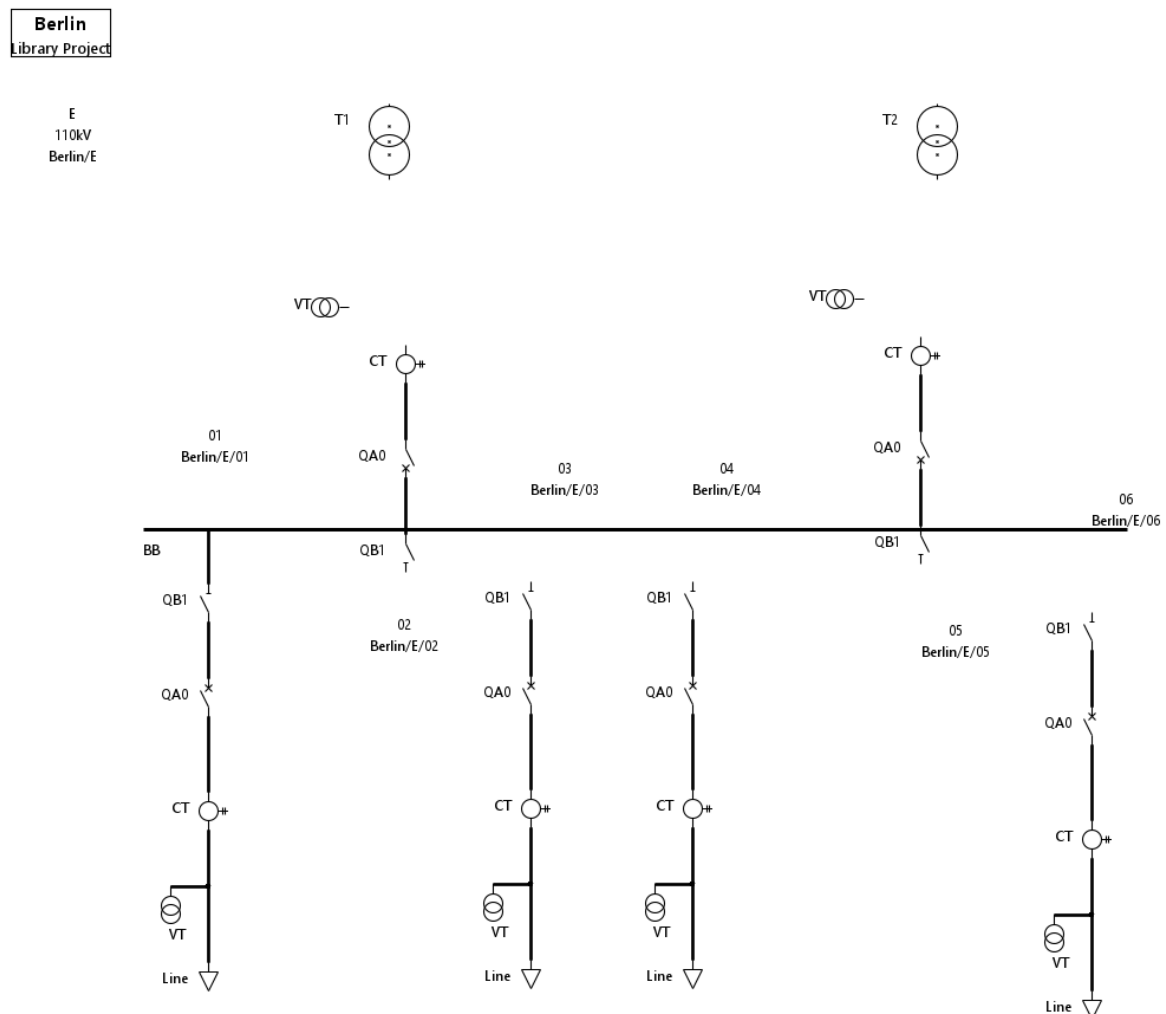


Figure 1. Single Line

### 3.2. Application Schemes

#### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/01/Measurement
- SampledMeasurements.Current:hlx\_Berlin/E/01/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/01/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/01/Measurement	A.TCTR.5
I2 sv	Berlin/E/01/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/01/Measurement	B.TCTR.1
I3 sv	Berlin/E/01/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/01/Measurement	C.TCTR.4
I Neut sv	Berlin/E/01/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/01/Measurement	N.TCTR.6

Table 2. SMV Message :SMV Configuration

#### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/01/Distance

- SampledMeasurements.Current:hlx\_Berlin/E/01/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/01/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/01/Distance	A.TCTR.2
I2 sv	Berlin/E/01/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/01/Distance	B.TCTR.3
I3 sv	Berlin/E/01/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/01/Distance	C.TCTR.7
I Neut sv	Berlin/E/01/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/01/Distance	N.TCTR.8

Table 3. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/01/Overcurrent
- SampledMeasurements.Current:hlx\_Berlin/E/01/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/01/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/01/Overcurrent	A.TCTR.5
I2 sv	Berlin/E/01/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/01/Overcurrent	B.TCTR.1
I3 sv	Berlin/E/01/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/01/Overcurrent	C.TCTR.4
I Neut sv	Berlin/E/01/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/01/Overcurrent	N.TCTR.6

Table 4. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.Voltage:hlx\_Berlin/E/01/VT/Voltage Samples
- SampledMeasurements.VoltageSubscriber:hlx\_Berlin/E/01/Measurement

Signal Name	Sending function	Data	Receiving function	Receiving logical node
U1 sv	Berlin/E/01/VT	ATVTR1.VolSv.instMag.i[MX]	Berlin/E/01/Measurement	A.TVTR.2
U2 sv	Berlin/E/01/VT	BTVTR2.VolSv.instMag.i[MX]	Berlin/E/01/Measurement	B.TVTR.12
U3 sv	Berlin/E/01/VT	CTVTR3.VolSv.instMag.i[MX]	Berlin/E/01/Measurement	C.TVTR.14
U Neut sv	Berlin/E/01/VT	NTVTR4.VolSv.instMag.i[MX]	Berlin/E/01/Measurement	N.TVTR.3

Table 5. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.Voltage:hlx\_Berlin/E/01/VT/Voltage Samples
- SampledMeasurements.VoltageSubscriber:hlx\_Berlin/E/01/Distance

Signal Name	Sending function	Data	Receiving function	Receiving logical node
U1 sv	Berlin/E/01/VT	ATVTR1.VolSv.instMag.i[MX]	Berlin/E/01/Distance	A.TVTR.7
U2 sv	Berlin/E/01/VT	BTVTR2.VolSv.instMag.i[MX]	Berlin/E/01/Distance	B.TVTR.8
U3 sv	Berlin/E/01/VT	CTVTR3.VolSv.instMag.i[MX]	Berlin/E/01/Distance	C.TVTR.4
U Neut sv	Berlin/E/01/VT	NTVTR4.VolSv.instMag.i[MX]	Berlin/E/01/Distance	N.TVTR.1

Table 6. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.Voltage:hlx\_Berlin/E/02/VT/Voltage Samples
- SampledMeasurements.VoltageSubscriber:hlx\_Berlin/E/02/Measurement

Signal Name	Sending function	Data	Receiving function	Receiving logical node
U1 sv	Berlin/E/02/VT	ATVTR1.VolSv.instMag.i[MX]	Berlin/E/02/Measurement	A.TVTR.2
U2 sv	Berlin/E/02/VT	BTVTR2.VolSv.instMag.i[MX]	Berlin/E/02/Measurement	B.TVTR.12
U3 sv	Berlin/E/02/VT	CTVTR3.VolSv.instMag.i[MX]	Berlin/E/02/Measurement	C.TVTR.14
U Neut sv	Berlin/E/02/VT	NTVTR4.VolSv.instMag.i[MX]	Berlin/E/02/Measurement	N.TVTR.3

Table 7. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/02/Measurement
- SampledMeasurements.Current:hlx\_Berlin/E/02/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/02/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/02/Measurement	A.TCTR.5
I2 sv	Berlin/E/02/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/02/Measurement	B.TCTR.1
I3 sv	Berlin/E/02/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/02/Measurement	C.TCTR.4
I Neut sv	Berlin/E/02/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/02/Measurement	N.TCTR.6

Table 8. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/02/Differential
- SampledMeasurements.Current:hlx\_Berlin/E/02/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/02/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/02/Differential	A.TCTR.2
I2 sv	Berlin/E/02/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/02/Differential	B.TCTR.3
I3 sv	Berlin/E/02/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/02/Differential	C.TCTR.1
I Neut sv	Berlin/E/02/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/02/Differential	N.TCTR.4

Table 9. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/02/Overcurrent
- SampledMeasurements.Current:hlx\_Berlin/E/02/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/02/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/02/Overcurrent	A.TCTR.5
I2 sv	Berlin/E/02/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/02/Overcurrent	B.TCTR.1
I3 sv	Berlin/E/02/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/02/Overcurrent	C.TCTR.4
I Neut sv	Berlin/E/02/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/02/Overcurrent	N.TCTR.6

Table 10. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/03/Measurement
- SampledMeasurements.Current:hlx\_Berlin/E/03/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/03/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/03/Measurement	A.TCTR.5



Signal Name	Sending function	Data	Receiving function	Receiving logical node
I2 sv	Berlin/E/03/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/03/Measurement	B.TCTR.1
I3 sv	Berlin/E/03/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/03/Measurement	C.TCTR.4
I Neut sv	Berlin/E/03/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/03/Measurement	N.TCTR.6

Table 11. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/03/Distance
- SampledMeasurements.Current:hlx\_Berlin/E/03/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/03/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/03/Distance	A.TCTR.2
I2 sv	Berlin/E/03/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/03/Distance	B.TCTR.3
I3 sv	Berlin/E/03/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/03/Distance	C.TCTR.7
I Neut sv	Berlin/E/03/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/03/Distance	N.TCTR.8

Table 12. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/03/Overcurrent
- SampledMeasurements.Current:hlx\_Berlin/E/03/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/03/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/03/Overcurrent	A.TCTR.5
I2 sv	Berlin/E/03/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/03/Overcurrent	B.TCTR.1
I3 sv	Berlin/E/03/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/03/Overcurrent	C.TCTR.4
I Neut sv	Berlin/E/03/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/03/Overcurrent	N.TCTR.6

Table 13. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.Voltage:hlx\_Berlin/E/03/VT/Voltage Samples
- SampledMeasurements.VoltageSubscriber:hlx\_Berlin/E/03/Measurement

Signal Name	Sending function	Data	Receiving function	Receiving logical node
U1 sv	Berlin/E/03/VT	ATVTR1.VolSv.instMag.i[MX]	Berlin/E/03/Measurement	A.TVTR.2
U2 sv	Berlin/E/03/VT	BTVTR2.VolSv.instMag.i[MX]	Berlin/E/03/Measurement	B.TVTR.12
U3 sv	Berlin/E/03/VT	CTVTR3.VolSv.instMag.i[MX]	Berlin/E/03/Measurement	C.TVTR.14
U Neut sv	Berlin/E/03/VT	NTVTR4.VolSv.instMag.i[MX]	Berlin/E/03/Measurement	N.TVTR.3

Table 14. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.Voltage:hlx\_Berlin/E/03/VT/Voltage Samples
- SampledMeasurements.VoltageSubscriber:hlx\_Berlin/E/03/Distance

Signal Name	Sending function	Data	Receiving function	Receiving logical node
U1 sv	Berlin/E/03/VT	ATVTR1.VolSv.instMag.i[MX]	Berlin/E/03/Distance	A.TVTR.7
U2 sv	Berlin/E/03/VT	BTVTR2.VolSv.instMag.i[MX]	Berlin/E/03/Distance	B.TVTR.8

Signal Name	Sending function	Data	Receiving function	Receiving logical node
U3 sv	Berlin/E/03/VT	CTVTR3.VolSv.instMag.i[MX]	Berlin/E/03/Distance	C.TVTR.4
U Neut sv	Berlin/E/03/VT	NTVTR4.VolSv.instMag.i[MX]	Berlin/E/03/Distance	N.TVTR.1

Table 15. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/04/Measurement
- SampledMeasurements.Current:hlx\_Berlin/E/04/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/04/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/04/Measurement	A.TCTR.5
I2 sv	Berlin/E/04/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/04/Measurement	B.TCTR.1
I3 sv	Berlin/E/04/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/04/Measurement	C.TCTR.4
I Neut sv	Berlin/E/04/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/04/Measurement	N.TCTR.6

Table 16. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/04/Distance
- SampledMeasurements.Current:hlx\_Berlin/E/04/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/04/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/04/Distance	A.TCTR.2
I2 sv	Berlin/E/04/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/04/Distance	B.TCTR.3
I3 sv	Berlin/E/04/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/04/Distance	C.TCTR.7
I Neut sv	Berlin/E/04/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/04/Distance	N.TCTR.8

Table 17. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/04/Overcurrent
- SampledMeasurements.Current:hlx\_Berlin/E/04/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/04/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/04/Overcurrent	A.TCTR.5
I2 sv	Berlin/E/04/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/04/Overcurrent	B.TCTR.1
I3 sv	Berlin/E/04/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/04/Overcurrent	C.TCTR.4
I Neut sv	Berlin/E/04/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/04/Overcurrent	N.TCTR.6

Table 18. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.Voltage:hlx\_Berlin/E/04/VT/Voltage Samples
- SampledMeasurements.VoltageSubscriber:hlx\_Berlin/E/04/Measurement

Signal Name	Sending function	Data	Receiving function	Receiving logical node
U1 sv	Berlin/E/04/VT	ATVTR1.VolSv.instMag.i[MX]	Berlin/E/04/Measurement	A.TVTR.2
U2 sv	Berlin/E/04/VT	BTVTR2.VolSv.instMag.i[MX]	Berlin/E/04/Measurement	B.TVTR.12
U3 sv	Berlin/E/04/VT	CTVTR3.VolSv.instMag.i[MX]	Berlin/E/04/Measurement	C.TVTR.14

Signal Name	Sending function	Data	Receiving function	Receiving logical node
U Neut sv	Berlin/E/04/VT	NTVTR4.VolSv.instMag.i[MX]	Berlin/E/04/Measurement	N.TVTR.3

Table 19. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.Voltage:hlx\_Berlin/E/04/VT/Voltage Samples
- SampledMeasurements.VoltageSubscriber:hlx\_Berlin/E/04/Distance

Signal Name	Sending function	Data	Receiving function	Receiving logical node
U1 sv	Berlin/E/04/VT	ATVTR1.VolSv.instMag.i[MX]	Berlin/E/04/Distance	A.TVTR.7
U2 sv	Berlin/E/04/VT	BTVTR2.VolSv.instMag.i[MX]	Berlin/E/04/Distance	B.TVTR.8
U3 sv	Berlin/E/04/VT	CTVTR3.VolSv.instMag.i[MX]	Berlin/E/04/Distance	C.TVTR.4
U Neut sv	Berlin/E/04/VT	NTVTR4.VolSv.instMag.i[MX]	Berlin/E/04/Distance	N.TVTR.1

Table 20. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.Voltage:hlx\_Berlin/E/05/VT/Voltage Samples
- SampledMeasurements.VoltageSubscriber:hlx\_Berlin/E/05/Measurement

Signal Name	Sending function	Data	Receiving function	Receiving logical node
U1 sv	Berlin/E/05/VT	ATVTR1.VolSv.instMag.i[MX]	Berlin/E/05/Measurement	A.TVTR.2
U2 sv	Berlin/E/05/VT	BTVTR2.VolSv.instMag.i[MX]	Berlin/E/05/Measurement	B.TVTR.12
U3 sv	Berlin/E/05/VT	CTVTR3.VolSv.instMag.i[MX]	Berlin/E/05/Measurement	C.TVTR.14
U Neut sv	Berlin/E/05/VT	NTVTR4.VolSv.instMag.i[MX]	Berlin/E/05/Measurement	N.TVTR.3

Table 21. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/05/Measurement
- SampledMeasurements.Current:hlx\_Berlin/E/05/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/05/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/05/Measurement	A.TCTR.5
I2 sv	Berlin/E/05/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/05/Measurement	B.TCTR.1
I3 sv	Berlin/E/05/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/05/Measurement	C.TCTR.4
I Neut sv	Berlin/E/05/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/05/Measurement	N.TCTR.6

Table 22. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/05/Differential
- SampledMeasurements.Current:hlx\_Berlin/E/05/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/05/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/05/Differential	A.TCTR.2
I2 sv	Berlin/E/05/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/05/Differential	B.TCTR.3
I3 sv	Berlin/E/05/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/05/Differential	C.TCTR.1

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I Neut sv	Berlin/E/05/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/05/Differential	N.TCTR.4

Table 23. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/05/Overcurrent
- SampledMeasurements.Current:hlx\_Berlin/E/05/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/05/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/05/Overcurrent	A.TCTR.5
I2 sv	Berlin/E/05/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/05/Overcurrent	B.TCTR.1
I3 sv	Berlin/E/05/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/05/Overcurrent	C.TCTR.4
I Neut sv	Berlin/E/05/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/05/Overcurrent	N.TCTR.6

Table 24. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/06/Measurement
- SampledMeasurements.Current:hlx\_Berlin/E/06/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/06/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/06/Measurement	A.TCTR.5
I2 sv	Berlin/E/06/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/06/Measurement	B.TCTR.1
I3 sv	Berlin/E/06/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/06/Measurement	C.TCTR.4
I Neut sv	Berlin/E/06/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/06/Measurement	N.TCTR.6

Table 25. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/06/Distance
- SampledMeasurements.Current:hlx\_Berlin/E/06/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/06/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/06/Distance	A.TCTR.2
I2 sv	Berlin/E/06/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/06/Distance	B.TCTR.3
I3 sv	Berlin/E/06/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/06/Distance	C.TCTR.7
I Neut sv	Berlin/E/06/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/06/Distance	N.TCTR.8

Table 26. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.CurrentSubscriber:hlx\_Berlin/E/06/Overcurrent
- SampledMeasurements.Current:hlx\_Berlin/E/06/CT/Current Samples

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I1 sv	Berlin/E/06/CT	ATCTR1.AmpSv.instMag.i[MX]	Berlin/E/06/Overcurrent	A.TCTR.5
I2 sv	Berlin/E/06/CT	BTCTR2.AmpSv.instMag.f[MX]	Berlin/E/06/Overcurrent	B.TCTR.1
I3 sv	Berlin/E/06/CT	CTCTR3.AmpSv.instMag.i[MX]	Berlin/E/06/Overcurrent	C.TCTR.4

Signal Name	Sending function	Data	Receiving function	Receiving logical node
I Neut sv	Berlin/E/06/CT	NTCTR4.AmpSv.instMag.i[MX]	Berlin/E/06/Overcurrent	N.TCTR.6

Table 27. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.Voltage:hlx\_Berlin/E/06/VT/Voltage Samples
- SampledMeasurements.VoltageSubscriber:hlx\_Berlin/E/06/Measurement

Signal Name	Sending function	Data	Receiving function	Receiving logical node
U1 sv	Berlin/E/06/VT	ATVTR1.VolSv.instMag.i[MX]	Berlin/E/06/Measurement	A.TVTR.2
U2 sv	Berlin/E/06/VT	BTVTR2.VolSv.instMag.i[MX]	Berlin/E/06/Measurement	B.TVTR.12
U3 sv	Berlin/E/06/VT	CTVTR3.VolSv.instMag.i[MX]	Berlin/E/06/Measurement	C.TVTR.14
U Neut sv	Berlin/E/06/VT	NTVTR4.VolSv.instMag.i[MX]	Berlin/E/06/Measurement	N.TVTR.3

Table 28. SMV Message :SMV Configuration

### Instance details

- SampledMeasurements.Voltage:hlx\_Berlin/E/06/VT/Voltage Samples
- SampledMeasurements.VoltageSubscriber:hlx\_Berlin/E/06/Distance

Signal Name	Sending function	Data	Receiving function	Receiving logical node
U1 sv	Berlin/E/06/VT	ATVTR1.VolSv.instMag.i[MX]	Berlin/E/06/Distance	A.TVTR.7
U2 sv	Berlin/E/06/VT	BTVTR2.VolSv.instMag.i[MX]	Berlin/E/06/Distance	B.TVTR.8
U3 sv	Berlin/E/06/VT	CTVTR3.VolSv.instMag.i[MX]	Berlin/E/06/Distance	C.TVTR.4
U Neut sv	Berlin/E/06/VT	NTVTR4.VolSv.instMag.i[MX]	Berlin/E/06/Distance	N.TVTR.1

Table 29. SMV Message :SMV Configuration

### Instance details

- SwitchControl.Control:hlx\_Berlin/E/01/QB1/Control
- SwitchControl.Interface:hlx\_Berlin/E/01/QB1/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Switch Position	Berlin/E/01/QB1	QB1XSWI1.Pos.stVal[ST]	Berlin/E/01/QB1/Control	QB1.CSW1.1
Operate Open	Berlin/E/01/QB1	QB1CSWI1.OpOpn.general[ST]	Berlin/E/01/QB1/Interface	QB1.XSWI.1
Operate Close	Berlin/E/01/QB1	QB1CSWI1.OpCls.general[ST]	Berlin/E/01/QB1/Interface	QB1.XSWI.1

Table 30. GOOSE Message :Slow GOOSE Priority: Low

### Instance details

- SwitchControl.Control:hlx\_Berlin/E/02/QB1/Control
- SwitchControl.Interface:hlx\_Berlin/E/02/QB1/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Switch Position	Berlin/E/02/QB1	QB1XSWI1.Pos.stVal[ST]	Berlin/E/02/QB1/Control	QB1.CSW1.1
Operate Open	Berlin/E/02/QB1	QB1CSWI1.OpOpn.general[ST]	Berlin/E/02/QB1/Interface	QB1.XSWI.1
Operate Close	Berlin/E/02/QB1	QB1CSWI1.OpCls.general[ST]	Berlin/E/02/QB1/Interface	QB1.XSWI.1

Table 31. GOOSE Message :Slow GOOSE Priority: Low

### Instance details

- SwitchControl.Control:hlx\_Berlin/E/03/QB1/Control

- SwitchControl.Interface:hlx\_Berlin/E/03/QB1/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Switch Position	Berlin/E/03/QB1	QB1XSWI1.Pos.stVal[ST]	Berlin/E/03/QB1/Control	QB1.CSWI.1
Operate Open	Berlin/E/03/QB1	QB1CSWI1.OpOpn.general[ST]	Berlin/E/03/QB1/Interface	QB1.XSWI.1
Operate Close	Berlin/E/03/QB1	QB1CSWI1.OpCls.general[ST]	Berlin/E/03/QB1/Interface	QB1.XSWI.1

Table 32. GOOSE Message :Slow GOOSE Priority: Low

### Instance details

- SwitchControl.Control:hlx\_Berlin/E/04/QB1/Control
- SwitchControl.Interface:hlx\_Berlin/E/04/QB1/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Switch Position	Berlin/E/04/QB1	QB1XSWI1.Pos.stVal[ST]	Berlin/E/04/QB1/Control	QB1.CSWI.1
Operate Open	Berlin/E/04/QB1	QB1CSWI1.OpOpn.general[ST]	Berlin/E/04/QB1/Interface	QB1.XSWI.1
Operate Close	Berlin/E/04/QB1	QB1CSWI1.OpCls.general[ST]	Berlin/E/04/QB1/Interface	QB1.XSWI.1

Table 33. GOOSE Message :Slow GOOSE Priority: Low

### Instance details

- SwitchControl.Control:hlx\_Berlin/E/05/QB1/Control
- SwitchControl.Interface:hlx\_Berlin/E/05/QB1/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Switch Position	Berlin/E/05/QB1	QB1XSWI1.Pos.stVal[ST]	Berlin/E/05/QB1/Control	QB1.CSWI.1
Operate Open	Berlin/E/05/QB1	QB1CSWI1.OpOpn.general[ST]	Berlin/E/05/QB1/Interface	QB1.XSWI.1
Operate Close	Berlin/E/05/QB1	QB1CSWI1.OpCls.general[ST]	Berlin/E/05/QB1/Interface	QB1.XSWI.1

Table 34. GOOSE Message :Slow GOOSE Priority: Low

### Instance details

- SwitchControl.Control:hlx\_Berlin/E/06/QB1/Control
- SwitchControl.Interface:hlx\_Berlin/E/06/QB1/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Switch Position	Berlin/E/06/QB1	QB1XSWI1.Pos.stVal[ST]	Berlin/E/06/QB1/Control	QB1.CSWI.1
Operate Open	Berlin/E/06/QB1	QB1CSWI1.OpOpn.general[ST]	Berlin/E/06/QB1/Interface	QB1.XSWI.1
Operate Close	Berlin/E/06/QB1	QB1CSWI1.OpCls.general[ST]	Berlin/E/06/QB1/Interface	QB1.XSWI.1

Table 35. GOOSE Message :Slow GOOSE Priority: Low

### Instance details

- BreakerControl.Control:hlx\_Berlin/E/01/QA0/Control
- BreakerControl.Interface:hlx\_Berlin/E/01/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Switch Position	Berlin/E/01/QA0	QA0XCBR1.Pos.stVal[ST]	Berlin/E/01/QA0/Control	QA0.CSWI.2
Operate Open	Berlin/E/01/QA0	QA0CSWI2.OpOpn.general[ST]	Berlin/E/01/QA0/Interface	QA0.XCBR.1
Operate Close	Berlin/E/01/QA0	QA0CSWI2.OpCls.general[ST]	Berlin/E/01/QA0/Interface	QA0.XCBR.1

Table 36. GOOSE Message :Slow GOOSE Priority: Low

### Instance details

- BreakerControl.Control:hlx\_Berlin/E/02/QA0/Control
- BreakerControl.Interface:hlx\_Berlin/E/02/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Switch Position	Berlin/E/02/QA0	QA0XCBR1.Pos.stVal[ST]	Berlin/E/02/QA0/Control	QA0.CSWI.2
Operate Open	Berlin/E/02/QA0	QA0CSWI2.OpOpn.general[ST]	Berlin/E/02/QA0/Interface	QA0.XCBR.1
Operate Close	Berlin/E/02/QA0	QA0CSWI2.OpCls.general[ST]	Berlin/E/02/QA0/Interface	QA0.XCBR.1

Table 37. GOOSE Message :Slow GOOSE Priority: Low

**Instance details**

- BreakerControl.Control:hlx\_Berlin/E/03/QA0/Control
- BreakerControl.Interface:hlx\_Berlin/E/03/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Switch Position	Berlin/E/03/QA0	QA0XCBR1.Pos.stVal[ST]	Berlin/E/03/QA0/Control	QA0.CSWI.2
Operate Open	Berlin/E/03/QA0	QA0CSWI2.OpOpn.general[ST]	Berlin/E/03/QA0/Interface	QA0.XCBR.1
Operate Close	Berlin/E/03/QA0	QA0CSWI2.OpCls.general[ST]	Berlin/E/03/QA0/Interface	QA0.XCBR.1

Table 38. GOOSE Message :Slow GOOSE Priority: Low

**Instance details**

- BreakerControl.Control:hlx\_Berlin/E/04/QA0/Control
- BreakerControl.Interface:hlx\_Berlin/E/04/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Switch Position	Berlin/E/04/QA0	QA0XCBR1.Pos.stVal[ST]	Berlin/E/04/QA0/Control	QA0.CSWI.2
Operate Open	Berlin/E/04/QA0	QA0CSWI2.OpOpn.general[ST]	Berlin/E/04/QA0/Interface	QA0.XCBR.1
Operate Close	Berlin/E/04/QA0	QA0CSWI2.OpCls.general[ST]	Berlin/E/04/QA0/Interface	QA0.XCBR.1

Table 39. GOOSE Message :Slow GOOSE Priority: Low

**Instance details**

- BreakerControl.Control:hlx\_Berlin/E/05/QA0/Control
- BreakerControl.Interface:hlx\_Berlin/E/05/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Switch Position	Berlin/E/05/QA0	QA0XCBR1.Pos.stVal[ST]	Berlin/E/05/QA0/Control	QA0.CSWI.2
Operate Open	Berlin/E/05/QA0	QA0CSWI2.OpOpn.general[ST]	Berlin/E/05/QA0/Interface	QA0.XCBR.1
Operate Close	Berlin/E/05/QA0	QA0CSWI2.OpCls.general[ST]	Berlin/E/05/QA0/Interface	QA0.XCBR.1

Table 40. GOOSE Message :Slow GOOSE Priority: Low

**Instance details**

- BreakerControl.Control:hlx\_Berlin/E/06/QA0/Control
- BreakerControl.Interface:hlx\_Berlin/E/06/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Switch Position	Berlin/E/06/QA0	QA0XCBR1.Pos.stVal[ST]	Berlin/E/06/QA0/Control	QA0.CSWI.2
Operate Open	Berlin/E/06/QA0	QA0CSWI2.OpOpn.general[ST]	Berlin/E/06/QA0/Interface	QA0.XCBR.1
Operate Close	Berlin/E/06/QA0	QA0CSWI2.OpCls.general[ST]	Berlin/E/06/QA0/Interface	QA0.XCBR.1

Table 41. GOOSE Message :Slow GOOSE Priority: Low

**Instance details**

- Trip.Trip:hlx\_Berlin/E/01/Trip
- Trip.Protection:hlx\_Berlin/E/01/Distance

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
DIS Operate	Berlin/E/01	DISPTRC1.Op.general[ST]	Berlin/E/01/Trip	Trip.PTRC.1

Table 42. GOOSE Message :Fast GOOSE Priority: High

**Instance details**

- Trip.Trip:hlx\_Berlin/E/01/Trip
- Trip.Protection:hlx\_Berlin/E/01/Overcurrent

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
OC Operate	Berlin/E/01	PHPTOC1.Op.general[ST]	Berlin/E/01/Trip	Trip.PTRC.1

Table 43. GOOSE Message :Fast GOOSE Priority: High

**Instance details**

- Trip.Trip:hlx\_Berlin/E/02/Trip
- Trip.Protection:hlx\_Berlin/E/02/Differential

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Diff Operate	Berlin/E/02	PDIF1.Op.general[ST]	Berlin/E/02/Trip	Trip.PTRC.1

Table 44. GOOSE Message :Fast GOOSE Priority: High

**Instance details**

- Trip.Trip:hlx\_Berlin/E/02/Trip
- Trip.Protection:hlx\_Berlin/E/02/Overcurrent

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
OC Operate	Berlin/E/02	PHPTOC1.Op.general[ST]	Berlin/E/02/Trip	Trip.PTRC.1

Table 45. GOOSE Message :Fast GOOSE Priority: High

**Instance details**

- Trip.Trip:hlx\_Berlin/E/03/Trip
- Trip.Protection:hlx\_Berlin/E/03/Distance

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
DIS Operate	Berlin/E/03	DISPTRC1.Op.general[ST]	Berlin/E/03/Trip	Trip.PTRC.1

Table 46. GOOSE Message :Fast GOOSE Priority: High

**Instance details**

- Trip.Trip:hlx\_Berlin/E/03/Trip
- Trip.Protection:hlx\_Berlin/E/03/Overcurrent

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
OC Operate	Berlin/E/03	PHPTOC1.Op.general[ST]	Berlin/E/03/Trip	Trip.PTRC.1

Table 47. GOOSE Message :Fast GOOSE Priority: High

**Instance details**

- Trip.Trip:hlx\_Berlin/E/04/Trip
- Trip.Protection:hlx\_Berlin/E/04/Distance

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
DIS Operate	Berlin/E/04	DISPTRC1.Op.general[ST]	Berlin/E/04/Trip	Trip.PTRC.1

Table 48. GOOSE Message :Fast GOOSE Priority: High

**Instance details**

- Trip.Trip:hlx\_Berlin/E/04/Trip



- Trip.Protection:hlx\_Berlin/E/04/Overcurrent

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
OC Operate	Berlin/E/04	PHPTOC1.Op.general[ST]	Berlin/E/04/Trip	Trip.PTRC.1

Table 49. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- Trip.Trip:hlx\_Berlin/E/05/Trip
- Trip.Protection:hlx\_Berlin/E/05/Differential

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Diff Operate	Berlin/E/05	PDIF1.Op.general[ST]	Berlin/E/05/Trip	Trip.PTRC.1

Table 50. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- Trip.Trip:hlx\_Berlin/E/05/Trip
- Trip.Protection:hlx\_Berlin/E/05/Overcurrent

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
OC Operate	Berlin/E/05	PHPTOC1.Op.general[ST]	Berlin/E/05/Trip	Trip.PTRC.1

Table 51. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- Trip.Trip:hlx\_Berlin/E/06/Trip
- Trip.Protection:hlx\_Berlin/E/06/Distance

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
DIS Operate	Berlin/E/06	DISPTRC1.Op.general[ST]	Berlin/E/06/Trip	Trip.PTRC.1

Table 52. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- Trip.Trip:hlx\_Berlin/E/06/Trip
- Trip.Protection:hlx\_Berlin/E/06/Overcurrent

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
OC Operate	Berlin/E/06	PHPTOC1.Op.general[ST]	Berlin/E/06/Trip	Trip.PTRC.1

Table 53. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureLine.BreakerFailure:hlx\_Berlin/E/01/BreakerFailure
- BreakerFailureLine.BreakerFailureInit:hlx\_Berlin/E/01/Trip

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Trip	Berlin/E/01	TripPTRC1.Tr.general[ST]	Berlin/E/01/BreakerFailure	RBRF.1

Table 54. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureLine.BreakerFailure:hlx\_Berlin/E/01/BreakerFailure
- BreakerFailureLine.CBRInternTrip:hlx\_Berlin/E/01/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate Internal	Berlin/E/01	RBRF1.OpIn.general[ST]	Berlin/E/01/QA0/Interface	QA0.XCBR.1

Table 55. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureLine.BreakerFailure:hlx\_Berlin/E/01/BreakerFailure
- BreakerFailureLine.CBRExternTrip:hlx\_Berlin/E/02/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/01	RBRF1.OpEx.general[ST]	Berlin/E/02/QA0/Interface	QA0.XCBR.1

Table 56. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureLine.BreakerFailure:hlx\_Berlin/E/03/BreakerFailure
- BreakerFailureLine.CBRExternTrip:hlx\_Berlin/E/02/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/03	RBRF1.OpEx.general[ST]	Berlin/E/02/QA0/Interface	QA0.XCBR.1

Table 57. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureLine.BreakerFailure:hlx\_Berlin/E/03/BreakerFailure
- BreakerFailureLine.BreakerFailureInit:hlx\_Berlin/E/03/Trip

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Trip	Berlin/E/03	TripPTRC1.Tr.general[ST]	Berlin/E/03/BreakerFailure	RBRF.1

Table 58. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureLine.BreakerFailure:hlx\_Berlin/E/03/BreakerFailure
- BreakerFailureLine.CBRInternTrip:hlx\_Berlin/E/03/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate Internal	Berlin/E/03	RBRF1.OpIn.general[ST]	Berlin/E/03/QA0/Interface	QA0.XCBR.1

Table 59. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureLine.BreakerFailure:hlx\_Berlin/E/04/BreakerFailure
- BreakerFailureLine.CBRExternTrip:hlx\_Berlin/E/02/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/04	RBRF1.OpEx.general[ST]	Berlin/E/02/QA0/Interface	QA0.XCBR.1

Table 60. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureLine.BreakerFailure:hlx\_Berlin/E/04/BreakerFailure
- BreakerFailureLine.BreakerFailureInit:hlx\_Berlin/E/04/Trip

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Trip	Berlin/E/04	TripPTRC1.Tr.general[ST]	Berlin/E/04/BreakerFailure	RBRF.1

Table 61. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureLine.BreakerFailure:hlx\_Berlin/E/04/BreakerFailure
- BreakerFailureLine.CBRInternTrip:hlx\_Berlin/E/04/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate Internal	Berlin/E/04	RBRF1.OpIn.general[ST]	Berlin/E/04/QA0/Interface	QA0.XCBR.1

Table 62. GOOSE Message :Fast GOOSE Priority: High

**Instance details**

- BreakerFailureLine.BreakerFailure:hlx\_Berlin/E/01/BreakerFailure
- BreakerFailureLine.CBREExternTrip:hlx\_Berlin/E/05/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/01	RBRF1.OpEx.general[ST]	Berlin/E/05/QA0/Interface	QA0.XCBR.1

Table 63. GOOSE Message :Fast GOOSE Priority: High

**Instance details**

- BreakerFailureLine.BreakerFailure:hlx\_Berlin/E/03/BreakerFailure
- BreakerFailureLine.CBREExternTrip:hlx\_Berlin/E/05/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/03	RBRF1.OpEx.general[ST]	Berlin/E/05/QA0/Interface	QA0.XCBR.1

Table 64. GOOSE Message :Fast GOOSE Priority: High

**Instance details**

- BreakerFailureLine.BreakerFailure:hlx\_Berlin/E/04/BreakerFailure
- BreakerFailureLine.CBREExternTrip:hlx\_Berlin/E/05/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/04	RBRF1.OpEx.general[ST]	Berlin/E/05/QA0/Interface	QA0.XCBR.1

Table 65. GOOSE Message :Fast GOOSE Priority: High

**Instance details**

- BreakerFailureLine.BreakerFailure:hlx\_Berlin/E/06/BreakerFailure
- BreakerFailureLine.CBREExternTrip:hlx\_Berlin/E/02/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/06	RBRF1.OpEx.general[ST]	Berlin/E/02/QA0/Interface	QA0.XCBR.1

Table 66. GOOSE Message :Fast GOOSE Priority: High

**Instance details**

- BreakerFailureLine.BreakerFailure:hlx\_Berlin/E/06/BreakerFailure
- BreakerFailureLine.CBREExternTrip:hlx\_Berlin/E/05/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/06	RBRF1.OpEx.general[ST]	Berlin/E/05/QA0/Interface	QA0.XCBR.1

Table 67. GOOSE Message :Fast GOOSE Priority: High

**Instance details**

- BreakerFailureLine.BreakerFailure:hlx\_Berlin/E/06/BreakerFailure
- BreakerFailureLine.BreakerFailureInit:hlx\_Berlin/E/06/Trip

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Trip	Berlin/E/06	TripPTRC1.Tr.general[ST]	Berlin/E/06/BreakerFailure	RBRF.1

Table 68. GOOSE Message :Fast GOOSE Priority: High

**Instance details**

- BreakerFailureLine.BreakerFailure:hlx\_Berlin/E/06/BreakerFailure

- BreakerFailureLine.CBRInternTrip:hlx\_Berlin/E/06/QA0/Interface

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate Internal	Berlin/E/06	RBRF1.OpIn.general[ST]	Berlin/E/06/QA0/Interface	QA0.XCBR.1

Table 69. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureTransformer.CBRExtern:hlx\_Berlin/E/01/QA0/Interface
- BreakerFailureTransformer.TransformerBreakerFailure:hlx\_Berlin/E/02/BreakerFailure

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/02	RBRF1.OpEx.general[ST]	Berlin/E/01/QA0/Interface	QA0.XCBR.1

Table 70. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureTransformer.TransformerBreakerFailure:hlx\_Berlin/E/02/BreakerFailure
- BreakerFailureTransformer.Init:hlx\_Berlin/E/02/Trip

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Trip	Berlin/E/02	TripPTRC1.Tr.general[ST]	Berlin/E/02/BreakerFailure	RBRF.1

Table 71. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureTransformer.CBRIntern:hlx\_Berlin/E/02/QA0/Interface
- BreakerFailureTransformer.TransformerBreakerFailure:hlx\_Berlin/E/02/BreakerFailure

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate Internal	Berlin/E/02	RBRF1.OpIn.general[ST]	Berlin/E/02/QA0/Interface	QA0.XCBR.1

Table 72. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureTransformer.CBRExtern:hlx\_Berlin/E/03/QA0/Interface
- BreakerFailureTransformer.TransformerBreakerFailure:hlx\_Berlin/E/02/BreakerFailure

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/02	RBRF1.OpEx.general[ST]	Berlin/E/03/QA0/Interface	QA0.XCBR.1

Table 73. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureTransformer.CBRExtern:hlx\_Berlin/E/04/QA0/Interface
- BreakerFailureTransformer.TransformerBreakerFailure:hlx\_Berlin/E/02/BreakerFailure

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/02	RBRF1.OpEx.general[ST]	Berlin/E/04/QA0/Interface	QA0.XCBR.1

Table 74. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureTransformer.CBRExtern:hlx\_Berlin/E/01/QA0/Interface
- BreakerFailureTransformer.TransformerBreakerFailure:hlx\_Berlin/E/05/BreakerFailure

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/05	RBRF1.OpEx.general[ST]	Berlin/E/01/QA0/Interface	QA0.XCBR.1

Table 75. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureTransformer.CBRExtern:hlx\_Berlin/E/02/QA0/Interface
- BreakerFailureTransformer.TransformerBreakerFailure:hlx\_Berlin/E/05/BreakerFailure

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/05	RBRF1.OpEx.general[ST]	Berlin/E/02/QA0/Interface	QA0.XCBR.1

Table 76. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureTransformer.CBRExtern:hlx\_Berlin/E/03/QA0/Interface
- BreakerFailureTransformer.TransformerBreakerFailure:hlx\_Berlin/E/05/BreakerFailure

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/05	RBRF1.OpEx.general[ST]	Berlin/E/03/QA0/Interface	QA0.XCBR.1

Table 77. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureTransformer.CBRExtern:hlx\_Berlin/E/04/QA0/Interface
- BreakerFailureTransformer.TransformerBreakerFailure:hlx\_Berlin/E/05/BreakerFailure

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/05	RBRF1.OpEx.general[ST]	Berlin/E/04/QA0/Interface	QA0.XCBR.1

Table 78. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureTransformer.TransformerBreakerFailure:hlx\_Berlin/E/05/BreakerFailure
- BreakerFailureTransformer.Init:hlx\_Berlin/E/05/Trip

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Trip	Berlin/E/05	TripPTRC1.Tr.general[ST]	Berlin/E/05/BreakerFailure	RBRF.1

Table 79. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureTransformer.CBRExtern:hlx\_Berlin/E/05/QA0/Interface
- BreakerFailureTransformer.TransformerBreakerFailure:hlx\_Berlin/E/02/BreakerFailure

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/02	RBRF1.OpEx.general[ST]	Berlin/E/05/QA0/Interface	QA0.XCBR.1

Table 80. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureTransformer.CBRIntern:hlx\_Berlin/E/05/QA0/Interface
- BreakerFailureTransformer.TransformerBreakerFailure:hlx\_Berlin/E/05/BreakerFailure

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate Internal	Berlin/E/05	RBRF1.OpIn.general[ST]	Berlin/E/05/QA0/Interface	QA0.XCBR.1

Table 81. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureTransformer.CBRExtern:hlx\_Berlin/E/06/QA0/Interface
- BreakerFailureTransformer.TransformerBreakerFailure:hlx\_Berlin/E/02/BreakerFailure

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/02	RBRF1.OpEx.general[ST]	Berlin/E/06/QA0/Interface	QA0.XCBR.1

Table 82. GOOSE Message :Fast GOOSE Priority: High

### Instance details

- BreakerFailureTransformer.CBRExtern:hlx\_Berlin/E/06/QA0/Interface
- BreakerFailureTransformer.TransformerBreakerFailure:hlx\_Berlin/E/05/BreakerFailure

Signal Name	Sending Function	Data	Receiving Function	Receiving Lnode
Operate External	Berlin/E/05	RBRF1.OpEx.general[ST]	Berlin/E/06/QA0/Interface	QA0.XCBR.1

Table 83. GOOSE Message :Fast GOOSE Priority: High

## 3.3. Voltage Level Berlin/E

110kV

Voltage Level description is missing.

Bay Name	Description	IEDs
BB	Busbar-	-
LineFeeder	-	-
01	-	BCU: E01BCU 6MD86, BPU: E01BPU RED615, BUP: E01BUP P545, PIU: E01PIU SAM60
02	-	BCU: E02BCU C60, BPU: E02BPU 7UT85, BUP: E02BUP 7SJ85, PIU: E02PIU 6MU8
03	-	BCU: E03BCU 6MD86, BPU: E03BPU RED615, BUP: E03BUP P545, PIU: E03PIU SAM60
04	-	BCU: E04BCU 6MD86, BPU: E04BPU RED615, BUP: E04BUP P545, PIU: E04PIU SAM60
05	-	BCU: E05BCU C60, BPU: E05BPU 7UT85, BUP: E05BUP 7SJ85, PIU: E05PIU 6MU8
06	-	BCU: E06BCU 6MD86, BPU: E06BPU RED615, BUP: E06BUP P545, PIU: E06PIU SAM60

### 3.3.1. Bus Bar Berlin/E/BB

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

### 3.3.2. Bay Berlin/E/01

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

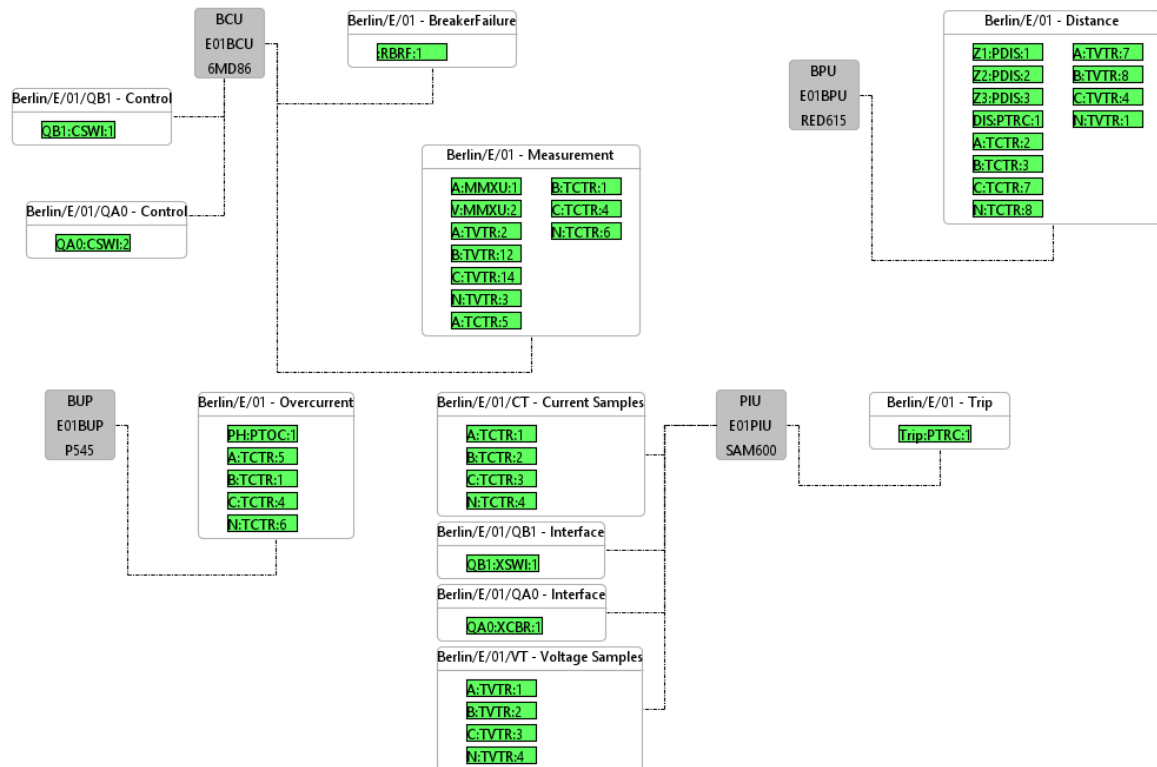


Figure 2. Bay Function Diagram of bay: 01

Role	Name	Type	Description
BCU	E01BCU	6MD86	-

Table 84. Specification for BCU

Role	Name	Type	Description
BPU	E01BPU	RED615	-

Table 85. Specification for BPU

Role	Name	Type	Description
BUP	E01BUP	P545	-

Table 86. Specification for BUP

Role	Name	Type	Description
PIU	E01PIU	SAM600	-

Table 87. Specification for PIU

Function	Process Name	Functional Name	Logical Device	Description
Measu remen t	I1	Berlin/E/01/ AMMXU1.A.phsA.cVal.mag.f[MX]	E01BCUMeasurement/ A.MMXU.1	No Link
Measu remen t	I2	Berlin/E/01/ AMMXU1.A.phsB.cVal.mag.f[MX]	E01BCUMeasurement/ A.MMXU.1	No Link
Measu remen t	I3	Berlin/E/01/ AMMXU1.A.phsC.cVal.mag.f[MX]	E01BCUMeasurement/ A.MMXU.1	No Link
Measu remen t	I Neut	Berlin/E/01/ AMMXU1.A.neut.cVal.mag.f[MX]	E01BCUMeasurement/ A.MMXU.1	No Link
Measu remen t	U1	Berlin/E/01/ VMMXU2.PhV.phsA.cVal.mag.f[MX]	E01BCUMeasurement/ V.MMXU.2	No Link

Function	Process Name	Functional Name	Logical Device	Description
Measurement	U2	Berlin/E/01/ VMMXU2.PhV.phsB.cVal.mag.f[MX]	E01BCUMeasurement/ V.MMXU.2	No Link
Measurement	U3	Berlin/E/01/ VMMXU2.PhV.phsC.cVal.mag.f[MX]	E01BCUMeasurement/ V.MMXU.2	No Link
Measurement	U Neut	Berlin/E/01/ VMMXU2.PhV.net.cVal.mag.f[MX]	E01BCUMeasurement/ V.MMXU.2	No Link
Measurement	U1 sv	Berlin/E/01/ ATVTR2.VolSv.instMag.i[MX]	E01BCUMeasurement/ A.TVTR.2	No Link
Measurement	U2 sv	Berlin/E/01/ BTVTR12.VolSv.instMag.i[MX]	E01BCUMeasurement/ B.TVTR.12	No Link
Measurement	U3 sv	Berlin/E/01/ CTVTR14.VolSv.instMag.i[MX]	E01BCUMeasurement/ C.TVTR.14	No Link
Measurement	U Neut sv	Berlin/E/01/ NTVTR3.VolSv.instMag.i[MX]	E01BCUMeasurement/ N.TVTR.3	No Link
Measurement	I1 sv	Berlin/E/01/ ATCTR5.AmpSv.instMag.i[MX]	E01BCUMeasurement/ A.TCTR.5	No Link
Measurement	I2 sv	Berlin/E/01/ BTCTR1.AmpSv.instMag.f[MX]	E01BCUMeasurement/ B.TCTR.1	No Link
Measurement	I3 sv	Berlin/E/01/ CTCTR4.AmpSv.instMag.i[MX]	E01BCUMeasurement/ C.TCTR.4	No Link
Measurement	I Neut sv	Berlin/E/01/ NTCTR6.AmpSv.instMag.i[MX]	E01BCUMeasurement/ N.TCTR.6	No Link
Distance	Start Z1	Berlin/E/01/Z1PDIS1.Str.general[ST]	E01BPULD0/Z1.PDIS.1	No Link
Distance	Operate Z1	Berlin/E/01/Z1PDIS1.Op.general[ST]	E01BPULD0/Z1.PDIS.1	No Link
Distance	Start Z2	Berlin/E/01/Z2PDIS2.Str.general[ST]	E01BPULD0/Z2.PDIS.2	No Link
Distance	Operate Z2	Berlin/E/01/Z2PDIS2.Op.general[ST]	E01BPULD0/Z2.PDIS.2	No Link
Distance	Start Z3	Berlin/E/01/Z3PDIS3.Str.general[ST]	E01BPULD0/Z3.PDIS.3	No Link
Distance	Operate Z3	Berlin/E/01/Z3PDIS3.Op.general[ST]	E01BPULD0/Z3.PDIS.3	No Link
Distance	DIS Operate	Berlin/E/01/DISPTRC1.Op.general[ST]	E01BPULD0/DIS.PTRC.1	No Link
Distance	I1 sv	Berlin/E/01/ ATCTR2.AmpSv.instMag.i[MX]	E01BPULD0/A.TCTR.2	No Link
Distance	I2 sv	Berlin/E/01/ BTCTR3.AmpSv.instMag.f[MX]	E01BPULD0/B.TCTR.3	No Link
Distance	I3 sv	Berlin/E/01/ CTCTR7.AmpSv.instMag.i[MX]	E01BPULD0/C.TCTR.7	No Link
Distance	I Neut sv	Berlin/E/01/ NTCTR8.AmpSv.instMag.i[MX]	E01BPULD0/N.TCTR.8	No Link
Distance	U1 sv	Berlin/E/01/ ATVTR7.VolSv.instMag.i[MX]	E01BPULD0/A.TVTR.7	No Link
Distance	U2 sv	Berlin/E/01/ BTVTR8.VolSv.instMag.i[MX]	E01BPULD0/B.TVTR.8	No Link
Distance	U3 sv	Berlin/E/01/ CTVTR4.VolSv.instMag.i[MX]	E01BPULD0/C.TVTR.4	No Link
Distance	U Neut sv	Berlin/E/01/ NTVTR1.VolSv.instMag.i[MX]	E01BPULD0/N.TVTR.1	No Link
Overcurrent	OC Start	Berlin/E/01/PHPTOC1.Str.general[ST]	E01BUPOvercurrent/ PH.PTOC.1	No Link



Function	Process Name	Functional Name	Logical Device	Description
Overcurrent	OC Operate	Berlin/E/01/PHPTOC1.Op.general[ST]	E01BUPOvercurrent/ PH.PTOC.1	No Link
Overcurrent	I1 sv	Berlin/E/01/ ATCTR5.AmpSv.instMag.i[MX]	E01BUPOvercurrent/A.TCTR.5	No Link
Overcurrent	I2 sv	Berlin/E/01/ BTCTR1.AmpSv.instMag.f[MX]	E01BUPOvercurrent/B.TCTR.1	No Link
Overcurrent	I3 sv	Berlin/E/01/ CTCTR4.AmpSv.instMag.i[MX]	E01BUPOvercurrent/C.TCTR.4	No Link
Overcurrent	I Neut sv	Berlin/E/01/ NTCTR6.AmpSv.instMag.i[MX]	E01BUPOvercurrent/N.TCTR.6	No Link
Trip	Trip	Berlin/E/01/TripPTRC1.Tr.general[ST]	E01PIULD0/Trip.PTRC.1	No Link
BreakerFailure	BF Start	Berlin/E/01/RBRF1.Str.general[ST]	E01BCUBreakerFailure1/ RBRF.1	No Link
BreakerFailure	Operate External	Berlin/E/01/RBRF1.OpEx.general[ST]	E01BCUBreakerFailure1/ RBRF.1	No Link
BreakerFailure	Operate Internal	Berlin/E/01/RBRF1.OpIn.general[ST]	E01BCUBreakerFailure1/ RBRF.1	No Link
Interface	Local Operation	Berlin/E/01/QB1/ QB1XSWI1.Loc.stVal[ST]	E01PIUQB1Interface/ QB1.XSWI.1	No Link
Interface	Switch Position	Berlin/E/01/QB1/ QB1XSWI1.Pos.stVal[ST]	E01PIUQB1Interface/ QB1.XSWI.1	No Link
Control	Switch Command	Berlin/E/01/QB1/ QB1CSWI1.Pos.Oper.ctlVal[CO]	E01BCUQB1Control/ QB1.CSWI.1	No Link
Control	Operate Open	Berlin/E/01/QB1/ QB1CSWI1.OpOpn.general[ST]	E01BCUQB1Control/ QB1.CSWI.1	No Link
Control	Operate Close	Berlin/E/01/QB1/ QB1CSWI1.OpCls.general[ST]	E01BCUQB1Control/ QB1.CSWI.1	No Link
Control	QB1 Position	Berlin/E/01/QB1/ QB1CSWI1.Pos.stVal[ST]	E01BCUQB1Control/ QB1.CSWI.1	No Link
Interface	Local Operation	Berlin/E/01/QA0/ QA0XCBR1.Loc.stVal[ST]	E01PIUQA0Interface/ QA0.XCBR.1	No Link
Interface	Switch Position	Berlin/E/01/QA0/ QA0XCBR1.Pos.stVal[ST]	E01PIUQA0Interface/ QA0.XCBR.1	No Link
Control	Switch Command	Berlin/E/01/QA0/ QA0CSWI2.Pos.Oper.ctlVal[CO]	E01BCUQA0Control/ QA0.CSWI.2	No Link
Control	Operate Open	Berlin/E/01/QA0/ QA0CSWI2.OpOpn.general[ST]	E01BCUQA0Control/ QA0.CSWI.2	No Link
Control	Operate Close	Berlin/E/01/QA0/ QA0CSWI2.OpCls.general[ST]	E01BCUQA0Control/ QA0.CSWI.2	No Link
Control	QA0 Position	Berlin/E/01/QA0/ QA0CSWI2.Pos.stVal[ST]	E01BCUQA0Control/ QA0.CSWI.2	No Link
L1	I1 sv	Berlin/E/01/CT/ ATCTR1.AmpSv.instMag.i[MX]	E01PIUCTCT/A.TCTR.1	No Link
L2	I2 sv	Berlin/E/01/CT/ BTCTR2.AmpSv.instMag.f[MX]	E01PIUCTCT/B.TCTR.2	No Link
L3	I3 sv	Berlin/E/01/CT/ CTCTR3.AmpSv.instMag.i[MX]	E01PIUCTCT/C.TCTR.3	No Link
Neut	I Neut sv	Berlin/E/01/CT/ NTCTR4.AmpSv.instMag.i[MX]	E01PIUCTCT/N.TCTR.4	No Link

Function	Process Name	Functional Name	Logical Device	Description
L1	U1 sv	Berlin/E/01/VT/ ATVTR1.VolSv.instMag.i[MX]	E01PIUVTVT/A.TVTR.1	No Link
L2	U2 sv	Berlin/E/01/VT/ BTVTR2.VolSv.instMag.i[MX]	E01PIUVTVT/B.TVTR.2	No Link
L3	U3 sv	Berlin/E/01/VT/ CTVTR3.VolSv.instMag.i[MX]	E01PIUVTVT/C.TVTR.3	No Link
Neut	U Neut sv	Berlin/E/01/VT/ NTVTR4.VolSv.instMag.i[MX]	E01PIUVTVT/N.TVTR.4	No Link

Table 88. Signals of 01

### 3.3.3. Bay Berlin/E/02

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

Role	Name	Type	Description
BCU	E02BCU	C60	-

Table 89. Specification for BCU

Role	Name	Type	Description
BPU	E02BPU	7UT85	-

Table 90. Specification for BPU

Role	Name	Type	Description
BUP	E02BUP	7SJ85	-

Table 91. Specification for BUP

Role	Name	Type	Description
PIU	E02PIU	6MU85	-

Table 92. Specification for PIU

Function	Process Name	Functional Name	Logical Device	Description
Measu remen t	I1	Berlin/E/02/ AMMXU1.A.phsA.cVal.mag.f[MX]	E02BCUMeasurement/ A.MMXU.1	No Link
Measu remen t	I2	Berlin/E/02/ AMMXU1.A.phsB.cVal.mag.f[MX]	E02BCUMeasurement/ A.MMXU.1	No Link
Measu remen t	I3	Berlin/E/02/ AMMXU1.A.phsC.cVal.mag.f[MX]	E02BCUMeasurement/ A.MMXU.1	No Link
Measu remen t	I Neut	Berlin/E/02/ AMMXU1.A.neut.cVal.mag.f[MX]	E02BCUMeasurement/ A.MMXU.1	No Link
Measu remen t	U1	Berlin/E/02/ VMMXU2.PhV.phsA.cVal.mag.f[MX]	E02BCUMeasurement/ V.MMXU.2	No Link
Measu remen t	U2	Berlin/E/02/ VMMXU2.PhV.phsB.cVal.mag.f[MX]	E02BCUMeasurement/ V.MMXU.2	No Link
Measu remen t	U3	Berlin/E/02/ VMMXU2.PhV.phsC.cVal.mag.f[MX]	E02BCUMeasurement/ V.MMXU.2	No Link
Measu remen t	U Neut	Berlin/E/02/ VMMXU2.PhV.net.cVal.mag.f[MX]	E02BCUMeasurement/ V.MMXU.2	No Link
Measu remen t	U1 sv	Berlin/E/02/ ATVTR2.VolSv.instMag.i[MX]	E02BCUMeasurement/ A.TVTR.2	No Link
Measu remen t	U2 sv	Berlin/E/02/ BTVTR12.VolSv.instMag.i[MX]	E02BCUMeasurement/ B.TVTR.12	No Link
Measu remen t	U3 sv	Berlin/E/02/ CTVTR14.VolSv.instMag.i[MX]	E02BCUMeasurement/ C.TVTR.14	No Link

Function	Process Name	Functional Name	Logical Device	Description
Measurement	U Neut sv	Berlin/E/02/NTVTR3.VolSv.instMag.i[MX]	E02BCUMeasurement/N.TVTR.3	No Link
Measurement	I1 sv	Berlin/E/02/ATCTR5.AmpSv.instMag.i[MX]	E02BCUMeasurement/A.TCTR.5	No Link
Measurement	I2 sv	Berlin/E/02/BTCTR1.AmpSv.instMag.f[MX]	E02BCUMeasurement/B.TCTR.1	No Link
Measurement	I3 sv	Berlin/E/02/CTCTR4.AmpSv.instMag.i[MX]	E02BCUMeasurement/C.TCTR.4	No Link
Measurement	I Neut sv	Berlin/E/02/NTCTR6.AmpSv.instMag.i[MX]	E02BCUMeasurement/N.TCTR.6	No Link
Differential	Diff Operate	Berlin/E/02/PDIF1.Op.general[ST]	E02BPUDifferential/PDIF.1	No Link
Differential	I1 sv	Berlin/E/02/ATCTR2.AmpSv.instMag.i[MX]	E02BPUDifferential/A.TCTR.2	No Link
Differential	I2 sv	Berlin/E/02/BTCTR3.AmpSv.instMag.f[MX]	E02BPUDifferential/B.TCTR.3	No Link
Differential	I3 sv	Berlin/E/02/CTCTR1.AmpSv.instMag.i[MX]	E02BPUDifferential/C.TCTR.1	No Link
Differential	I Neut sv	Berlin/E/02/NTCTR4.AmpSv.instMag.i[MX]	E02BPUDifferential/N.TCTR.4	No Link
Overcurrent	OC Start	Berlin/E/02/PHPTOC1.Str.general[ST]	E02BUPOvercurrent/PH.PTOC.1	No Link
Overcurrent	OC Operate	Berlin/E/02/PHPTOC1.Op.general[ST]	E02BUPOvercurrent/PH.PTOC.1	No Link
Overcurrent	I1 sv	Berlin/E/02/ATCTR5.AmpSv.instMag.i[MX]	E02BUPOvercurrent/A.TCTR.5	No Link
Overcurrent	I2 sv	Berlin/E/02/BTCTR1.AmpSv.instMag.f[MX]	E02BUPOvercurrent/B.TCTR.1	No Link
Overcurrent	I3 sv	Berlin/E/02/CTCTR4.AmpSv.instMag.i[MX]	E02BUPOvercurrent/C.TCTR.4	No Link
Overcurrent	I Neut sv	Berlin/E/02/NTCTR6.AmpSv.instMag.i[MX]	E02BUPOvercurrent/N.TCTR.6	No Link
Trip	Trip	Berlin/E/02/TripPTRC1.Tr.general[ST]	E02PIUTrip/Trip.PTRC.1	No Link
BreakerFailure	BF Start	Berlin/E/02/RBRF1.Str.general[ST]	E02BCUBreakerFailure/RBRF.1	No Link
BreakerFailure	Operate External	Berlin/E/02/RBRF1.OpEx.general[ST]	E02BCUBreakerFailure/RBRF.1	No Link
BreakerFailure	Operate Internal	Berlin/E/02/RBRF1.OpIn.general[ST]	E02BCUBreakerFailure/RBRF.1	No Link
Interface	Local Operation	Berlin/E/02/QB1/QB1XSWI1.Loc.stVal[ST]	E02PIUQB1Interface/QB1.XSWI.1	No Link
Interface	Switch Position	Berlin/E/02/QB1/QB1XSWI1.Pos.stVal[ST]	E02PIUQB1Interface/QB1.XSWI.1	No Link
Control	Switch Command	Berlin/E/02/QB1/QB1CSWI1.Pos.Oper.ctlVal[CO]	E02BCUQB1Control/QB1.CSWI.1	No Link
Control	Operate Open	Berlin/E/02/QB1/QB1CSWI1.OpOpn.general[ST]	E02BCUQB1Control/QB1.CSWI.1	No Link
Control	Operate Close	Berlin/E/02/QB1/QB1CSWI1.OpCls.general[ST]	E02BCUQB1Control/QB1.CSWI.1	No Link

Function	Process Name	Functional Name	Logical Device	Description
Contr ol	QB1 Position	Berlin/E/02/QB1/ QB1CSWI1.Pos.stVal[ST]	E02BCUQB1Control/ QB1.CSWI.1	No Link
Inter face	Local Operation	Berlin/E/02/QA0/ QA0XCBR1.Loc.stVal[ST]	E02PIUQA0Interface/ QA0.XCBR.1	No Link
Inter face	Switch Position	Berlin/E/02/QA0/ QA0XCBR1.Pos.stVal[ST]	E02PIUQA0Interface/ QA0.XCBR.1	No Link
Contr ol	Switch Command	Berlin/E/02/QA0/ QA0CSWI2.Pos.Oper.ctlVal[CO]	E02BCUQA0Control/ QA0.CSWI.2	No Link
Contr ol	Operate Open	Berlin/E/02/QA0/ QA0CSWI2.OpOpn.general[ST]	E02BCUQA0Control/ QA0.CSWI.2	No Link
Contr ol	Operate Close	Berlin/E/02/QA0/ QA0CSWI2.OpCls.general[ST]	E02BCUQA0Control/ QA0.CSWI.2	No Link
Contr ol	QA0 Position	Berlin/E/02/QA0/ QA0CSWI2.Pos.stVal[ST]	E02BCUQA0Control/ QA0.CSWI.2	No Link
L1	U1 sv	Berlin/E/02/VT/ ATVTR1.VolSv.instMag.i[MX]	E02PIUVTVT/A.TVTR.1	No Link
L2	U2 sv	Berlin/E/02/VT/ BTVTR2.VolSv.instMag.i[MX]	E02PIUVTVT/B.TVTR.2	No Link
L3	U3 sv	Berlin/E/02/VT/ CTVTR3.VolSv.instMag.i[MX]	E02PIUVTVT/C.TVTR.3	No Link
Neut	U Neut sv	Berlin/E/02/VT/ NTVTR4.VolSv.instMag.i[MX]	E02PIUVTVT/N.TVTR.4	No Link
L1	I1 sv	Berlin/E/02/CT/ ATCTR1.AmpSv.instMag.i[MX]	E02PIUCTCT/A.TCTR.1	No Link
L2	I2 sv	Berlin/E/02/CT/ BTCTR2.AmpSv.instMag.f[MX]	E02PIUCTCT/B.TCTR.2	No Link
L3	I3 sv	Berlin/E/02/CT/ CTCTR3.AmpSv.instMag.i[MX]	E02PIUCTCT/C.TCTR.3	No Link
Neut	I Neut sv	Berlin/E/02/CT/ NTCTR4.AmpSv.instMag.i[MX]	E02PIUCTCT/N.TCTR.4	No Link

Table 93. Signals of 02

### 3.3.4. Bay Berlin/E/03

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

Role	Name	Type	Description
BCU	E03BCU	6MD86	-

Table 94. Specification for BCU

Role	Name	Type	Description
BPU	E03BPU	RED615	-

Table 95. Specification for BPU

Role	Name	Type	Description
BUP	E03BUP	P545	-

Table 96. Specification for BUP

Role	Name	Type	Description
PIU	E03PIU	SAM600	-

Table 97. Specification for PIU

Function	Process Name	Functional Name	Logical Device	Description
Measurement	I1	Berlin/E/03/ AMMXU1.A.phsA.cVal.mag.f[MX]	E03BCUMeasurement/ A.MMXU.1	No Link
Measurement	I2	Berlin/E/03/ AMMXU1.A.phsB.cVal.mag.f[MX]	E03BCUMeasurement/ A.MMXU.1	No Link
Measurement	I3	Berlin/E/03/ AMMXU1.A.phsC.cVal.mag.f[MX]	E03BCUMeasurement/ A.MMXU.1	No Link
Measurement	I Neut	Berlin/E/03/ AMMXU1.A.neut.cVal.mag.f[MX]	E03BCUMeasurement/ A.MMXU.1	No Link
Measurement	U1	Berlin/E/03/ VMMXU2.PhV.phsA.cVal.mag.f[MX]	E03BCUMeasurement/ V.MMXU.2	No Link
Measurement	U2	Berlin/E/03/ VMMXU2.PhV.phsB.cVal.mag.f[MX]	E03BCUMeasurement/ V.MMXU.2	No Link
Measurement	U3	Berlin/E/03/ VMMXU2.PhV.phsC.cVal.mag.f[MX]	E03BCUMeasurement/ V.MMXU.2	No Link
Measurement	U Neut	Berlin/E/03/ VMMXU2.PhV.net.cVal.mag.f[MX]	E03BCUMeasurement/ V.MMXU.2	No Link
Measurement	U1 sv	Berlin/E/03/ ATVTR2.VolSv.instMag.i[MX]	E03BCUMeasurement/ A.TVTR.2	No Link
Measurement	U2 sv	Berlin/E/03/ BTVTR12.VolSv.instMag.i[MX]	E03BCUMeasurement/ B.TVTR.12	No Link
Measurement	U3 sv	Berlin/E/03/ CTVTR14.VolSv.instMag.i[MX]	E03BCUMeasurement/ C.TVTR.14	No Link
Measurement	U Neut sv	Berlin/E/03/ NTVTR3.VolSv.instMag.i[MX]	E03BCUMeasurement/ N.TVTR.3	No Link
Measurement	I1 sv	Berlin/E/03/ ATCTR5.AmpSv.instMag.i[MX]	E03BCUMeasurement/ A.TCTR.5	No Link
Measurement	I2 sv	Berlin/E/03/ BTCTR1.AmpSv.instMag.f[MX]	E03BCUMeasurement/ B.TCTR.1	No Link
Measurement	I3 sv	Berlin/E/03/ CTCTR4.AmpSv.instMag.i[MX]	E03BCUMeasurement/ C.TCTR.4	No Link
Measurement	I Neut sv	Berlin/E/03/ NTCTR6.AmpSv.instMag.i[MX]	E03BCUMeasurement/ N.TCTR.6	No Link
Distance	Start Z1	Berlin/E/03/Z1PDIS1.Str.general[ST]	E03BPULD0/Z1.PDIS.1	No Link
Distance	Operate Z1	Berlin/E/03/Z1PDIS1.Op.general[ST]	E03BPULD0/Z1.PDIS.1	No Link
Distance	Start Z2	Berlin/E/03/Z2PDIS2.Str.general[ST]	E03BPULD0/Z2.PDIS.2	No Link
Distance	Operate Z2	Berlin/E/03/Z2PDIS2.Op.general[ST]	E03BPULD0/Z2.PDIS.2	No Link
Distance	Start Z3	Berlin/E/03/Z3PDIS3.Str.general[ST]	E03BPULD0/Z3.PDIS.3	No Link
Distance	Operate Z3	Berlin/E/03/Z3PDIS3.Op.general[ST]	E03BPULD0/Z3.PDIS.3	No Link
Distance	DIS Operate	Berlin/E/03/DISPTRC1.Op.general[ST]	E03BPULD0/DIS.PTRC.1	No Link
Distance	I1 sv	Berlin/E/03/ ATCTR2.AmpSv.instMag.i[MX]	E03BPULD0/A.TCTR.2	No Link
Distance	I2 sv	Berlin/E/03/ BTCTR3.AmpSv.instMag.f[MX]	E03BPULD0/B.TCTR.3	No Link
Distance	I3 sv	Berlin/E/03/ CTCTR7.AmpSv.instMag.i[MX]	E03BPULD0/C.TCTR.7	No Link
Distance	I Neut sv	Berlin/E/03/ NTCTR8.AmpSv.instMag.i[MX]	E03BPULD0/N.TCTR.8	No Link

Function	Process Name	Functional Name	Logical Device	Description
Distance	U1 sv	Berlin/E/03/ ATVTR7.VolSv.instMag.i[MX]	E03BPULD0/A.TVTR.7	No Link
Distance	U2 sv	Berlin/E/03/ BTVTR8.VolSv.instMag.i[MX]	E03BPULD0/B.TVTR.8	No Link
Distance	U3 sv	Berlin/E/03/ CTVTR4.VolSv.instMag.i[MX]	E03BPULD0/C.TVTR.4	No Link
Distance	U Neut sv	Berlin/E/03/ NTVTR1.VolSv.instMag.i[MX]	E03BPULD0/N.TVTR.1	No Link
Overcurrent	OC Start	Berlin/E/03/PHPTOC1.Str.general[ST]	E03BUPOvercurrent/ PH.PTOC.1	No Link
Overcurrent	OC Operate	Berlin/E/03/PHPTOC1.Op.general[ST]	E03BUPOvercurrent/ PH.PTOC.1	No Link
Overcurrent	I1 sv	Berlin/E/03/ ATCTR5.AmpSv.instMag.i[MX]	E03BUPOvercurrent/A.TCTR.5	No Link
Overcurrent	I2 sv	Berlin/E/03/ BTCTR1.AmpSv.instMag.f[MX]	E03BUPOvercurrent/B.TCTR.1	No Link
Overcurrent	I3 sv	Berlin/E/03/ CTCTR4.AmpSv.instMag.i[MX]	E03BUPOvercurrent/C.TCTR.4	No Link
Overcurrent	I Neut sv	Berlin/E/03/ NTCTR6.AmpSv.instMag.i[MX]	E03BUPOvercurrent/N.TCTR.6	No Link
Trip	Trip	Berlin/E/03/TripPTRC1.Tr.general[ST]	E03PIULD0/Trip.PTRC.1	No Link
BreakerFailure	BF Start	Berlin/E/03/RBRF1.Str.general[ST]	E03BCUBreakerFailure1/ RBRF.1	No Link
BreakerFailure	Operate External	Berlin/E/03/RBRF1.OpEx.general[ST]	E03BCUBreakerFailure1/ RBRF.1	No Link
BreakerFailure	Operate Internal	Berlin/E/03/RBRF1.OpIn.general[ST]	E03BCUBreakerFailure1/ RBRF.1	No Link
Interface	Local Operation	Berlin/E/03/QB1/ QB1XSWI1.Loc.stVal[ST]	E03PIUQB1Interface/ QB1.XSWI.1	No Link
Interface	Switch Position	Berlin/E/03/QB1/ QB1XSWI1.Pos.stVal[ST]	E03PIUQB1Interface/ QB1.XSWI.1	No Link
Control	Switch Command	Berlin/E/03/QB1/ QB1CSWI1.Pos.Oper.ctlVal[CO]	E03BCUQB1Control/ QB1.CSWI.1	No Link
Control	Operate Open	Berlin/E/03/QB1/ QB1CSWI1.OpOpn.general[ST]	E03BCUQB1Control/ QB1.CSWI.1	No Link
Control	Operate Close	Berlin/E/03/QB1/ QB1CSWI1.OpCls.general[ST]	E03BCUQB1Control/ QB1.CSWI.1	No Link
Control	QB1 Position	Berlin/E/03/QB1/ QB1CSWI1.Pos.stVal[ST]	E03BCUQB1Control/ QB1.CSWI.1	No Link
Interface	Local Operation	Berlin/E/03/QA0/ QA0XCBR1.Loc.stVal[ST]	E03PIUQA0Interface/ QA0.XCBR.1	No Link
Interface	Switch Position	Berlin/E/03/QA0/ QA0XCBR1.Pos.stVal[ST]	E03PIUQA0Interface/ QA0.XCBR.1	No Link
Control	Switch Command	Berlin/E/03/QA0/ QA0CSWI2.Pos.Oper.ctlVal[CO]	E03BCUQA0Control/ QA0.CSWI.2	No Link
Control	Operate Open	Berlin/E/03/QA0/ QA0CSWI2.OpOpn.general[ST]	E03BCUQA0Control/ QA0.CSWI.2	No Link
Control	Operate Close	Berlin/E/03/QA0/ QA0CSWI2.OpCls.general[ST]	E03BCUQA0Control/ QA0.CSWI.2	No Link

Function	Process Name	Functional Name	Logical Device	Description
Contr ol	QA0 Position	Berlin/E/03/QA0/ QA0CSWI2.Pos.stVal[ST]	E03BCUQA0Control/ QA0.CSWI.2	No Link
L1	I1 sv	Berlin/E/03/CT/ ATCTR1.AmpSv.instMag.i[MX]	E03PIUCTCT/A.TCTR.1	No Link
L2	I2 sv	Berlin/E/03/CT/ BTCTR2.AmpSv.instMag.f[MX]	E03PIUCTCT/B.TCTR.2	No Link
L3	I3 sv	Berlin/E/03/CT/ CTCTR3.AmpSv.instMag.i[MX]	E03PIUCTCT/C.TCTR.3	No Link
Neut	I Neut sv	Berlin/E/03/CT/ NTCTR4.AmpSv.instMag.i[MX]	E03PIUCTCT/N.TCTR.4	No Link
L1	U1 sv	Berlin/E/03/VT/ ATVTR1.VolSv.instMag.i[MX]	E03PIUVTVT/A.TVTR.1	No Link
L2	U2 sv	Berlin/E/03/VT/ BTVTR2.VolSv.instMag.i[MX]	E03PIUVTVT/B.TVTR.2	No Link
L3	U3 sv	Berlin/E/03/VT/ CTVTR3.VolSv.instMag.i[MX]	E03PIUVTVT/C.TVTR.3	No Link
Neut	U Neut sv	Berlin/E/03/VT/ NTVTR4.VolSv.instMag.i[MX]	E03PIUVTVT/N.TVTR.4	No Link

Table 98. Signals of 03

### 3.3.5. Bay Berlin/E/04

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

Role	Name	Type	Description
BCU	E04BCU	6MD86	-

Table 99. Specification for BCU

Role	Name	Type	Description
BPU	E04BPU	RED615	-

Table 100. Specification for BPU

Role	Name	Type	Description
BUP	E04BUP	P545	-

Table 101. Specification for BUP

Role	Name	Type	Description
PIU	E04PIU	SAM600	-

Table 102. Specification for PIU

Function	Process Name	Functional Name	Logical Device	Description
Measu remen t	I1	Berlin/E/04/ AMMXU1.A.phsA.cVal.mag.f[MX]	E04BCUMeasurement/ A.MMXU.1	No Link
Measu remen t	I2	Berlin/E/04/ AMMXU1.A.phsB.cVal.mag.f[MX]	E04BCUMeasurement/ A.MMXU.1	No Link
Measu remen t	I3	Berlin/E/04/ AMMXU1.A.phsC.cVal.mag.f[MX]	E04BCUMeasurement/ A.MMXU.1	No Link
Measu remen t	I Neut	Berlin/E/04/ AMMXU1.A.neut.cVal.mag.f[MX]	E04BCUMeasurement/ A.MMXU.1	No Link
Measu remen t	U1	Berlin/E/04/ VMMXU2.PhV.phsA.cVal.mag.f[MX]	E04BCUMeasurement/ V.MMXU.2	No Link
Measu remen t	U2	Berlin/E/04/ VMMXU2.PhV.phsB.cVal.mag.f[MX]	E04BCUMeasurement/ V.MMXU.2	No Link

Function	Process Name	Functional Name	Logical Device	Description
Measurement	U3	Berlin/E/04/VMMXU2.PhV.phsC.cVal.mag.f[MX]	E04BCUMeasurement/V.MMXU.2	No Link
Measurement	U Neut	Berlin/E/04/VMMXU2.PhV.net.cVal.mag.f[MX]	E04BCUMeasurement/V.MMXU.2	No Link
Measurement	U1 sv	Berlin/E/04/ATVTR2.VolSv.instMag.i[MX]	E04BCUMeasurement/A.TVTR.2	No Link
Measurement	U2 sv	Berlin/E/04/BTVTR12.VolSv.instMag.i[MX]	E04BCUMeasurement/B.TVTR.12	No Link
Measurement	U3 sv	Berlin/E/04/CTVTR14.VolSv.instMag.i[MX]	E04BCUMeasurement/C.TVTR.14	No Link
Measurement	U Neut sv	Berlin/E/04/NTVTR3.VolSv.instMag.i[MX]	E04BCUMeasurement/N.TVTR.3	No Link
Measurement	I1 sv	Berlin/E/04/ATCTR5.AmpSv.instMag.i[MX]	E04BCUMeasurement/A.TCTR.5	No Link
Measurement	I2 sv	Berlin/E/04/BTCTR1.AmpSv.instMag.f[MX]	E04BCUMeasurement/B.TCTR.1	No Link
Measurement	I3 sv	Berlin/E/04/CTCTR4.AmpSv.instMag.i[MX]	E04BCUMeasurement/C.TCTR.4	No Link
Measurement	I Neut sv	Berlin/E/04/NTCTR6.AmpSv.instMag.i[MX]	E04BCUMeasurement/N.TCTR.6	No Link
Distance	Start Z1	Berlin/E/04/Z1PDIS1.Str.general[ST]	E04BPULD0/Z1.PDIS.1	No Link
Distance	Operate Z1	Berlin/E/04/Z1PDIS1.Op.general[ST]	E04BPULD0/Z1.PDIS.1	No Link
Distance	Start Z2	Berlin/E/04/Z2PDIS2.Str.general[ST]	E04BPULD0/Z2.PDIS.2	No Link
Distance	Operate Z2	Berlin/E/04/Z2PDIS2.Op.general[ST]	E04BPULD0/Z2.PDIS.2	No Link
Distance	Start Z3	Berlin/E/04/Z3PDIS3.Str.general[ST]	E04BPULD0/Z3.PDIS.3	No Link
Distance	Operate Z3	Berlin/E/04/Z3PDIS3.Op.general[ST]	E04BPULD0/Z3.PDIS.3	No Link
Distance	DIS Operate	Berlin/E/04/DISPTRC1.Op.general[ST]	E04BPULD0/DIS.PTRC.1	No Link
Distance	I1 sv	Berlin/E/04/ATCTR2.AmpSv.instMag.i[MX]	E04BPULD0/A.TCTR.2	No Link
Distance	I2 sv	Berlin/E/04/BTCTR3.AmpSv.instMag.f[MX]	E04BPULD0/B.TCTR.3	No Link
Distance	I3 sv	Berlin/E/04/CTCTR7.AmpSv.instMag.i[MX]	E04BPULD0/C.TCTR.7	No Link
Distance	I Neut sv	Berlin/E/04/NTCTR8.AmpSv.instMag.i[MX]	E04BPULD0/N.TCTR.8	No Link
Distance	U1 sv	Berlin/E/04/ATVTR7.VolSv.instMag.i[MX]	E04BPULD0/A.TVTR.7	No Link
Distance	U2 sv	Berlin/E/04/BTVTR8.VolSv.instMag.i[MX]	E04BPULD0/B.TVTR.8	No Link
Distance	U3 sv	Berlin/E/04/CTVTR4.VolSv.instMag.i[MX]	E04BPULD0/C.TVTR.4	No Link
Distance	U Neut sv	Berlin/E/04/NTVTR1.VolSv.instMag.i[MX]	E04BPULD0/N.TVTR.1	No Link
Overcurrent	OC Start	Berlin/E/04/PHPTOC1.Str.general[ST]	E04BUPOvercurrent/PH.PTOC.1	No Link
Overcurrent	OC Operate	Berlin/E/04/PHPTOC1.Op.general[ST]	E04BUPOvercurrent/PH.PTOC.1	No Link



Function	Process Name	Functional Name	Logical Device	Description
Overcurrent	I1 sv	Berlin/E/04/ATCTR5.AmpSv.instMag.i[MX]	E04BUPOvercurrent/A.TCTR.5	No Link
Overcurrent	I2 sv	Berlin/E/04/BTCTR1.AmpSv.instMag.f[MX]	E04BUPOvercurrent/B.TCTR.1	No Link
Overcurrent	I3 sv	Berlin/E/04/CTCTR4.AmpSv.instMag.i[MX]	E04BUPOvercurrent/C.TCTR.4	No Link
Overcurrent	I Neut sv	Berlin/E/04/NTCTR6.AmpSv.instMag.i[MX]	E04BUPOvercurrent/N.TCTR.6	No Link
Trip	Trip	Berlin/E/04/TripPTRC1.Tr.general[ST]	E04PIULD0/Trip.PTRC.1	No Link
BreakerFailure	BF Start	Berlin/E/04/RBRF1.Str.general[ST]	E04BCUBreakerFailure1/RBRF.1	No Link
BreakerFailure	Operate External	Berlin/E/04/RBRF1.OpEx.general[ST]	E04BCUBreakerFailure1/RBRF.1	No Link
BreakerFailure	Operate Internal	Berlin/E/04/RBRF1.OpIn.general[ST]	E04BCUBreakerFailure1/RBRF.1	No Link
Interface	Local Operation	Berlin/E/04/QB1/QB1XSW11.Loc.stVal[ST]	E04PIUQB1Interface/QB1.XSW1.1	No Link
Interface	Switch Position	Berlin/E/04/QB1/QB1XSW11.Pos.stVal[ST]	E04PIUQB1Interface/QB1.XSW1.1	No Link
Control	Switch Command	Berlin/E/04/QB1/QB1CSW11.Pos.Oper.ctlVal[CO]	E04BCUQB1Control/QB1.CSW1.1	No Link
Control	Operate Open	Berlin/E/04/QB1/QB1CSW11.OpOpn.general[ST]	E04BCUQB1Control/QB1.CSW1.1	No Link
Control	Operate Close	Berlin/E/04/QB1/QB1CSW11.OpCls.general[ST]	E04BCUQB1Control/QB1.CSW1.1	No Link
Control	QB1 Position	Berlin/E/04/QB1/QB1CSW11.Pos.stVal[ST]	E04BCUQB1Control/QB1.CSW1.1	No Link
Interface	Local Operation	Berlin/E/04/QA0/QA0XCBR1.Loc.stVal[ST]	E04PIUQA0Interface/QA0.XCBR.1	No Link
Interface	Switch Position	Berlin/E/04/QA0/QA0XCBR1.Pos.stVal[ST]	E04PIUQA0Interface/QA0.XCBR.1	No Link
Control	Switch Command	Berlin/E/04/QA0/QA0CSW12.Pos.Oper.ctlVal[CO]	E04BCUQA0Control/QA0.CSW1.2	No Link
Control	Operate Open	Berlin/E/04/QA0/QA0CSW12.OpOpn.general[ST]	E04BCUQA0Control/QA0.CSW1.2	No Link
Control	Operate Close	Berlin/E/04/QA0/QA0CSW12.OpCls.general[ST]	E04BCUQA0Control/QA0.CSW1.2	No Link
Control	QA0 Position	Berlin/E/04/QA0/QA0CSW12.Pos.stVal[ST]	E04BCUQA0Control/QA0.CSW1.2	No Link
L1	I1 sv	Berlin/E/04/CT/ATCTR1.AmpSv.instMag.i[MX]	E04PIUCTCT/A.TCTR.1	No Link
L2	I2 sv	Berlin/E/04/CT/BTCTR2.AmpSv.instMag.f[MX]	E04PIUCTCT/B.TCTR.2	No Link
L3	I3 sv	Berlin/E/04/CT/CTCTR3.AmpSv.instMag.i[MX]	E04PIUCTCT/C.TCTR.3	No Link
Neut	I Neut sv	Berlin/E/04/CT/NTCTR4.AmpSv.instMag.i[MX]	E04PIUCTCT/N.TCTR.4	No Link
L1	U1 sv	Berlin/E/04/VT/ATVTR1.VolSv.instMag.i[MX]	E04PIUVTVT/A.TVTR.1	No Link

Function	Process Name	Functional Name	Logical Device	Description
L2	U2 sv	Berlin/E/04/VT/ BTVTR2.VolSv.instMag.i[MX]	E04PIUVTVT/B.TVTR.2	No Link
L3	U3 sv	Berlin/E/04/VT/ CTVTR3.VolSv.instMag.i[MX]	E04PIUVTVT/C.TVTR.3	No Link
Neut	U Neut sv	Berlin/E/04/VT/ NTVTR4.VolSv.instMag.i[MX]	E04PIUVTVT/N.TVTR.4	No Link

Table 103. Signals of 04

### 3.3.6. Bay Berlin/E/05

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

Role	Name	Type	Description
BCU	E05BCU	C60	-

Table 104. Specification for BCU

Role	Name	Type	Description
BPU	E05BPU	7UT85	-

Table 105. Specification for BPU

Role	Name	Type	Description
BUP	E05BUP	7SJ85	-

Table 106. Specification for BUP

Role	Name	Type	Description
PIU	E05PIU	6MU85	-

Table 107. Specification for PIU

Function	Process Name	Functional Name	Logical Device	Description
Measu remen t	I1	Berlin/E/05/ AMMXU1.A.phsA.cVal.mag.f[MX]	E05BCUMeasurement/ A.MMXU.1	No Link
Measu remen t	I2	Berlin/E/05/ AMMXU1.A.phsB.cVal.mag.f[MX]	E05BCUMeasurement/ A.MMXU.1	No Link
Measu remen t	I3	Berlin/E/05/ AMMXU1.A.phsC.cVal.mag.f[MX]	E05BCUMeasurement/ A.MMXU.1	No Link
Measu remen t	I Neut	Berlin/E/05/ AMMXU1.A.neut.cVal.mag.f[MX]	E05BCUMeasurement/ A.MMXU.1	No Link
Measu remen t	U1	Berlin/E/05/ VMMXU2.PhV.phsA.cVal.mag.f[MX]	E05BCUMeasurement/ V.MMXU.2	No Link
Measu remen t	U2	Berlin/E/05/ VMMXU2.PhV.phsB.cVal.mag.f[MX]	E05BCUMeasurement/ V.MMXU.2	No Link
Measu remen t	U3	Berlin/E/05/ VMMXU2.PhV.phsC.cVal.mag.f[MX]	E05BCUMeasurement/ V.MMXU.2	No Link
Measu remen t	U Neut	Berlin/E/05/ VMMXU2.PhV.net.cVal.mag.f[MX]	E05BCUMeasurement/ V.MMXU.2	No Link
Measu remen t	U1 sv	Berlin/E/05/ ATVTR2.VolSv.instMag.i[MX]	E05BCUMeasurement/ A.TVTR.2	No Link
Measu remen t	U2 sv	Berlin/E/05/ BTVTR12.VolSv.instMag.i[MX]	E05BCUMeasurement/ B.TVTR.12	No Link
Measu remen t	U3 sv	Berlin/E/05/ CTVTR14.VolSv.instMag.i[MX]	E05BCUMeasurement/ C.TVTR.14	No Link
Measu remen t	U Neut sv	Berlin/E/05/ NTVTR3.VolSv.instMag.i[MX]	E05BCUMeasurement/ N.TVTR.3	No Link

Function	Process Name	Functional Name	Logical Device	Description
Measurement	I1 sv	Berlin/E/05/ATCTR5.AmpSv.instMag.i[MX]	E05BCUMeasurement/A.TCTR.5	No Link
Measurement	I2 sv	Berlin/E/05/BTCTR1.AmpSv.instMag.f[MX]	E05BCUMeasurement/B.TCTR.1	No Link
Measurement	I3 sv	Berlin/E/05/CTCTR4.AmpSv.instMag.i[MX]	E05BCUMeasurement/C.TCTR.4	No Link
Measurement	I Neut sv	Berlin/E/05/NTCTR6.AmpSv.instMag.i[MX]	E05BCUMeasurement/N.TCTR.6	No Link
Differential	Diff Operate	Berlin/E/05/PDIF1.Op.general[ST]	E05BPUDifferential/PDIF.1	No Link
Differential	I1 sv	Berlin/E/05/ATCTR2.AmpSv.instMag.i[MX]	E05BPUDifferential/A.TCTR.2	No Link
Differential	I2 sv	Berlin/E/05/BTCTR3.AmpSv.instMag.f[MX]	E05BPUDifferential/B.TCTR.3	No Link
Differential	I3 sv	Berlin/E/05/CTCTR1.AmpSv.instMag.i[MX]	E05BPUDifferential/C.TCTR.1	No Link
Differential	I Neut sv	Berlin/E/05/NTCTR4.AmpSv.instMag.i[MX]	E05BPUDifferential/N.TCTR.4	No Link
Overcurrent	OC Start	Berlin/E/05/PHPTOC1.Str.general[ST]	E05BUPOvercurrent/PH.PTOC.1	No Link
Overcurrent	OC Operate	Berlin/E/05/PHPTOC1.Op.general[ST]	E05BUPOvercurrent/PH.PTOC.1	No Link
Overcurrent	I1 sv	Berlin/E/05/ATCTR5.AmpSv.instMag.i[MX]	E05BUPOvercurrent/A.TCTR.5	No Link
Overcurrent	I2 sv	Berlin/E/05/BTCTR1.AmpSv.instMag.f[MX]	E05BUPOvercurrent/B.TCTR.1	No Link
Overcurrent	I3 sv	Berlin/E/05/CTCTR4.AmpSv.instMag.i[MX]	E05BUPOvercurrent/C.TCTR.4	No Link
Overcurrent	I Neut sv	Berlin/E/05/NTCTR6.AmpSv.instMag.i[MX]	E05BUPOvercurrent/N.TCTR.6	No Link
Trip	Trip	Berlin/E/05/TripPTRC1.Tr.general[ST]	E05PIUTrip/Trip.PTRC.1	No Link
BreakerFailure	BF Start	Berlin/E/05/RBRF1.Str.general[ST]	E05BCUBreakerFailure/RBRF.1	No Link
BreakerFailure	Operate External	Berlin/E/05/RBRF1.OpEx.general[ST]	E05BCUBreakerFailure/RBRF.1	No Link
BreakerFailure	Operate Internal	Berlin/E/05/RBRF1.OpIn.general[ST]	E05BCUBreakerFailure/RBRF.1	No Link
Interface	Local Operation	Berlin/E/05/QB1/QB1XSWI1.Loc.stVal[ST]	E05PIUQB1Interface/QB1.XSWI.1	No Link
Interface	Switch Position	Berlin/E/05/QB1/QB1XSWI1.Pos.stVal[ST]	E05PIUQB1Interface/QB1.XSWI.1	No Link
Control	Switch Command	Berlin/E/05/QB1/QB1CSWI1.Pos.Oper.ctlVal[CO]	E05BCUQB1Control/QB1.CSWI.1	No Link
Control	Operate Open	Berlin/E/05/QB1/QB1CSWI1.OpOpn.general[ST]	E05BCUQB1Control/QB1.CSWI.1	No Link
Control	Operate Close	Berlin/E/05/QB1/QB1CSWI1.OpCls.general[ST]	E05BCUQB1Control/QB1.CSWI.1	No Link
Control	QB1 Position	Berlin/E/05/QB1/QB1CSWI1.Pos.stVal[ST]	E05BCUQB1Control/QB1.CSWI.1	No Link

Function	Process Name	Functional Name	Logical Device	Description
Inter face	Local Operation	Berlin/E/05/QA0/QA0XCBR1.Loc.stVal[ST]	E05PIUQA0Interface/QA0.XCBR.1	No Link
Inter face	Switch Position	Berlin/E/05/QA0/QA0XCBR1.Pos.stVal[ST]	E05PIUQA0Interface/QA0.XCBR.1	No Link
Contr ol	Switch Command	Berlin/E/05/QA0/QA0CSWI2.Pos.Oper.ctlVal[CO]	E05BCUQA0Control/QA0.CSWI.2	No Link
Contr ol	Operate Open	Berlin/E/05/QA0/QA0CSWI2.OpOpn.general[ST]	E05BCUQA0Control/QA0.CSWI.2	No Link
Contr ol	Operate Close	Berlin/E/05/QA0/QA0CSWI2.OpCls.general[ST]	E05BCUQA0Control/QA0.CSWI.2	No Link
Contr ol	QA0 Position	Berlin/E/05/QA0/QA0CSWI2.Pos.stVal[ST]	E05BCUQA0Control/QA0.CSWI.2	No Link
L1	U1 sv	Berlin/E/05/VT/ATVTR1.VolSv.instMag.i[MX]	E05PIUVTVT/A.TVTR.1	No Link
L2	U2 sv	Berlin/E/05/VT/BTVTR2.VolSv.instMag.i[MX]	E05PIUVTVT/B.TVTR.2	No Link
L3	U3 sv	Berlin/E/05/VT/CTVTR3.VolSv.instMag.i[MX]	E05PIUVTVT/C.TVTR.3	No Link
Neut	U Neut sv	Berlin/E/05/VT/NTVTR4.VolSv.instMag.i[MX]	E05PIUVTVT/N.TVTR.4	No Link
L1	I1 sv	Berlin/E/05/CT/ATCTR1.AmpSv.instMag.i[MX]	E05PIUCTCT/A.TCTR.1	No Link
L2	I2 sv	Berlin/E/05/CT/BTCTR2.AmpSv.instMag.f[MX]	E05PIUCTCT/B.TCTR.2	No Link
L3	I3 sv	Berlin/E/05/CT/CTCTR3.AmpSv.instMag.i[MX]	E05PIUCTCT/C.TCTR.3	No Link
Neut	I Neut sv	Berlin/E/05/CT/NTCTR4.AmpSv.instMag.i[MX]	E05PIUCTCT/N.TCTR.4	No Link

Table 108. Signals of 05

### 3.3.7. Bay Berlin/E/06

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

Role	Name	Type	Description
BCU	E06BCU	6MD86	-

Table 109. Specification for BCU

Role	Name	Type	Description
BPU	E06BPU	RED615	-

Table 110. Specification for BPU

Role	Name	Type	Description
BUP	E06BUP	P545	-

Table 111. Specification for BUP

Role	Name	Type	Description
PIU	E06PIU	SAM600	-

Table 112. Specification for PIU

Function	Process Name	Functional Name	Logical Device	Description
Measu remen t	I1	Berlin/E/06/AMMXU1.A.phsA.cVal.mag.f[MX]	E06BCUMeasurement/A.MMXU.1	No Link

Function	Process Name	Functional Name	Logical Device	Description
Measurement	I2	Berlin/E/06/ AMMXU1.A.phsB.cVal.mag.f[MX]	E06BCUMeasurement/ A.MMXU.1	No Link
Measurement	I3	Berlin/E/06/ AMMXU1.A.phsC.cVal.mag.f[MX]	E06BCUMeasurement/ A.MMXU.1	No Link
Measurement	I Neut	Berlin/E/06/ AMMXU1.A.neut.cVal.mag.f[MX]	E06BCUMeasurement/ A.MMXU.1	No Link
Measurement	U1	Berlin/E/06/ VMMXU2.PhV.phsA.cVal.mag.f[MX]	E06BCUMeasurement/ V.MMXU.2	No Link
Measurement	U2	Berlin/E/06/ VMMXU2.PhV.phsB.cVal.mag.f[MX]	E06BCUMeasurement/ V.MMXU.2	No Link
Measurement	U3	Berlin/E/06/ VMMXU2.PhV.phsC.cVal.mag.f[MX]	E06BCUMeasurement/ V.MMXU.2	No Link
Measurement	U Neut	Berlin/E/06/ VMMXU2.PhV.net.cVal.mag.f[MX]	E06BCUMeasurement/ V.MMXU.2	No Link
Measurement	U1 sv	Berlin/E/06/ ATVTR2.VolSv.instMag.i[MX]	E06BCUMeasurement/ A.TVTR.2	No Link
Measurement	U2 sv	Berlin/E/06/ BTVTR12.VolSv.instMag.i[MX]	E06BCUMeasurement/ B.TVTR.12	No Link
Measurement	U3 sv	Berlin/E/06/ CTVTR14.VolSv.instMag.i[MX]	E06BCUMeasurement/ C.TVTR.14	No Link
Measurement	U Neut sv	Berlin/E/06/ NTVTR3.VolSv.instMag.i[MX]	E06BCUMeasurement/ N.TVTR.3	No Link
Measurement	I1 sv	Berlin/E/06/ ATCTR5.AmpSv.instMag.i[MX]	E06BCUMeasurement/ A.TCTR.5	No Link
Measurement	I2 sv	Berlin/E/06/ BTCTR1.AmpSv.instMag.f[MX]	E06BCUMeasurement/ B.TCTR.1	No Link
Measurement	I3 sv	Berlin/E/06/ CTCTR4.AmpSv.instMag.i[MX]	E06BCUMeasurement/ C.TCTR.4	No Link
Measurement	I Neut sv	Berlin/E/06/ NTCTR6.AmpSv.instMag.i[MX]	E06BCUMeasurement/ N.TCTR.6	No Link
Distance	Start Z1	Berlin/E/06/Z1PDIS1.Str.general[ST]	E06BPULD0/Z1.PDIS.1	No Link
Distance	Operate Z1	Berlin/E/06/Z1PDIS1.Op.general[ST]	E06BPULD0/Z1.PDIS.1	No Link
Distance	Start Z2	Berlin/E/06/Z2PDIS2.Str.general[ST]	E06BPULD0/Z2.PDIS.2	No Link
Distance	Operate Z2	Berlin/E/06/Z2PDIS2.Op.general[ST]	E06BPULD0/Z2.PDIS.2	No Link
Distance	Start Z3	Berlin/E/06/Z3PDIS3.Str.general[ST]	E06BPULD0/Z3.PDIS.3	No Link
Distance	Operate Z3	Berlin/E/06/Z3PDIS3.Op.general[ST]	E06BPULD0/Z3.PDIS.3	No Link
Distance	DIS Operate	Berlin/E/06/DISPTRC1.Op.general[ST]	E06BPULD0/DIS.PTRC.1	No Link
Distance	I1 sv	Berlin/E/06/ ATCTR2.AmpSv.instMag.i[MX]	E06BPULD0/A.TCTR.2	No Link
Distance	I2 sv	Berlin/E/06/ BTCTR3.AmpSv.instMag.f[MX]	E06BPULD0/B.TCTR.3	No Link
Distance	I3 sv	Berlin/E/06/ CTCTR7.AmpSv.instMag.i[MX]	E06BPULD0/C.TCTR.7	No Link
Distance	I Neut sv	Berlin/E/06/ NTCTR8.AmpSv.instMag.i[MX]	E06BPULD0/N.TCTR.8	No Link
Distance	U1 sv	Berlin/E/06/ ATVTR7.VolSv.instMag.i[MX]	E06BPULD0/A.TVTR.7	No Link

Function	Process Name	Functional Name	Logical Device	Description
Distance	U2 sv	Berlin/E/06/ BTVTR8.VolSv.instMag.i[MX]	E06BPULD0/B.TVTR.8	No Link
Distance	U3 sv	Berlin/E/06/ CTVTR4.VolSv.instMag.i[MX]	E06BPULD0/C.TVTR.4	No Link
Distance	U Neut sv	Berlin/E/06/ NTVTR1.VolSv.instMag.i[MX]	E06BPULD0/N.TVTR.1	No Link
Overcurrent	OC Start	Berlin/E/06/PHPTOC1.Str.general[ST]	E06BUPOvercurrent/ PH.PTOC.1	No Link
Overcurrent	OC Operate	Berlin/E/06/PHPTOC1.Op.general[ST]	E06BUPOvercurrent/ PH.PTOC.1	No Link
Overcurrent	I1 sv	Berlin/E/06/ ATCTR5.AmpSv.instMag.i[MX]	E06BUPOvercurrent/A.TCTR.5	No Link
Overcurrent	I2 sv	Berlin/E/06/ BTCTR1.AmpSv.instMag.f[MX]	E06BUPOvercurrent/B.TCTR.1	No Link
Overcurrent	I3 sv	Berlin/E/06/ CTCTR4.AmpSv.instMag.i[MX]	E06BUPOvercurrent/C.TCTR.4	No Link
Overcurrent	I Neut sv	Berlin/E/06/ NTCTR6.AmpSv.instMag.i[MX]	E06BUPOvercurrent/N.TCTR.6	No Link
Trip	Trip	Berlin/E/06/TripPTRC1.Tr.general[ST]	E06PIULD0/Trip.PTRC.1	No Link
BreakerFailure	BF Start	Berlin/E/06/RBRF1.Str.general[ST]	E06BCUBreakerFailure1/ RBRF.1	No Link
BreakerFailure	Operate External	Berlin/E/06/RBRF1.OpEx.general[ST]	E06BCUBreakerFailure1/ RBRF.1	No Link
BreakerFailure	Operate Internal	Berlin/E/06/RBRF1.OpIn.general[ST]	E06BCUBreakerFailure1/ RBRF.1	No Link
Interface	Local Operation	Berlin/E/06/QB1/ QB1XSWI1.Loc.stVal[ST]	E06PIUQB1Interface/ QB1.XSWI.1	No Link
Interface	Switch Position	Berlin/E/06/QB1/ QB1XSWI1.Pos.stVal[ST]	E06PIUQB1Interface/ QB1.XSWI.1	No Link
Control	Switch Command	Berlin/E/06/QB1/ QB1CSWI1.Pos.Oper.ctlVal[CO]	E06BCUQB1Control/ QB1.CSWI.1	No Link
Control	Operate Open	Berlin/E/06/QB1/ QB1CSWI1.OpOpn.general[ST]	E06BCUQB1Control/ QB1.CSWI.1	No Link
Control	Operate Close	Berlin/E/06/QB1/ QB1CSWI1.OpCls.general[ST]	E06BCUQB1Control/ QB1.CSWI.1	No Link
Control	QB1 Position	Berlin/E/06/QB1/ QB1CSWI1.Pos.stVal[ST]	E06BCUQB1Control/ QB1.CSWI.1	No Link
Interface	Local Operation	Berlin/E/06/QA0/ QA0XCBR1.Loc.stVal[ST]	E06PIUQA0Interface/ QA0.XCBR.1	No Link
Interface	Switch Position	Berlin/E/06/QA0/ QA0XCBR1.Pos.stVal[ST]	E06PIUQA0Interface/ QA0.XCBR.1	No Link
Control	Switch Command	Berlin/E/06/QA0/ QA0CSWI2.Pos.Oper.ctlVal[CO]	E06BCUQA0Control/ QA0.CSWI.2	No Link
Control	Operate Open	Berlin/E/06/QA0/ QA0CSWI2.OpOpn.general[ST]	E06BCUQA0Control/ QA0.CSWI.2	No Link
Control	Operate Close	Berlin/E/06/QA0/ QA0CSWI2.OpCls.general[ST]	E06BCUQA0Control/ QA0.CSWI.2	No Link
Control	QA0 Position	Berlin/E/06/QA0/ QA0CSWI2.Pos.stVal[ST]	E06BCUQA0Control/ QA0.CSWI.2	No Link

Function	Process Name	Functional Name	Logical Device	Description
L1	I1 sv	Berlin/E/06/CT/ ATCTR1.AmpSv.instMag.i[MX]	E06PIUCTCT/A.TCTR.1	No Link
L2	I2 sv	Berlin/E/06/CT/ BTCTR2.AmpSv.instMag.f[MX]	E06PIUCTCT/B.TCTR.2	No Link
L3	I3 sv	Berlin/E/06/CT/ CTCTR3.AmpSv.instMag.i[MX]	E06PIUCTCT/C.TCTR.3	No Link
Neut	I Neut sv	Berlin/E/06/CT/ NTCTR4.AmpSv.instMag.i[MX]	E06PIUCTCT/N.TCTR.4	No Link
L1	U1 sv	Berlin/E/06/VT/ ATVTR1.VolSv.instMag.i[MX]	E06PIUVTVT/A.TVTR.1	No Link
L2	U2 sv	Berlin/E/06/VT/ BTVTR2.VolSv.instMag.i[MX]	E06PIUVTVT/B.TVTR.2	No Link
L3	U3 sv	Berlin/E/06/VT/ CTVTR3.VolSv.instMag.i[MX]	E06PIUVTVT/C.TVTR.3	No Link
Neut	U Neut sv	Berlin/E/06/VT/ NTVTR4.VolSv.instMag.i[MX]	E06PIUVTVT/N.TVTR.4	No Link

Table 113. Signals of 06

## 3.4. Transformers

### 3.4.1. PWT

Name	Description	W1:VL	W2:VL	W3:VL	IED Name	Logical Device Instance	Logical Node
T1	-	-	W2:E	-			
T2	-	-	-	-			

## 4. System Communication Diagram

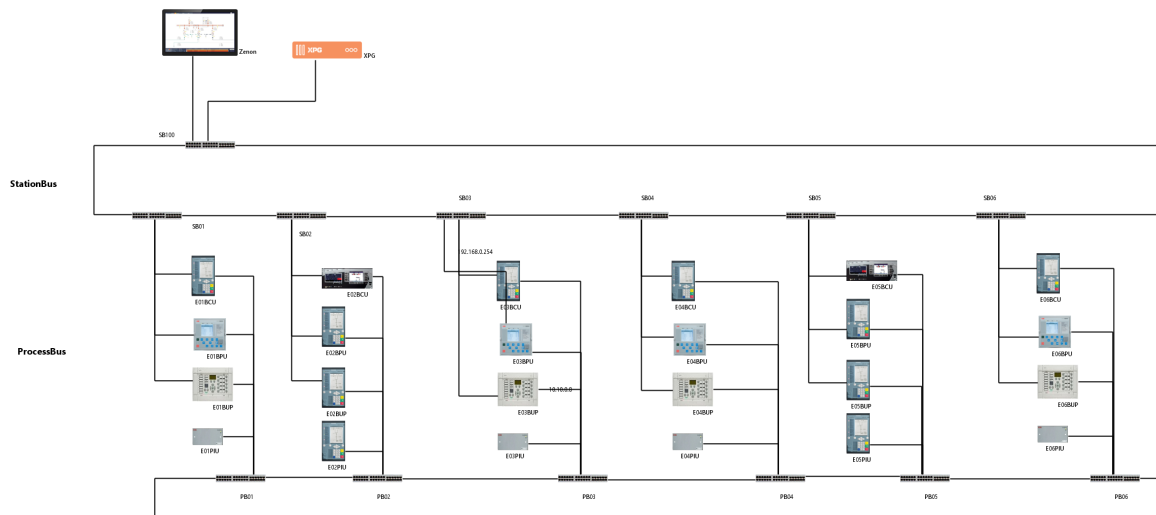


Figure 3. System Diagram

### 4.1. Subnetwork

Name		Type		
StationBus		8-MMS		

IED	Access Point	IP Address	IP Subnet	IP Gateway
Zenon	S1	10.10.0.1	255.255.255.0	10.10.0.1
XPG	AP2	10.10.0.2	255.255.255.0	10.10.0.1
E04BCU	F	192.168.0.7	255.255.255.0	10.10.0.1
E01BUP	AP1	10.10.0.1	255.255.255.0	0.0.0.0
E01BCU	E	172.24.7.111	255.255.255.0	172.24.7.1
E02BCU	S1	127.0.0.1	255.255.255.0	127.0.0.0
E01BPU	AP1	192.168.0.254	255.255.255.0	192.168.2.1
E02BPU	E	10.16.60.65	255.255.255.0	0.0.0.0
E02BUP	E	10.16.60.65	255.255.255.0	0.0.0.0
E03BUP	AP1	192.168.0.3	255.255.255.0	10.10.0.1
E03BCU	E	192.168.0.1	255.255.255.0	10.10.0.1
E04BPU	AP1	192.168.0.8	255.255.255.0	10.10.0.1
E04BUP	AP1	192.168.0.9	255.255.255.0	10.10.0.1
E05BPU	E	192.168.0.5	255.255.255.0	10.10.0.1
E05BUP	E	192.168.0.6	255.255.255.0	10.10.0.1
E06BPU	AP1	192.168.0.11	255.255.255.0	10.10.0.1
E06BUP	AP1	192.168.0.12	255.255.255.0	10.10.0.1
E06BCU	E	192.168.0.10	255.255.255.0	10.10.0.1
E05BCU	S1	192.168.0.4	255.255.255.0	10.10.0.1
E03BPU	AP1	192.168.0.254	255.255.255.0	192.168.2.1

Table 114. Connected Access Points



Name		Type		
ProcessBus		8-MMS		

IED	Access Point	IP Address	IP Subnet	IP Gateway
E01BCU	F	10.10.0.2	255.255.255.0	10.10.0.1
E01BPU	AP2	10.10.0.3	255.255.255.0	10.10.0.1
E02BPU	F	10.10.0.4	255.255.255.0	10.10.0.1
E02BUP	F	10.10.0.5	255.255.255.0	10.10.0.1
E01BUP	AP2	10.10.0.6	255.255.255.0	10.10.0.1
E03BCU	F	10.10.0.7	255.255.255.0	10.10.0.1
E03BUP	AP2	10.10.0.9	255.255.255.0	10.10.0.1
E05BPU	F	10.10.0.12	255.255.255.0	10.10.0.1
E05BUP	F	10.10.0.13	255.255.255.0	10.10.0.1
E04BPU	AP2	10.10.0.18	255.255.255.0	10.10.0.1
E04BUP	AP2	10.10.0.19	255.255.255.0	10.10.0.1
E06BCU	F	10.10.0.20	255.255.255.0	10.10.0.1
E06BPU	AP2	10.10.0.21	255.255.255.0	10.10.0.1
E06BUP	AP2	10.10.0.22	255.255.255.0	10.10.0.1
E01PIU	S1	10.10.0.1	255.255.255.0	10.10.0.1
E02BCU	S2	127.0.0.1	255.255.255.0	127.0.0.0
E02PIU	E	192.168.100.103	255.255.255.0	192.168.100.1
E03PIU	S1	10.10.0.17	255.255.255.0	10.10.0.1
E04PIU	S1	10.10.0.16	255.255.255.0	10.10.0.1
E04BCU	E	10.10.0.10	255.255.255.0	10.10.0.1
E05PIU	E	10.10.0.14	255.255.255.0	10.10.0.1
E06PIU	S1	10.10.0.15	255.255.255.0	10.10.0.1
E05BCU	S2	10.10.0.11	255.255.255.0	10.10.0.1
E03BPU	AP2	10.10.0.8	255.255.255.0	10.10.0.1

Table 115. Connected Access Points

## 4.2. IED Overview

### 4.2.1. IED Summary

Name	IED Type	Manufacturer	Used in Bays
XPG	gateway	no manufacturer	Berlin
Zenon	ZENON	Copa-Data	Berlin
E01PIU	SAM600	ABB	01, 01
E01BUP	P545	ALSTOM	01, 01
E01BCU	6MD86	SIEMENS	01, 01
E02BCU	C60	GE Multilin	02, 02
E02PIU	6MU85	SIEMENS	02, 02
E01BPU	RED615	ABB	01, 01
E02BPU	7UT85	SIEMENS	02, 02
E02BUP	7SJ85	SIEMENS	02, 02

Name	IED Type	Manufacturer	Used in Bays
E03PIU	SAM600	ABB	03, 03
E03BUP	P545	ALSTOM	03, 03
E03BCU	6MD86	SIEMENS	03, 03
E04BPU	RED615	ABB	04, 04
E04PIU	SAM600	ABB	04, 04
E04BUP	P545	ALSTOM	04, 04
E04BCU	6MD86	SIEMENS	04, 04
E05BPU	7UT85	SIEMENS	05, 05
E05BUP	7SJ85	SIEMENS	05, 05
E05PIU	6MU85	SIEMENS	05, 05
E06BPU	RED615	ABB	06, 06
E06PIU	SAM600	ABB	06, 06
E06BUP	P545	ALSTOM	06, 06
E06BCU	6MD86	SIEMENS	06, 06
E05BCU	C60	GE Multilin	05, 05
E03BPU	RED615	ABB	03

Table 116. 26 IEDs

## 4.3. Communication

### 4.3.1. Reports

#### Report Control: E01BUPSystem/LLN0.RCB.urcbA

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01BUP	Logical Device	System	Data Set	ds_urcb1
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	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
E01BUPOvercurrent/ATCTR5.AmpSv[MX]	Zenon, Zenon
E01BUPOvercurrent/BTCTR1.AmpSv[MX]	Zenon, Zenon
E01BUPOvercurrent/CTCTR4.AmpSv[MX]	Zenon, Zenon
E01BUPOvercurrent/NTCTR6.AmpSv[MX]	Zenon, Zenon

#### Report Control: E01BUPSystem/LLN0.RCB.brcbA

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01BUP	Logical Device	System	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	brcbA	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
E01BUPOvercurrent/PHPTOC1.Op[ST]	XPG, XPG
E01BUPOvercurrent/PHPTOC1.Str[ST]	XPG, XPG

#### Report Control: E01BCUMeasurement/LLN0.RCB.brcba

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01BCU	Logical Device	Measurement	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E01BCUBreakerFailure1/RBRF1.OpEx[ST]	Zenon, Zenon
E01BCUBreakerFailure1/RBRF1.OpIn[ST]	Zenon, Zenon
E01BCUBreakerFailure1/RBRF1.Str[ST]	Zenon, Zenon
E01BCUQA0Control/QA0CSWI2.OpCls[ST]	Zenon, Zenon
E01BCUQA0Control/QA0CSWI2.OpOpn[ST]	Zenon, Zenon
E01BCUQA0Control/QA0CSWI2.Pos[ST]	Zenon, Zenon
E01BCUQB1Control/QB1CSWI1.OpCls[ST]	Zenon, Zenon
E01BCUQB1Control/QB1CSWI1.OpOpn[ST]	Zenon, Zenon
E01BCUQB1Control/QB1CSWI1.Pos[ST]	Zenon, Zenon

#### Report Control: E01BCUMeasurement/LLN0.RCB.brcbb

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01BCU	Logical Device	Measurement	Data Set	ds_brcb2
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E01BCUBreakerFailure1/RBRF1.OpEx[ST]	XPG, XPG
E01BCUBreakerFailure1/RBRF1.OpIn[ST]	XPG, XPG
E01BCUBreakerFailure1/RBRF1.Str[ST]	XPG, XPG
E01BCUQA0Control/QA0CSWI2.OpCls[ST]	XPG, XPG

Source Data Attribute	Client
E01BCUQA0Control/QA0CSWI2.OpOpn[ST]	XPG, XPG
E01BCUQA0Control/QA0CSWI2.Pos[ST]	XPG, XPG
E01BCUQB1Control/QB1CSWI1.OpCls[ST]	XPG, XPG
E01BCUQB1Control/QB1CSWI1.OpOpn[ST]	XPG, XPG
E01BCUQB1Control/QB1CSWI1.Pos[ST]	XPG, XPG

#### Report Control: E01BCUMeasurement/LLN0.RCB.urbca

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01BCU	Logical Device	Measurement	Data Set	ds_urbcl
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	urbca	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
E01BCUMeasurement/AMMXU1.A[MX]	Zenon, Zenon
E01BCUMeasurement/VMMXU2.PhV[MX]	Zenon, Zenon

#### Report Control: E01BCUMeasurement/LLN0.RCB.urbcb

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01BCU	Logical Device	Measurement	Data Set	ds_urbcb2
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	urbcb	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
E01BCUMeasurement/AMMXU1.A[MX]	XPG, XPG
E01BCUMeasurement/VMMXU2.PhV[MX]	XPG, XPG

#### Report Control: E02BCUMaster/LLN0.RCB.BRCB01

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02BCU	Logical Device	Master	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E02BCUBreakerFailure/RBRF1.OpEx.general[ST]	Zenon, Zenon
E02BCUBreakerFailure/RBRF1.OpIn.general[ST]	Zenon, Zenon
E02BCUBreakerFailure/RBRF1.Str.general[ST]	Zenon, Zenon
E02BCUQA0Control/QA0CSWI2.OpCls.general[ST]	Zenon, Zenon
E02BCUQA0Control/QA0CSWI2.OpOpn.general[ST]	Zenon, Zenon
E02BCUQA0Control/QA0CSWI2.Pos.stVal[ST]	Zenon, Zenon
E02BCUQB1Control/QB1CSWI1.OpCls.general[ST]	Zenon, Zenon
E02BCUQB1Control/QB1CSWI1.OpOpn.general[ST]	Zenon, Zenon
E02BCUQB1Control/QB1CSWI1.Pos.stVal[ST]	Zenon, Zenon

### Report Control: E02BCUMaster/LLN0.RCB.BRCB02

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02BCU	Logical Device	Master	Data Set	ds_brcb2
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E02BCUBreakerFailure/RBRF1.OpEx.general[ST]	XPG, XPG
E02BCUBreakerFailure/RBRF1.OpIn.general[ST]	XPG, XPG
E02BCUBreakerFailure/RBRF1.Str.general[ST]	XPG, XPG
E02BCUQA0Control/QA0CSWI2.OpCls.general[ST]	XPG, XPG
E02BCUQA0Control/QA0CSWI2.OpOpn.general[ST]	XPG, XPG
E02BCUQA0Control/QA0CSWI2.Pos.stVal[ST]	XPG, XPG
E02BCUQB1Control/QB1CSWI1.OpCls.general[ST]	XPG, XPG
E02BCUQB1Control/QB1CSWI1.OpOpn.general[ST]	XPG, XPG
E02BCUQB1Control/QB1CSWI1.Pos.stVal[ST]	XPG, XPG

### Report Control: E02BCUMaster/LLN0.RCB.URCB01

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02BCU	Logical Device	Master	Data Set	ds_urcb1
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	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
E02BCUMeasurement/AMMXU1.A.neut.cVal.mag.f[MX]	Zenon, Zenon

Source Data Attribute	Client
E02BCUMeasurement/AMMXU1.A.phsA.cVal.mag.f[MX]	Zenon, Zenon
E02BCUMeasurement/AMMXU1.A.phsB.cVal.mag.f[MX]	Zenon, Zenon
E02BCUMeasurement/AMMXU1.A.phsC.cVal.mag.f[MX]	Zenon, Zenon
E02BCUMeasurement/VMMXU2.PhV.net.cVal.mag.f[MX]	Zenon, Zenon
E02BCUMeasurement/VMMXU2.PhV.phsA.cVal.mag.f[MX]	Zenon, Zenon
E02BCUMeasurement/VMMXU2.PhV.phsB.cVal.mag.f[MX]	Zenon, Zenon
E02BCUMeasurement/VMMXU2.PhV.phsC.cVal.mag.f[MX]	Zenon, Zenon

### Report Control: E02BCUMaster/LLN0.RCB.URCB02

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02BCU	Logical Device	Master	Data Set	ds_urcb2
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	URCB02	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
E02BCUMeasurement/AMMXU1.A.neut.cVal.mag.f[MX]	XPG, XPG
E02BCUMeasurement/AMMXU1.A.phsA.cVal.mag.f[MX]	XPG, XPG
E02BCUMeasurement/AMMXU1.A.phsB.cVal.mag.f[MX]	XPG, XPG
E02BCUMeasurement/AMMXU1.A.phsC.cVal.mag.f[MX]	XPG, XPG
E02BCUMeasurement/VMMXU2.PhV.net.cVal.mag.f[MX]	XPG, XPG
E02BCUMeasurement/VMMXU2.PhV.phsA.cVal.mag.f[MX]	XPG, XPG
E02BCUMeasurement/VMMXU2.PhV.phsB.cVal.mag.f[MX]	XPG, XPG
E02BCUMeasurement/VMMXU2.PhV.phsC.cVal.mag.f[MX]	XPG, XPG

### Report Control: E01BPULD0/LLN0.RCB.brcba

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01BPU	Logical Device	LD0	Data Set	Statfled
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E01BPULD0/DISPTRC1.Op[ST]	Zenon, Zenon
E01BPULD0/Z1PDIS1.Op[ST]	Zenon, Zenon
E01BPULD0/Z1PDIS1.Str[ST]	Zenon, Zenon
E01BPULD0/Z2PDIS2.Op[ST]	Zenon, Zenon

Source Data Attribute	Client
E01BPULD0/Z2PDIS2.Str[ST]	Zenon, Zenon
E01BPULD0/Z3PDIS3.Op[ST]	Zenon, Zenon
E01BPULD0/Z3PDIS3.Str[ST]	Zenon, Zenon

#### Report Control: E01BPULD0/LLN0.RCB.brcbb

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01BPU	Logical Device	LD0	Data Set	StatIo
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E01BPULD0/DISPTRC1.Op[ST]	XPG, XPG
E01BPULD0/Z1PDIS1.Op[ST]	XPG, XPG
E01BPULD0/Z1PDIS1.Str[ST]	XPG, XPG
E01BPULD0/Z2PDIS2.Op[ST]	XPG, XPG
E01BPULD0/Z2PDIS2.Str[ST]	XPG, XPG
E01BPULD0/Z3PDIS3.Op[ST]	XPG, XPG
E01BPULD0/Z3PDIS3.Str[ST]	XPG, XPG

#### Report Control: E01BPULD0/LLN0.RCB.urbca

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01BPU	Logical Device	LD0	Data Set	StatUrg
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	urbca	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
E01BPULD0/ATCTR2.AmpSv[MX]	Zenon, Zenon
E01BPULD0/ATVTR7.VolSv[MX]	Zenon, Zenon
E01BPULD0/BTCTR3.AmpSv[MX]	Zenon, Zenon
E01BPULD0/BTVTR8.VolSv[MX]	Zenon, Zenon
E01BPULD0/CTCTR7.AmpSv[MX]	Zenon, Zenon
E01BPULD0/CTVTR4.VolSv[MX]	Zenon, Zenon
E01BPULD0/NTCTR8.AmpSv[MX]	Zenon, Zenon
E01BPULD0/NTVTR1.VolSv[MX]	Zenon, Zenon

**Report Control: E02BPUDifferential/LLN0.RCB.brcba**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02BPU	Logical Device	Differential	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E02BPUDifferential/PDIF1.Op[ST]	Zenon, Zenon

**Report Control: E02BPUDifferential/LLN0.RCB.brcbb**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02BPU	Logical Device	Differential	Data Set	ds_brcb2
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E02BPUDifferential/PDIF1.Op[ST]	XPG, XPG

**Report Control: E02BPUDifferential/LLN0.RCB.urbca**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02BPU	Logical Device	Differential	Data Set	ds_urbcl
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	urbca	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
E02BPUDifferential/ATCTR2.AmpSv[MX]	XPG, XPG
E02BPUDifferential/BTCTR3.AmpSv[MX]	XPG, XPG
E02BPUDifferential/CTCTR1.AmpSv[MX]	XPG, XPG
E02BPUDifferential/NTCTR4.AmpSv[MX]	XPG, XPG

**Report Control: E02BUPOvercurrent/LLN0.RCB.brcba**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02BUP	Logical Device	Overcurrent	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000



Attribute	Value	Attribute	Value	Attribute	Value
intg Pd	100	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
E02BUPOvercurrent/PHPTOC1.Op[ST]	XPG, XPG
E02BUPOvercurrent/PHPTOC1.Str[ST]	XPG, XPG

#### Report Control: E02BUPOvercurrent/LLN0.RCB.urbca

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02BUP	Logical Device	Overcurrent	Data Set	ds_urbcl
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	urbca	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
E02BUPOvercurrent/ATCTR5.AmpSv[MX]	Zenon, Zenon
E02BUPOvercurrent/BTCTR1.AmpSv[MX]	Zenon, Zenon
E02BUPOvercurrent/CTCTR4.AmpSv[MX]	Zenon, Zenon
E02BUPOvercurrent/NTCTR6.AmpSv[MX]	Zenon, Zenon

#### Report Control: E03BUPSystem/LLN0.RCB.urbcA

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03BUP	Logical Device	System	Data Set	ds_urbcl
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	urbcA	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
E03BUPOvercurrent/ATCTR5.AmpSv[MX]	Zenon, Zenon
E03BUPOvercurrent/BTCTR1.AmpSv[MX]	Zenon, Zenon
E03BUPOvercurrent/CTCTR4.AmpSv[MX]	Zenon, Zenon
E03BUPOvercurrent/NTCTR6.AmpSv[MX]	Zenon, Zenon

#### Report Control: E03BUPSystem/LLN0.RCB.brcbA

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03BUP	Logical Device	System	Data Set	ds_brcbl

Attribute	Value	Attribute	Value	Attribute	Value
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E03BUPOvercurrent/PHPTOC1.Op[ST]	XPG, XPG
E03BUPOvercurrent/PHPTOC1.Str[ST]	XPG, XPG

### Report Control: E03BCUMeasurement/LLN0.RCB.brcba

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03BCU	Logical Device	Measurement	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E03BCUBreakerFailure1/RBRF1.OpEx[ST]	Zenon, Zenon
E03BCUBreakerFailure1/RBRF1.OpIn[ST]	Zenon, Zenon
E03BCUBreakerFailure1/RBRF1.Str[ST]	Zenon, Zenon
E03BCUQA0Control/QA0CSWI2.OpCls[ST]	Zenon, Zenon
E03BCUQA0Control/QA0CSWI2.OpOpn[ST]	Zenon, Zenon
E03BCUQA0Control/QA0CSWI2.Pos[ST]	Zenon, Zenon
E03BCUQB1Control/QB1CSWI1.OpCls[ST]	Zenon, Zenon
E03BCUQB1Control/QB1CSWI1.OpOpn[ST]	Zenon, Zenon
E03BCUQB1Control/QB1CSWI1.Pos[ST]	Zenon, Zenon

### Report Control: E03BCUMeasurement/LLN0.RCB.brcbb

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03BCU	Logical Device	Measurement	Data Set	ds_brcb2
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E03BCUBreakerFailure1/RBRF1.OpEx[ST]	XPG, XPG

Source Data Attribute	Client
E03BCUBreakerFailure1/RBRF1.OpIn[ST]	XPG, XPG
E03BCUBreakerFailure1/RBRF1.Str[ST]	XPG, XPG
E03BCUQA0Control/QA0CSWI2.OpCls[ST]	XPG, XPG
E03BCUQA0Control/QA0CSWI2.OpOpn[ST]	XPG, XPG
E03BCUQA0Control/QA0CSWI2.Pos[ST]	XPG, XPG
E03BCUQB1Control/QB1CSWI1.OpCls[ST]	XPG, XPG
E03BCUQB1Control/QB1CSWI1.OpOpn[ST]	XPG, XPG
E03BCUQB1Control/QB1CSWI1.Pos[ST]	XPG, XPG

#### Report Control: E03BCUMeasurement/LLN0.RCB.urcha

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03BCU	Logical Device	Measurement	Data Set	ds_urch1
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	urcha	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
E03BCUMeasurement/AMMXU1.A[MX]	Zenon, Zenon
E03BCUMeasurement/VMMXU2.PhV[MX]	Zenon, Zenon

#### Report Control: E03BCUMeasurement/LLN0.RCB.urbcb

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03BCU	Logical Device	Measurement	Data Set	ds_urbcb2
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	urbcb	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
E03BCUMeasurement/AMMXU1.A[MX]	XPG, XPG
E03BCUMeasurement/VMMXU2.PhV[MX]	XPG, XPG

#### Report Control: E04BPULD0/LLN0.RCB.brcba

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04BPU	Logical Device	LD0	Data Set	StatIed
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	brcba	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
E04BPULD0/DISPTRC1.Op[ST]	Zenon, Zenon
E04BPULD0/Z1PDIS1.Op[ST]	Zenon, Zenon
E04BPULD0/Z1PDIS1.Str[ST]	Zenon, Zenon
E04BPULD0/Z2PDIS2.Op[ST]	Zenon, Zenon
E04BPULD0/Z2PDIS2.Str[ST]	Zenon, Zenon
E04BPULD0/Z3PDIS3.Op[ST]	Zenon, Zenon
E04BPULD0/Z3PDIS3.Str[ST]	Zenon, Zenon

### Report Control: E04BPULD0/LLN0.RCB.brcbb

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04BPU	Logical Device	LD0	Data Set	StatIo
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E04BPULD0/DISPTRC1.Op[ST]	XPG, XPG
E04BPULD0/Z1PDIS1.Op[ST]	XPG, XPG
E04BPULD0/Z1PDIS1.Str[ST]	XPG, XPG
E04BPULD0/Z2PDIS2.Op[ST]	XPG, XPG
E04BPULD0/Z2PDIS2.Str[ST]	XPG, XPG
E04BPULD0/Z3PDIS3.Op[ST]	XPG, XPG
E04BPULD0/Z3PDIS3.Str[ST]	XPG, XPG

### Report Control: E04BPULD0/LLN0.RCB.urcba

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04BPU	Logical Device	LD0	Data Set	StatUrg
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	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
E04BPULD0/ATCTR2.AmpSv[MX]	Zenon, Zenon
E04BPULD0/ATVTR7.VolSv[MX]	Zenon, Zenon

Source Data Attribute	Client
E04BPULD0/BTCTR3.AmpSv[MX]	Zenon, Zenon
E04BPULD0/BTVTR8.VolSv[MX]	Zenon, Zenon
E04BPULD0/CTCTR7.AmpSv[MX]	Zenon, Zenon
E04BPULD0/CTVTR4.VolSv[MX]	Zenon, Zenon
E04BPULD0/NTCTR8.AmpSv[MX]	Zenon, Zenon
E04BPULD0/NTVTR1.VolSv[MX]	Zenon, Zenon

#### Report Control: E04BUPSystem/LLN0.RCB.urcbA

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04BUP	Logical Device	System	Data Set	ds_urcb1
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	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
E04BUPOvercurrent/ATCTR5.AmpSv[MX]	Zenon, Zenon
E04BUPOvercurrent/BTCTR1.AmpSv[MX]	Zenon, Zenon
E04BUPOvercurrent/CTCTR4.AmpSv[MX]	Zenon, Zenon
E04BUPOvercurrent/NTCTR6.AmpSv[MX]	Zenon, Zenon

#### Report Control: E04BUPSystem/LLN0.RCB.brcbA

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04BUP	Logical Device	System	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E04BUPOvercurrent/PHPTOC1.Op[ST]	XPG, XPG
E04BUPOvercurrent/PHPTOC1.Str[ST]	XPG, XPG

#### Report Control: E04BCUMeasurement/LLN0.RCB.brcba

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04BCU	Logical Device	Measurement	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	brcba	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
E04BCUBreakerFailure1/RBRF1.OpEx[ST]	Zenon, Zenon
E04BCUBreakerFailure1/RBRF1.OpIn[ST]	Zenon, Zenon
E04BCUBreakerFailure1/RBRF1.Str[ST]	Zenon, Zenon
E04BCUQA0Control/QA0CSWI2.OpCls[ST]	Zenon, Zenon
E04BCUQA0Control/QA0CSWI2.OpOpn[ST]	Zenon, Zenon
E04BCUQA0Control/QA0CSWI2.Pos[ST]	Zenon, Zenon
E04BCUQB1Control/QB1CSWI1.OpCls[ST]	Zenon, Zenon
E04BCUQB1Control/QB1CSWI1.OpOpn[ST]	Zenon, Zenon
E04BCUQB1Control/QB1CSWI1.Pos[ST]	Zenon, Zenon

### Report Control: E04BCUMeasurement/LLN0.RCB.brcbb

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04BCU	Logical Device	Measurement	Data Set	ds_brcb2
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E04BCUBreakerFailure1/RBRF1.OpEx[ST]	XPG, XPG
E04BCUBreakerFailure1/RBRF1.OpIn[ST]	XPG, XPG
E04BCUBreakerFailure1/RBRF1.Str[ST]	XPG, XPG
E04BCUQA0Control/QA0CSWI2.OpCls[ST]	XPG, XPG
E04BCUQA0Control/QA0CSWI2.OpOpn[ST]	XPG, XPG
E04BCUQA0Control/QA0CSWI2.Pos[ST]	XPG, XPG
E04BCUQB1Control/QB1CSWI1.OpCls[ST]	XPG, XPG
E04BCUQB1Control/QB1CSWI1.OpOpn[ST]	XPG, XPG
E04BCUQB1Control/QB1CSWI1.Pos[ST]	XPG, XPG

### Report Control: E04BCUMeasurement/LLN0.RCB.urbba

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04BCU	Logical Device	Measurement	Data Set	ds_urbcb1
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	urbba	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

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

Source Data Attribute	Client
E04BCUMeasurement/AMMXU1.A[MX]	Zenon, Zenon
E04BCUMeasurement/VMMXU2.PhV[MX]	Zenon, Zenon

#### Report Control: E04BCUMeasurement/LLN0.RCB.urbcb

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04BCU	Logical Device	Measurement	Data Set	ds_urbcb2
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	urbcb	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
E04BCUMeasurement/AMMXU1.A[MX]	XPG, XPG
E04BCUMeasurement/VMMXU2.PhV[MX]	XPG, XPG

#### Report Control: E05BPUDifferential/LLN0.RCB.brcba

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05BPU	Logical Device	Differential	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E05BPUDifferential/PDIF1.Op[ST]	Zenon, Zenon

#### Report Control: E05BPUDifferential/LLN0.RCB.brcbb

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05BPU	Logical Device	Differential	Data Set	ds_brcb2
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E05BPUDifferential/PDIF1.Op[ST]	XPG, XPG

**Report Control: E05BPUDifferential/LLN0.RCB.urbca**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05BPU	Logical Device	Differential	Data Set	ds_urbcl
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	urbca	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
E05BPUDifferential/ATCTR2.AmpSv[MX]	XPG, XPG
E05BPUDifferential/BTCTR3.AmpSv[MX]	XPG, XPG
E05BPUDifferential/CTCTR1.AmpSv[MX]	XPG, XPG
E05BPUDifferential/NTCTR4.AmpSv[MX]	XPG, XPG

**Report Control: E05BUPOvercurrent/LLN0.RCB.brcba**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05BUP	Logical Device	Overcurrent	Data Set	ds_brcbl
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E05BUPOvercurrent/PHPTOC1.Op[ST]	XPG, XPG
E05BUPOvercurrent/PHPTOC1.Str[ST]	XPG, XPG

**Report Control: E05BUPOvercurrent/LLN0.RCB.urbca**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05BUP	Logical Device	Overcurrent	Data Set	ds_urbcl
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	urbca	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
E05BUPOvercurrent/ATCTR5.AmpSv[MX]	Zenon, Zenon
E05BUPOvercurrent/BTCTR1.AmpSv[MX]	Zenon, Zenon
E05BUPOvercurrent/CTCTR4.AmpSv[MX]	Zenon, Zenon
E05BUPOvercurrent/NTCTR6.AmpSv[MX]	Zenon, Zenon



**Report Control: E06BPULD0/LLN0.RCB.brcba**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06BPU	Logical Device	LD0	Data Set	StatIed
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E06BPULD0/DISPTRC1.Op[ST]	Zenon, Zenon
E06BPULD0/Z1PDIS1.Op[ST]	Zenon, Zenon
E06BPULD0/Z1PDIS1.Str[ST]	Zenon, Zenon
E06BPULD0/Z2PDIS2.Op[ST]	Zenon, Zenon
E06BPULD0/Z2PDIS2.Str[ST]	Zenon, Zenon
E06BPULD0/Z3PDIS3.Op[ST]	Zenon, Zenon
E06BPULD0/Z3PDIS3.Str[ST]	Zenon, Zenon

**Report Control: E06BPULD0/LLN0.RCB.brcbb**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06BPU	Logical Device	LD0	Data Set	StatIo
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E06BPULD0/DISPTRC1.Op[ST]	XPG, XPG
E06BPULD0/Z1PDIS1.Op[ST]	XPG, XPG
E06BPULD0/Z1PDIS1.Str[ST]	XPG, XPG
E06BPULD0/Z2PDIS2.Op[ST]	XPG, XPG
E06BPULD0/Z2PDIS2.Str[ST]	XPG, XPG
E06BPULD0/Z3PDIS3.Op[ST]	XPG, XPG
E06BPULD0/Z3PDIS3.Str[ST]	XPG, XPG

**Report Control: E06BPULD0/LLN0.RCB.urbca**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06BPU	Logical Device	LD0	Data Set	StatUrg
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	urbca	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
E06BPULD0/ATCTR2.AmpSv[MX]	Zenon, Zenon
E06BPULD0/ATVTR7.VolSv[MX]	Zenon, Zenon
E06BPULD0/BTCTR3.AmpSv[MX]	Zenon, Zenon
E06BPULD0/BTVTR8.VolSv[MX]	Zenon, Zenon
E06BPULD0/CTCTR7.AmpSv[MX]	Zenon, Zenon
E06BPULD0/CTVTR4.VolSv[MX]	Zenon, Zenon
E06BPULD0/NTCTR8.AmpSv[MX]	Zenon, Zenon
E06BPULD0/NTVTR1.VolSv[MX]	Zenon, Zenon

### Report Control: E06BUPSystem/LLN0.RCB.urcbA

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06BUP	Logical Device	System	Data Set	ds_urcb1
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	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
E06BUPOvercurrent/ATCTR5.AmpSv[MX]	Zenon, Zenon
E06BUPOvercurrent/BTCTR1.AmpSv[MX]	Zenon, Zenon
E06BUPOvercurrent/CTCTR4.AmpSv[MX]	Zenon, Zenon
E06BUPOvercurrent/NTCTR6.AmpSv[MX]	Zenon, Zenon

### Report Control: E06BUPSystem/LLN0.RCB.brcbA

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06BUP	Logical Device	System	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E06BUPOvercurrent/PHPTOC1.Op[ST]	XPG, XPG
E06BUPOvercurrent/PHPTOC1.Str[ST]	XPG, XPG

**Report Control: E06BCUMeasurement/LLN0.RCB.brcba**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06BCU	Logical Device	Measurement	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E06BCUBreakerFailure1/RBRF1.OpEx[ST]	Zenon, Zenon
E06BCUBreakerFailure1/RBRF1.OpIn[ST]	Zenon, Zenon
E06BCUBreakerFailure1/RBRF1.Str[ST]	Zenon, Zenon
E06BCUQA0Control/QA0CSWI2.OpCls[ST]	Zenon, Zenon
E06BCUQA0Control/QA0CSWI2.OpOpn[ST]	Zenon, Zenon
E06BCUQA0Control/QA0CSWI2.Pos[ST]	Zenon, Zenon
E06BCUQB1Control/QB1CSWI1.OpCls[ST]	Zenon, Zenon
E06BCUQB1Control/QB1CSWI1.OpOpn[ST]	Zenon, Zenon
E06BCUQB1Control/QB1CSWI1.Pos[ST]	Zenon, Zenon

**Report Control: E06BCUMeasurement/LLN0.RCB.brcbb**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06BCU	Logical Device	Measurement	Data Set	ds_brcb2
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E06BCUBreakerFailure1/RBRF1.OpEx[ST]	XPG, XPG
E06BCUBreakerFailure1/RBRF1.OpIn[ST]	XPG, XPG
E06BCUBreakerFailure1/RBRF1.Str[ST]	XPG, XPG
E06BCUQA0Control/QA0CSWI2.OpCls[ST]	XPG, XPG
E06BCUQA0Control/QA0CSWI2.OpOpn[ST]	XPG, XPG
E06BCUQA0Control/QA0CSWI2.Pos[ST]	XPG, XPG
E06BCUQB1Control/QB1CSWI1.OpCls[ST]	XPG, XPG
E06BCUQB1Control/QB1CSWI1.OpOpn[ST]	XPG, XPG
E06BCUQB1Control/QB1CSWI1.Pos[ST]	XPG, XPG

**Report Control: E06BCUMeasurement/LLN0.RCB.urbca**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06BCU	Logical Device	Measurement	Data Set	ds_urbc1
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	urbca	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
E06BCUMeasurement/AMMXU1.A[MX]	Zenon, Zenon
E06BCUMeasurement/VMMXU2.PhV[MX]	Zenon, Zenon

**Report Control: E06BCUMeasurement/LLN0.RCB.urbcb**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06BCU	Logical Device	Measurement	Data Set	ds_urbc2
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	urbcb	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
E06BCUMeasurement/AMMXU1.A[MX]	XPG, XPG
E06BCUMeasurement/VMMXU2.PhV[MX]	XPG, XPG

**Report Control: E05BCUMaster/LLN0.RCB.BRCB01**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05BCU	Logical Device	Master	Data Set	ds_brcb1
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E05BCUBreakerFailure/RBRF1.OpEx.general[ST]	Zenon, Zenon
E05BCUBreakerFailure/RBRF1.OpIn.general[ST]	Zenon, Zenon
E05BCUBreakerFailure/RBRF1.Str.general[ST]	Zenon, Zenon
E05BCUQA0Control/QA0CSWI2.OpCls.general[ST]	Zenon, Zenon
E05BCUQA0Control/QA0CSWI2.OpOpn.general[ST]	Zenon, Zenon
E05BCUQA0Control/QA0CSWI2.Pos.stVal[ST]	Zenon, Zenon

Source Data Attribute	Client
E05BCUQB1Control/QB1CSWI1.OpCls.general[ST]	Zenon, Zenon
E05BCUQB1Control/QB1CSWI1.OpOpn.general[ST]	Zenon, Zenon
E05BCUQB1Control/QB1CSWI1.Pos.stVal[ST]	Zenon, Zenon

### Report Control: E05BCUMaster/LLN0.RCB.BRCB02

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05BCU	Logical Device	Master	Data Set	ds_brcb2
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E05BCUBreakerFailure/RBRF1.OpEx.general[ST]	XPG, XPG
E05BCUBreakerFailure/RBRF1.OpIn.general[ST]	XPG, XPG
E05BCUBreakerFailure/RBRF1.Str.general[ST]	XPG, XPG
E05BCUQA0Control/QA0CSWI2.OpCls.general[ST]	XPG, XPG
E05BCUQA0Control/QA0CSWI2.OpOpn.general[ST]	XPG, XPG
E05BCUQA0Control/QA0CSWI2.Pos.stVal[ST]	XPG, XPG
E05BCUQB1Control/QB1CSWI1.OpCls.general[ST]	XPG, XPG
E05BCUQB1Control/QB1CSWI1.OpOpn.general[ST]	XPG, XPG
E05BCUQB1Control/QB1CSWI1.Pos.stVal[ST]	XPG, XPG

### Report Control: E05BCUMaster/LLN0.RCB.URCB01

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05BCU	Logical Device	Master	Data Set	ds_urbcb1
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	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
E05BCUMeasurement/AMMXU1.A.neut.cVal.mag.f[MX]	Zenon, Zenon
E05BCUMeasurement/AMMXU1.A.phsA.cVal.mag.f[MX]	Zenon, Zenon
E05BCUMeasurement/AMMXU1.A.phsB.cVal.mag.f[MX]	Zenon, Zenon
E05BCUMeasurement/AMMXU1.A.phsC.cVal.mag.f[MX]	Zenon, Zenon
E05BCUMeasurement/VMMXU2.PhV.net.cVal.mag.f[MX]	Zenon, Zenon
E05BCUMeasurement/VMMXU2.PhV.phsA.cVal.mag.f[MX]	Zenon, Zenon
E05BCUMeasurement/VMMXU2.PhV.phsB.cVal.mag.f[MX]	Zenon, Zenon

Source Data Attribute	Client
E05BCUMeasurement/VMMXU2.PhV.phsC.cVal.mag.f[MX]	Zenon, Zenon

**Report Control: E05BCUMaster/LLN0.RCB.URCB02**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05BCU	Logical Device	Master	Data Set	ds_urcb2
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	rpt ID	URCB02	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
E05BCUMeasurement/AMMXU1.A.neut.cVal.mag.f[MX]	XPG, XPG
E05BCUMeasurement/AMMXU1.A.phsA.cVal.mag.f[MX]	XPG, XPG
E05BCUMeasurement/AMMXU1.A.phsB.cVal.mag.f[MX]	XPG, XPG
E05BCUMeasurement/AMMXU1.A.phsC.cVal.mag.f[MX]	XPG, XPG
E05BCUMeasurement/VMMXU2.PhV.net.cVal.mag.f[MX]	XPG, XPG
E05BCUMeasurement/VMMXU2.PhV.phsA.cVal.mag.f[MX]	XPG, XPG
E05BCUMeasurement/VMMXU2.PhV.phsB.cVal.mag.f[MX]	XPG, XPG
E05BCUMeasurement/VMMXU2.PhV.phsC.cVal.mag.f[MX]	XPG, XPG

**Report Control: E03BPULD0/LLN0.RCB.brcba**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03BPU	Logical Device	LD0	Data Set	Statld
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E03BPULD0/DISPTRC1.Op[ST]	Zenon, Zenon
E03BPULD0/Z1PDIS1.Op[ST]	Zenon, Zenon
E03BPULD0/Z1PDIS1.Str[ST]	Zenon, Zenon
E03BPULD0/Z2PDIS2.Op[ST]	Zenon, Zenon
E03BPULD0/Z2PDIS2.Str[ST]	Zenon, Zenon
E03BPULD0/Z3PDIS3.Op[ST]	Zenon, Zenon
E03BPULD0/Z3PDIS3.Str[ST]	Zenon, Zenon

**Report Control: E03BPULD0/LLN0.RCB.brcbb**

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03BPU	Logical Device	LD0	Data Set	Statlo

Attribute	Value	Attribute	Value	Attribute	Value
buffered	true	buffered Time	100	report confRev	10000
intg Pd	100	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
E03BPULD0/DISPTRC1.Op[ST]	XPG, XPG
E03BPULD0/Z1PDIS1.Op[ST]	XPG, XPG
E03BPULD0/Z1PDIS1.Str[ST]	XPG, XPG
E03BPULD0/Z2PDIS2.Op[ST]	XPG, XPG
E03BPULD0/Z2PDIS2.Str[ST]	XPG, XPG
E03BPULD0/Z3PDIS3.Op[ST]	XPG, XPG
E03BPULD0/Z3PDIS3.Str[ST]	XPG, XPG

#### Report Control: E03BPULD0/LLN0.RCB.urcba

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03BPU	Logical Device	LD0	Data Set	StatUrg
buffered	false	buffered Time	100	report confRev	10000
intg Pd	100	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
E03BPULD0/ATCTR2.AmpSv[MX]	Zenon, Zenon
E03BPULD0/ATVTR7.VolSv[MX]	Zenon, Zenon
E03BPULD0/BTCTR3.AmpSv[MX]	Zenon, Zenon
E03BPULD0/BTVTR8.VolSv[MX]	Zenon, Zenon
E03BPULD0/CTCTR7.AmpSv[MX]	Zenon, Zenon
E03BPULD0/CTVTR4.VolSv[MX]	Zenon, Zenon
E03BPULD0/NTCTR8.AmpSv[MX]	Zenon, Zenon
E03BPULD0/NTVTR1.VolSv[MX]	Zenon, Zenon

### 4.3.2. Unused Report Control Blocks

IED Name	Logical Device	Report ID	Buffered
E01BUP	System	urcbB	false
E01BUP	System	urcbC	false
E01BUP	System	urcbD	false
E01BUP	System	urcbE	false
E01BUP	System	urcbF	false
E01BUP	System	urcbG	false

IED Name	Logical Device	Report ID	Buffered
E01BUP	System	urcbH	false
E01BUP	System	urcbI	false
E01BUP	System	urcbJ	false
E01BUP	System	urcbK	false
E01BUP	System	urcbL	false
E01BUP	System	urcbM	false
E01BUP	System	urcbN	false
E01BUP	System	urcbO	false
E01BUP	System	urcbP	false
E01BUP	System	brcbB	true
E01BUP	System	brcbC	true
E01BUP	System	brcbD	true
E01BUP	System	brcbE	true
E01BUP	System	brcbF	true
E01BUP	System	brcbG	true
E01BUP	System	brcbH	true
E03BUP	System	urcbB	false
E03BUP	System	urcbC	false
E03BUP	System	urcbD	false
E03BUP	System	urcbE	false
E03BUP	System	urcbF	false
E03BUP	System	urcbG	false
E03BUP	System	urcbH	false
E03BUP	System	urcbI	false
E03BUP	System	urcbJ	false
E03BUP	System	urcbK	false
E03BUP	System	urcbL	false
E03BUP	System	urcbM	false
E03BUP	System	urcbN	false
E03BUP	System	urcbO	false
E03BUP	System	urcbP	false
E03BUP	System	brcbB	true
E03BUP	System	brcbC	true
E03BUP	System	brcbD	true
E03BUP	System	brcbE	true
E03BUP	System	brcbF	true
E03BUP	System	brcbG	true
E03BUP	System	brcbH	true
E04BUP	System	urcbB	false
E04BUP	System	urcbC	false
E04BUP	System	urcbD	false



IED Name	Logical Device	Report ID	Buffered
E04BUP	System	urcbE	false
E04BUP	System	urcbF	false
E04BUP	System	urcbG	false
E04BUP	System	urcbH	false
E04BUP	System	urcbI	false
E04BUP	System	urcbJ	false
E04BUP	System	urcbK	false
E04BUP	System	urcbL	false
E04BUP	System	urcbM	false
E04BUP	System	urcbN	false
E04BUP	System	urcbO	false
E04BUP	System	urcbP	false
E04BUP	System	brcbB	true
E04BUP	System	brcbC	true
E04BUP	System	brcbD	true
E04BUP	System	brcbE	true
E04BUP	System	brcbF	true
E04BUP	System	brcbG	true
E04BUP	System	brcbH	true
E06BUP	System	urcbB	false
E06BUP	System	urcbC	false
E06BUP	System	urcbD	false
E06BUP	System	urcbE	false
E06BUP	System	urcbF	false
E06BUP	System	urcbG	false
E06BUP	System	urcbH	false
E06BUP	System	urcbI	false
E06BUP	System	urcbJ	false
E06BUP	System	urcbK	false
E06BUP	System	urcbL	false
E06BUP	System	urcbM	false
E06BUP	System	urcbN	false
E06BUP	System	urcbO	false
E06BUP	System	urcbP	false
E06BUP	System	brcbB	true
E06BUP	System	brcbC	true
E06BUP	System	brcbD	true
E06BUP	System	brcbE	true
E06BUP	System	brcbF	true
E06BUP	System	brcbG	true
E06BUP	System	brcbH	true

### 4.3.3. Goose Messages

Publisher	GOOSE ID	Subscribers
E01PIU	gcb_l1	E01BCU
E01PIU	gcb_f1	E01BCU
E01PIU	gcb_l2	E01BCU
E01BUP	gcb01	E01PIU
E01BCU	gcb_l1	E01PIU, E05PIU, E02PIU
E01BCU	gcb_f1	E01PIU, E05PIU, E02PIU
E01BCU	gcb_l2	E01PIU, E05PIU, E02PIU
E02BCU	GoCB01	E02PIU, E01PIU, E03PIU, E06PIU, E04PIU, E05PIU
E02BCU	GoCB02	E02PIU, E01PIU, E03PIU, E06PIU, E04PIU, E05PIU
E02BCU	GoCB03	E02PIU, E01PIU, E03PIU, E06PIU, E04PIU, E05PIU
E02PIU	gcb_l1	E02BCU
E02PIU	gcb_f1	E02BCU
E02PIU	gcb_l2	E02BCU
E01BPU	gcb_f1	E01PIU
E02BPU	gcb_f1	E02PIU
E02BUP	gcb_f1	E02PIU
E03PIU	gcb_l1	E03BCU
E03PIU	gcb_f1	E03BCU
E03PIU	gcb_l2	E03BCU
E03BUP	gcb01	E03PIU
E03BCU	gcb_l1	E03PIU, E05PIU, E02PIU
E03BCU	gcb_f1	E03PIU, E05PIU, E02PIU
E03BCU	gcb_l2	E03PIU, E05PIU, E02PIU
E04BPU	gcb_f1	E04PIU
E04PIU	gcb_l1	E04BCU
E04PIU	gcb_f1	E04BCU
E04PIU	gcb_l2	E04BCU
E04BUP	gcb01	E04PIU
E04BCU	gcb_l1	E04PIU, E05PIU, E02PIU
E04BCU	gcb_f1	E04PIU, E05PIU, E02PIU
E04BCU	gcb_l2	E04PIU, E05PIU, E02PIU
E05BPU	gcb_f1	E05PIU
E05BUP	gcb_f1	E05PIU
E05PIU	gcb_l1	E05BCU
E05PIU	gcb_f1	E05BCU
E05PIU	gcb_l2	E05BCU
E06BPU	gcb_f1	E06PIU
E06PIU	gcb_l1	E06BCU

Publisher	GOOSE ID	Subscribers
E06PIU	gcb_f1	E06BCU
E06PIU	gcb_l2	E06BCU
E06BUP	gcb01	E06PIU
E06BCU	gcb_l1	E06PIU, E05PIU, E02PIU
E06BCU	gcb_f1	E06PIU, E05PIU, E02PIU
E06BCU	gcb_l2	E06PIU, E05PIU, E02PIU
E05BCU	GoCB01	E05PIU, E01PIU, E03PIU, E06PIU, E04PIU, E02PIU
E05BCU	GoCB02	E05PIU, E01PIU, E03PIU, E06PIU, E04PIU, E02PIU
E05BCU	GoCB03	E05PIU, E01PIU, E03PIU, E06PIU, E04PIU, E02PIU
E03BPU	gcb_f1	E03PIU

Table 117. GOOSE Messages Overview

## GOOSE Message Details

### Goose Control:E01PIULD0/LLN0.GCB.gcb\_l1

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01PIU	DataSet	ds_gcb_l1	MAC Address	01-0C-CD-01-00-00
Logical Device	LD0	DataSet Description	-	Goose appID	E01PIULD0/LLN0gcb_l1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E01PIUQA0Interface/QA0XCBR1.Pos.stVal[ST]	Internal Address
E01BCUQA0Control/QA0.CSW1.2	-

Table 118. Subscribers to: E01PIU

### Goose Control:E01PIULD0/LLN0.GCB.gcb\_f1

BreakerFailureLine

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01PIU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	LD0	DataSet Description	-	Goose appID	E01PIULD0/LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E01PIULD0/TripPTRC1.Tr.general[ST]	Internal Address
E01BCUBreakerFailure1/RBRF.1	-

Table 119. Subscribers to: E01PIU

### Goose Control:E01PIULD0/LLN0.GCB.gcb\_l2

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01PIU	DataSet	ds_gcb_l2	MAC Address	01-0C-CD-01-00-00
Logical Device	LD0	DataSet Description	-	Goose appID	E01PIULD0/LLN0gcb_l2

Attribute	Value	Attribute	Value	Attribute	Value
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E01PIUQB1Interface/QB1XSWI1.Pos.stVal[ST]	Internal Address
E01BCUQB1Control/QB1.CSWI.1	-

Table 120. Subscribers to: E01PIU

**Goose Control:E01BUPSystem/LLN0.GCB.gcb01**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01BUP	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	System	DataSet Description	-	Goose appID	E01BUPSystem/ LLN0gcb01
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E01BUPOvercurrent/PHPTOC1.Op.general[ST]	Internal Address
E01PIULD0/LLN0	-

Table 121. Subscribers to: E01BUP

**Goose Control:E01BCUMeasurement/LLN0.GCB.gcb\_l1**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01BCU	DataSet	ds_gcb_l1	MAC Address	01-0C-CD-01-00-00
Logical Device	Measurement	DataSet Description	-	Goose appID	E01BCUMeasurement/ LLN0gcb_l1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E01BCUQA0Control/QA0CSWI2.OpCls.general[ST]	Internal Address
E01PIULD0/LLN0	-

Table 122. Subscribers to: E01BCU

Subscribers to: E01BCUQA0Control/QA0CSWI2.OpOpn.general[ST]	Internal Address
E01PIULD0/LLN0	-

Table 123. Subscribers to: E01BCU

**Goose Control:E01BCUMeasurement/LLN0.GCB.gcb\_f1**

BreakerFailureLine

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01BCU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	Measurement	DataSet Description	-	Goose appID	E01BCUMeasurement/ LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E01BCUBreakerFailure1/RBRF1.OpEx.general[ST]	Internal Address
E05PIUQA0Interface/QA0.XCBR.1	-

Subscribers to: E01BCUBreakerFailure1/RBRF1.OpEx.general[ST]	Internal Address
E02PIUQA0Interface/QA0.XCBR.1	-

Table 124. Subscribers to: E01BCU

Subscribers to: E01BCUBreakerFailure1/RBRF1.OpIn.general[ST]	Internal Address
E01PIULD0/LLN0	-

Table 125. Subscribers to: E01BCU

**Goose Control:E01BCUMeasurement/LLN0.GCB.gcb\_l2**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01BCU	DataSet	ds_gcb_l2	MAC Address	01-0C-CD-01-00-00
Logical Device	Measurement	DataSet Description	-	Goose appID	E01BCUMeasurement/ LLN0gcb_l2
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E01BCUQB1Control/QB1CSWI1.OpCls.general[ST]	Internal Address
E01PIULD0/LLN0	-

Table 126. Subscribers to: E01BCU

Subscribers to: E01BCUQB1Control/QB1CSWI1.OpOpn.general[ST]	Internal Address
E01PIULD0/LLN0	-

Table 127. Subscribers to: E01BCU

**Goose Control:E02BCUMaster/LLN0.GCB.GoCB01**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02BCU	DataSet	ds_gcb_l1	MAC Address	01-0C-CD-01-00-00
Logical Device	Master	DataSet Description	-	Goose appID	E02BCUMaster/ LLN0GoCB01
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E02BCUQA0Control/QA0CSWI2.OpCls.general[ST]	Internal Address
E02PIUQA0Interface/QA0.XCBR.1	-

Table 128. Subscribers to: E02BCU

Subscribers to: E02BCUQA0Control/QA0CSWI2.OpOpn.general[ST]	Internal Address
E02PIUQA0Interface/QA0.XCBR.1	-

Table 129. Subscribers to: E02BCU

**Goose Control:E02BCUMaster/LLN0.GCB.GoCB02**

BreakerFailureTransformer

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02BCU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	Master	DataSet Description	-	Goose appID	E02BCUMaster/ LLN0GoCB02
confRev	10000	Max duration (ms)	10000	VLAN ID	000

Attribute	Value	Attribute	Value	Attribute	Value
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E02BCUBreakerFailure/RBRF1.OpEx.general[ST]	Internal Address
E01PIULD0/LLN0	-
E03PIULD0/LLN0	-
E06PIULD0/LLN0	-
E04PIULD0/LLN0	-
E05PIUQA0Interface/QA0.XCBR.1	-

Table 130. Subscribers to: E02BCU

Subscribers to: E02BCUBreakerFailure/RBRF1.OpIn.general[ST]	Internal Address
E02PIUQA0Interface/QA0.XCBR.1	-

Table 131. Subscribers to: E02BCU

### Goose Control:E02BCUMaster/LLN0.GCB.GoCB03

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02BCU	DataSet	ds_gcb_l2	MAC Address	01-0C-CD-01-00-00
Logical Device	Master	DataSet Description	-	Goose appID	E02BCUMaster/LLN0GoCB03
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E02BCUQB1Control/QB1CSWI1.OpCls.general[ST]	Internal Address
E02PIUQB1Interface/QB1.XSWI.1	-

Table 132. Subscribers to: E02BCU

Subscribers to: E02BCUQB1Control/QB1CSWI1.OpOpn.general[ST]	Internal Address
E02PIUQB1Interface/QB1.XSWI.1	-

Table 133. Subscribers to: E02BCU

### Goose Control:E02PIUTrip/LLN0.GCB.gcb\_l1

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02PIU	DataSet	ds_gcb_l1	MAC Address	01-0C-CD-01-00-00
Logical Device	Trip	DataSet Description	-	Goose appID	E02PIUTrip/LLN0gcb_l1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E02PIUQA0Interface/QA0XCBR1.Pos.stVal[ST]	Internal Address
E02BCUMaster/GGIO.3	-

Table 134. Subscribers to: E02PIU

### Goose Control:E02PIUTrip/LLN0.GCB.gcb\_f1

BreakerFailureTransformer

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02PIU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00

Attribute	Value	Attribute	Value	Attribute	Value
Logical Device	Trip	DataSet Description	-	Goose appID	E02PIUTrip/LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E02PIUTrip/TripPTRC1.Tr.general[ST]	Internal Address
E02BCUMaster/GGIO.3	-

Table 135. Subscribers to: E02PIU

**Goose Control:E02PIUTrip/LLN0.GCB.gcb\_l2**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02PIU	DataSet	ds_gcb_l2	MAC Address	01-0C-CD-01-00-00
Logical Device	Trip	DataSet Description	-	Goose appID	E02PIUTrip/LLN0gcb_l2
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E02PIUQB1Interface/QB1XSWI1.Pos.stVal[ST]	Internal Address
E02BCUMaster/GGIO.3	-

Table 136. Subscribers to: E02PIU

**Goose Control:E01BPULD0/LLN0.GCB.gcb\_f1**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01BPU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	LD0	DataSet Description	-	Goose appID	E01BPULD0/LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E01BPULD0/DISPTRC1.Op.general[ST]	Internal Address
E01PIULD0/LLN0	-

Table 137. Subscribers to: E01BPU

**Goose Control:E02BPUDifferential/LLN0.GCB.gcb\_f1**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02BPU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	Differential	DataSet Description	-	Goose appID	E02BPUDifferential/LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E02BPUDifferential/PDIF1.Op.general[ST]	Internal Address
E02PIUTrip/Trip.PTRC.1	-

Table 138. Subscribers to: E02BPU

**Goose Control:E02BUPOvercurrent/LLN0.GCB.gcb\_f1**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02BUP	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	Overcurrent	DataSet Description	-	Goose appID	E02BUPOvercurrent/LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E02BUPOvercurrent/PHPTOC1.Op.general[ST]	Internal Address
E02PIUTrip/Trip.PTRC.1	-

Table 139. Subscribers to: E02BUP

**Goose Control:E03PIULD0/LLN0.GCB.gcb\_l1**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03PIU	DataSet	ds_gcb_l1	MAC Address	01-0C-CD-01-00-00
Logical Device	LD0	DataSet Description	-	Goose appID	E03PIULD0/LLN0gcb_l1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E03PIUQA0Interface/QA0XCBR1.Pos.stVal[ST]	Internal Address
E03BCUQA0Control/QA0.CSW1.2	-

Table 140. Subscribers to: E03PIU

**Goose Control:E03PIULD0/LLN0.GCB.gcb\_f1**

BreakerFailureLine

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03PIU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	LD0	DataSet Description	-	Goose appID	E03PIULD0/LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E03PIULD0/TripPTRC1.Tr.general[ST]	Internal Address
E03BCUBreakerFailure1/RBRF.1	-

Table 141. Subscribers to: E03PIU

**Goose Control:E03PIULD0/LLN0.GCB.gcb\_l2**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03PIU	DataSet	ds_gcb_l2	MAC Address	01-0C-CD-01-00-00
Logical Device	LD0	DataSet Description	-	Goose appID	E03PIULD0/LLN0gcb_l2
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4



Subscribers to: E03PIUQB1Interface/QB1XSWI1.Pos.stVal[ST]	Internal Address
E03BCUQB1Control/QB1.CSWI.1	-

Table 142. Subscribers to: E03PIU

**Goose Control:E03BUPSystem/LLN0.GCB.gcb01**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03BUP	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	System	DataSet Description	-	Goose appID	E03BUPSystem/ LLN0gcb01
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E03BUPOvercurrent/PHPTOC1.Op.general[ST]	Internal Address
E03PIULD0/LLN0	-

Table 143. Subscribers to: E03BUP

**Goose Control:E03BCUMeasurement/LLN0.GCB.gcb\_l1**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03BCU	DataSet	ds_gcb_l1	MAC Address	01-0C-CD-01-00-00
Logical Device	Measurement	DataSet Description	-	Goose appID	E03BCUMeasurement/ LLN0gcb_l1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E03BCUQA0Control/QA0CSWI2.OpCls.general[ST]	Internal Address
E03PIULD0/LLN0	-

Table 144. Subscribers to: E03BCU

Subscribers to: E03BCUQA0Control/QA0CSWI2.OpOpn.general[ST]	Internal Address
E03PIULD0/LLN0	-

Table 145. Subscribers to: E03BCU

**Goose Control:E03BCUMeasurement/LLN0.GCB.gcb\_f1**

BreakerFailureLine

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03BCU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	Measurement	DataSet Description	-	Goose appID	E03BCUMeasurement/ LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E03BCUBreakerFailure1/RBRF1.OpEx.general[ST]	Internal Address
E05PIUQA0Interface/QA0.XCBBR.1	-
E02PIUQA0Interface/QA0.XCBBR.1	-

Table 146. Subscribers to: E03BCU

Subscribers to: E03BCUBreakerFailure1/RBRF1.OpIn.general[ST]	Internal Address
E03PIULD0/LLN0	-

Table 147. Subscribers to: E03BCU

**Goose Control:E03BCUMeasurement/LLN0.GCB.gcb\_l2**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03BCU	DataSet	ds_gcb_l2	MAC Address	01-0C-CD-01-00-00
Logical Device	Measurement	DataSet Description	-	Goose appID	E03BCUMeasurement/LLN0gcb_l2
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E03BCUQB1Control/QB1CSWI1.OpCls.general[ST]	Internal Address
E03PIULD0/LLN0	-

Table 148. Subscribers to: E03BCU

Subscribers to: E03BCUQB1Control/QB1CSWI1.OpOpn.general[ST]	Internal Address
E03PIULD0/LLN0	-

Table 149. Subscribers to: E03BCU

**Goose Control:E04BPULD0/LLN0.GCB.gcb\_f1**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04BPU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	LD0	DataSet Description	-	Goose appID	E04BPULD0/LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E04BPULD0/DISPTRC1.Op.general[ST]	Internal Address
E04PIULD0/LLN0	-

Table 150. Subscribers to: E04BPU

**Goose Control:E04PIULD0/LLN0.GCB.gcb\_l1**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04PIU	DataSet	ds_gcb_l1	MAC Address	01-0C-CD-01-00-00
Logical Device	LD0	DataSet Description	-	Goose appID	E04PIULD0/LLN0gcb_l1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E04PIUQA0Interface/QA0XCBR1.Pos.stVal[ST]	Internal Address
E04BCUQA0Control/QA0.CSWI.2	-

Table 151. Subscribers to: E04PIU

**Goose Control:E04PIULD0/LLN0.GCB.gcb\_f1**

BreakerFailureLine

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04PIU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	LD0	DataSet Description	-	Goose appID	E04PIULD0/ LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E04PIULD0/TripPTRC1.Tr.general[ST]	Internal Address
E04BCUBreakerFailure1/RBRF.1	-

Table 152. Subscribers to: E04PIU

**Goose Control:E04PIULD0/LLN0.GCB.gcb\_l2**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04PIU	DataSet	ds_gcb_l2	MAC Address	01-0C-CD-01-00-00
Logical Device	LD0	DataSet Description	-	Goose appID	E04PIULD0/LLN0gcb_l2
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E04PIUQB1Interface/QB1XSWI1.Pos.stVal[ST]	Internal Address
E04BCUQB1Control/QB1.CSWI.1	-

Table 153. Subscribers to: E04PIU

**Goose Control:E04BUPSystem/LLN0.GCB.gcb01**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04BUP	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	System	DataSet Description	-	Goose appID	E04BUPSystem/ LLN0gcb01
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E04BUPOvercurrent/PHPTOC1.Op.general[ST]	Internal Address
E04PIULD0/LLN0	-

Table 154. Subscribers to: E04BUP

**Goose Control:E04BCUMeasurement/LLN0.GCB.gcb\_l1**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04BCU	DataSet	ds_gcb_l1	MAC Address	01-0C-CD-01-00-00
Logical Device	Measurement	DataSet Description	-	Goose appID	E04BCUMeasurement/ LLN0gcb_l1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E04BCUQA0Control/QA0CSWI2.OpCls.general[ST]	Internal Address
E04PIULD0/LLN0	-

Table 155. Subscribers to: E04BCU

Subscribers to: E04BCUQA0Control/QA0CSWI2.OpOpn.general[ST]	Internal Address
E04PIULD0/LLN0	-

Table 156. Subscribers to: E04BCU

**Goose Control:E04BCUMeasurement/LLN0.GCB.gcb\_f1**

BreakerFailureLine

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04BCU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	Measurement	DataSet Description	-	Goose appID	E04BCUMeasurement/LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E04BCUBreakerFailure1/RBRF1.OpEx.general[ST]	Internal Address
E05PIUQA0Interface/QA0.XCBR.1	-
E02PIUQA0Interface/QA0.XCBR.1	-

Table 157. Subscribers to: E04BCU

Subscribers to: E04BCUBreakerFailure1/RBRF1.OpIn.general[ST]	Internal Address
E04PIULD0/LLN0	-

Table 158. Subscribers to: E04BCU

**Goose Control:E04BCUMeasurement/LLN0.GCB.gcb\_l2**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04BCU	DataSet	ds_gcb_l2	MAC Address	01-0C-CD-01-00-00
Logical Device	Measurement	DataSet Description	-	Goose appID	E04BCUMeasurement/LLN0gcb_l2
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E04BCUQB1Control/QB1CSWI1.OpCls.general[ST]	Internal Address
E04PIULD0/LLN0	-

Table 159. Subscribers to: E04BCU

Subscribers to: E04BCUQB1Control/QB1CSWI1.OpOpn.general[ST]	Internal Address
E04PIULD0/LLN0	-

Table 160. Subscribers to: E04BCU

**Goose Control:E05BPUDifferential/LLN0.GCB.gcb\_f1**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05BPU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	Differential	DataSet Description	-	Goose appID	E05BPUDifferential/LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E05BPUDifferential/PDIF1.Op.general[ST]	Internal Address
E05PIUTrip/Trip.PTRC.1	-

Table 161. Subscribers to: E05BPU

**Goose Control:E05BUPOvercurrent/LLN0.GCB.gcb\_f1**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05BUP	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	Overcurrent	DataSet Description	-	Goose appID	E05BUPOvercurrent/LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E05BUPOvercurrent/PHPTOC1.Op.general[ST]	Internal Address
E05PIUTrip/Trip.PTRC.1	-

Table 162. Subscribers to: E05BUP

**Goose Control:E05PIUTrip/LLN0.GCB.gcb\_l1**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05PIU	DataSet	ds_gcb_l1	MAC Address	01-0C-CD-01-00-00
Logical Device	Trip	DataSet Description	-	Goose appID	E05PIUTrip/LLN0gcb_l1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E05PIUQA0Interface/QA0XCBR1.Pos.stVal[ST]	Internal Address
E05BCUMaster/GGIO.3	-

Table 163. Subscribers to: E05PIU

**Goose Control:E05PIUTrip/LLN0.GCB.gcb\_f1**

BreakerFailureTransformer

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05PIU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	Trip	DataSet Description	-	Goose appID	E05PIUTrip/LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E05PIUTrip/TripPTRC1.Tr.general[ST]	Internal Address
E05BCUMaster/GGIO.3	-

Table 164. Subscribers to: E05PIU

**Goose Control:E05PIUTrip/LLN0.GCB.gcb\_l2**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05PIU	DataSet	ds_gcb_l2	MAC Address	01-0C-CD-01-00-00
Logical Device	Trip	DataSet Description	-	Goose appID	E05PIUTrip/LLN0gcb_l2
confRev	10000	Max duration (ms)	10000	VLAN ID	000

Attribute	Value	Attribute	Value	Attribute	Value
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E05PIUQB1Interface/QB1XSWI1.Pos.stVal[ST]	Internal Address
E05BCUMaster/GGIO.3	-

Table 165. Subscribers to: E05PIU

**Goose Control:E06BPULD0/LLN0.GCB.gcb\_f1**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06BPU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	LD0	DataSet Description	-	Goose appID	E06BPULD0/LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E06BPULD0/DISPTRC1.Op.general[ST]	Internal Address
E06PIULD0/LLN0	-

Table 166. Subscribers to: E06BPU

**Goose Control:E06PIULD0/LLN0.GCB.gcb\_l1**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06PIU	DataSet	ds_gcb_l1	MAC Address	01-0C-CD-01-00-00
Logical Device	LD0	DataSet Description	-	Goose appID	E06PIULD0/LLN0gcb_l1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E06PIUQA0Interface/QA0XCBR1.Pos.stVal[ST]	Internal Address
E06BCUQA0Control/QA0.CSWI.2	-

Table 167. Subscribers to: E06PIU

**Goose Control:E06PIULD0/LLN0.GCB.gcb\_f1**

BreakerFailureLine

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06PIU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	LD0	DataSet Description	-	Goose appID	E06PIULD0/LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E06PIULD0/TripPTRC1.Tr.general[ST]	Internal Address
E06BCUBreakerFailure1/RBRF.1	-

Table 168. Subscribers to: E06PIU

**Goose Control:E06PIULD0/LLN0.GCB.gcb\_l2**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06PIU	DataSet	ds_gcb_l2	MAC Address	01-0C-CD-01-00-00
Logical Device	LD0	DataSet Description	-	Goose appID	E06PIULD0/LLN0gcb_l2
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E06PIUQB1Interface/QB1XSWI1.Pos.stVal[ST]	Internal Address
E06BCUQB1Control/QB1.CSWI.1	-

Table 169. Subscribers to: E06PIU

**Goose Control:E06BUPSystem/LLN0.GCB.gcb01**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06BUP	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	System	DataSet Description	-	Goose appID	E06BUPSystem/ LLN0gcb01
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E06BUPOvercurrent/PHPTOC1.Op.general[ST]	Internal Address
E06PIULD0/LLN0	-

Table 170. Subscribers to: E06BUP

**Goose Control:E06BCUMeasurement/LLN0.GCB.gcb\_l1**

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06BCU	DataSet	ds_gcb_l1	MAC Address	01-0C-CD-01-00-00
Logical Device	Measurement	DataSet Description	-	Goose appID	E06BCUMeasurement/ LLN0gcb_l1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E06BCUQA0Control/QA0CSWI2.OpCls.general[ST]	Internal Address
E06PIULD0/LLN0	-

Table 171. Subscribers to: E06BCU

Subscribers to: E06BCUQA0Control/QA0CSWI2.OpOpn.general[ST]	Internal Address
E06PIULD0/LLN0	-

Table 172. Subscribers to: E06BCU

**Goose Control:E06BCUMeasurement/LLN0.GCB.gcb\_f1**

BreakerFailureLine

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06BCU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	Measurement	DataSet Description	-	Goose appID	E06BCUMeasurement/ LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E06BCUBreakerFailure1/RBRF1.OpEx.general[ST]	Internal Address
E05PIUQA0Interface/QA0.XCBBR.1	-
E02PIUQA0Interface/QA0.XCBBR.1	-

Table 173. Subscribers to: E06BCU

Subscribers to: E06BCUBreakerFailure1/RBRF1.OpIn.general[ST]	Internal Address
E06PIULD0/LLN0	-

Table 174. Subscribers to: E06BCU

### Goose Control:E06BCUMeasurement/LLN0.GCB.gcb\_l2

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06BCU	DataSet	ds_gcb_l2	MAC Address	01-0C-CD-01-00-00
Logical Device	Measurement	DataSet Description	-	Goose appID	E06BCUMeasurement/ LLN0gcb_l2
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E06BCUQB1Control/QB1CSWI1.OpCls.general[ST]	Internal Address
E06PIULD0/LLN0	-

Table 175. Subscribers to: E06BCU

Subscribers to: E06BCUQB1Control/QB1CSWI1.OpOpn.general[ST]	Internal Address
E06PIULD0/LLN0	-

Table 176. Subscribers to: E06BCU

### Goose Control:E05BCUMaster/LLN0.GCB.GoCB01

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05BCU	DataSet	ds_gcb_l1	MAC Address	01-0C-CD-01-00-00
Logical Device	Master	DataSet Description	-	Goose appID	E05BCUMaster/ LLN0GoCB01
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E05BCUQA0Control/QA0CSWI2.OpCls.general[ST]	Internal Address
E05PIUQA0Interface/QA0.XCBBR.1	-

Table 177. Subscribers to: E05BCU

Subscribers to: E05BCUQA0Control/QA0CSWI2.OpOpn.general[ST]	Internal Address
E05PIUQA0Interface/QA0.XCBBR.1	-

Table 178. Subscribers to: E05BCU

### Goose Control:E05BCUMaster/LLN0.GCB.GoCB02

BreakerFailureTransformer

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05BCU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	Master	DataSet Description	-	Goose appID	E05BCUMaster/ LLN0GoCB02



Attribute	Value	Attribute	Value	Attribute	Value
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E05BCUBreakerFailure/RBRF1.OpEx.general[ST]	Internal Address
E01PIULD0/LLN0	-
E03PIULD0/LLN0	-
E06PIULD0/LLN0	-
E04PIULD0/LLN0	-
E02PIUQA0Interface/QA0.XCBBR.1	-

Table 179. Subscribers to: E05BCU

Subscribers to: E05BCUBreakerFailure/RBRF1.OpIn.general[ST]	Internal Address
E05PIUQA0Interface/QA0.XCBBR.1	-

Table 180. Subscribers to: E05BCU

### Goose Control:E05BCUMaster/LLN0.GCB.GoCB03

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05BCU	DataSet	ds_gcb_l2	MAC Address	01-0C-CD-01-00-00
Logical Device	Master	DataSet Description	-	Goose appID	E05BCUMaster/ LLN0GoCB03
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	500	VLAN Priority	4

Subscribers to: E05BCUQB1Control/QB1CSWI1.OpCls.general[ST]	Internal Address
E05PIUQB1Interface/QB1.XSWI.1	-

Table 181. Subscribers to: E05BCU

Subscribers to: E05BCUQB1Control/QB1CSWI1.OpOpn.general[ST]	Internal Address
E05PIUQB1Interface/QB1.XSWI.1	-

Table 182. Subscribers to: E05BCU

### Goose Control:E03BPULD0/LLN0.GCB.gcb\_f1

Helinks default Goose Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03BPU	DataSet	ds_gcb_f1	MAC Address	01-0C-CD-01-00-00
Logical Device	LD0	DataSet Description	-	Goose appID	E03BPULD0/ LLN0gcb_f1
confRev	10000	Max duration (ms)	10000	VLAN ID	000
GSE appID	0000	Min duration (ms)	5	VLAN Priority	4

Subscribers to: E03BPULD0/DISPTRC1.Op.general[ST]	Internal Address
E03PIULD0/LLN0	-

Table 183. Subscribers to: E03BPU

## 4.3.4. SMV Messages

Publisher	SMV Control Block	SMV Subscribers
E01PIU	smvcba	E01BUP, E01BCU, E01BPU

Publisher	SMV Control Block	SMV Subscribers
E02PIU	smvcba	E02BCU, E02BPU, E02BUP
E03PIU	smvcba	E03BUP, E03BPU, E03BCU
E04PIU	smvcba	E04BUP, E04BPU, E04BCU
E05PIU	smvcba	E05BUP, E05BCU, E05BPU
E06PIU	smvcba	E06BCU, E06BPU, E06BUP

Table 184. SMV Streams Overview

## SMV Stream Details

### SMV Control BlockE01PIULD0/LLN0.SVCB.smvcba

Helinks default SMV Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E01PIU	DataSet	ds_smvcba	MAC Address	01-0C-CD-04-01-FF
Logical Device	LD0	DataSet Desc.	-	Configuration Revision	10000
SMV ID	E01PIULD0/LLN0smvcba	VLAN ID	000	APPID	4000
Vlan Prio.	4	Nr. of ASDU	1	Sample Mode	SmpPerPeriod
Sample Rate	80	Security Enabled	None	Opt. Time Stamp	false
Opt. DataRef	false	Opt. DataSet	false	Opt. Refresh Time	false
Opt.Sample Rate	false	Opt.Security	false	Opt. Sync. Source ID	false

Table 185. SMV Control Block

Subscriber To E01PIUCTCT/ATCTR1.AmpSv.instMag.i[MX]	Internal Address
E01BUPSystem/Gos.GGIO.1	-
E01BCUMeasurement/A.TCTR.5	-
E01BPULD0/LLN0	-

Table 186. Subscriber To E01PIU

Subscriber To E01PIUCTCT/BTCTR2.AmpSv.instMag.f[MX]	Internal Address
E01BUPSystem/Gos.GGIO.1	-
E01BCUMeasurement/B.TCTR.1	-
E01BPULD0/LLN0	-

Table 187. Subscriber To E01PIU

Subscriber To E01PIUCTCT/CTCTR3.AmpSv.instMag.i[MX]	Internal Address
E01BUPSystem/Gos.GGIO.1	-
E01BCUMeasurement/C.TCTR.4	-
E01BPULD0/LLN0	-

Table 188. Subscriber To E01PIU

Subscriber To E01PIUCTCT/NTCTR4.AmpSv.instMag.i[MX]	Internal Address
E01BUPSystem/Gos.GGIO.1	-
E01BCUMeasurement/N.TCTR.6	-
E01BPULD0/LLN0	-

Table 189. Subscriber To E01PIU

Subscriber To E01PIUVTVT/ATVTR1.VolSv.instMag.i[MX]	Internal Address
E01BCUMeasurement/A.TVTR.2	-
E01BPULD0/LLN0	-

Table 190. Subscriber To E01PIU

Subscriber To E01PIUVTVT/BTVTR2.VolSv.instMag.i[MX]	Internal Address
E01BCUMeasurement/B.TVTR.12	-
E01BPULD0/LLN0	-

Table 191. Subscriber To E01PIU

Subscriber To E01PIUVTVT/CTVTR3.VolSv.instMag.i[MX]	Internal Address
E01BCUMeasurement/C.TVTR.14	-
E01BPULD0/LLN0	-

Table 192. Subscriber To E01PIU

Subscriber To E01PIUVTVT/NTVTR4.VolSv.instMag.i[MX]	Internal Address
E01BCUMeasurement/N.TVTR.3	-
E01BPULD0/LLN0	-

Table 193. Subscriber To E01PIU

### SMV Control BlockE02PIUTrip/LLN0.SVCB.smvcba

Helinks default SMV Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E02PIU	DataSet	ds_smvcba	MAC Address	01-0C-CD-04-01-FF
Logical Device	Trip	DataSet Desc.	-	Configuration Revision	10000
SMV ID	E02PIUTrip/LLN0smvcba	VLAN ID	000	APPID	4000
Vlan Prio.	4	Nr. of ASDU	1	Sample Mode	SmpPerPeriod
Sample Rate	80	Security Enabled	None	Opt. Time Stamp	false
Opt. DataRef	false	Opt. DataSet	false	Opt. Refresh Time	false
Opt.Sample Rate	false	Opt.Security	false	Opt. Sync. Source ID	false

Table 194. SMV Control Block

Subscriber To E02PIUCTCT/ATCTR1.AmpSv.instMag.i[MX]	Internal Address
E02BCUMaster/GGIO.3	-
E02BPUDifferential/A.TCTR.2	-
E02BUPOvercurrent/A.TCTR.5	-

Table 195. Subscriber To E02PIU

Subscriber To E02PIUCTCT/BTCTR2.AmpSv.instMag.f[MX]	Internal Address
E02BCUMaster/GGIO.3	-
E02BPUDifferential/B.TCTR.3	-
E02BUPOvercurrent/B.TCTR.1	-

Table 196. Subscriber To E02PIU

Subscriber To E02PIUCTCT/CTCTR3.AmpSv.instMag.i[MX]	Internal Address
E02BCUMaster/GGIO.3	-

Subscriber To E02PIUCTCT/CTCTR3.AmpSv.instMag.i[MX]	Internal Address
E02BPUDifferential/C.TCTR.1	-
E02BUPOvercurrent/C.TCTR.4	-

Table 197. Subscriber To E02PIU

Subscriber To E02PIUCTCT/NTCTR4.AmpSv.instMag.i[MX]	Internal Address
E02BCUMaster/GGIO.3	-
E02BPUDifferential/N.TCTR.4	-
E02BUPOvercurrent/N.TCTR.6	-

Table 198. Subscriber To E02PIU

Subscriber To E02PIUVTVT/ATVTR1.VolSv.instMag.i[MX]	Internal Address
E02BCUMaster/GGIO.3	-

Table 199. Subscriber To E02PIU

Subscriber To E02PIUVTVT/BTVTR2.VolSv.instMag.i[MX]	Internal Address
E02BCUMaster/GGIO.3	-

Table 200. Subscriber To E02PIU

Subscriber To E02PIUVTVT/CTVTR3.VolSv.instMag.i[MX]	Internal Address
E02BCUMaster/GGIO.3	-

Table 201. Subscriber To E02PIU

Subscriber To E02PIUVTVT/NTVTR4.VolSv.instMag.i[MX]	Internal Address
E02BCUMaster/GGIO.3	-

Table 202. Subscriber To E02PIU

### SMV Control BlockE03PIULD0/LLN0.SVCB.smvcba

Helinks default SMV Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E03PIU	DataSet	ds_smvcba	MAC Address	01-0C-CD-04-01-FF
Logical Device	LD0	DataSet Desc.	-	Configuration Revision	10000
SMV ID	E03PIULD0/LLN0smvcba	VLAN ID	000	APPID	4000
Vlan Prio.	4	Nr. of ASDU	1	Sample Mode	SmpPerPeriod
Sample Rate	80	Security Enabled	None	Opt. Time Stamp	false
Opt. DataRef	false	Opt. DataSet	false	Opt. Refresh Time	false
Opt.Sample Rate	false	Opt.Security	false	Opt. Sync. Source ID	false

Table 203. SMV Control Block

Subscriber To E03PIUCTCT/ATCTR1.AmpSv.instMag.i[MX]	Internal Address
E03BUPSystem/Gos.GGIO.1	-
E03BPULD0/LLN0	-
E03BCUMeasurement/A.TCTR.5	-

Table 204. Subscriber To E03PIU

Subscriber To E03PIUCTCT/BTCTR2.AmpSv.instMag.f[MX]	Internal Address
E03BUPSystem/Gos.GGIO.1	-

Subscriber To E03PIUCTCT/BTCTR2.AmpSv.instMag.i[MX]	Internal Address
E03BPULD0/LLN0	-
E03BCUMeasurement/B.TCTR.1	-

Table 205. Subscriber To E03PIU

Subscriber To E03PIUCTCT/CTCTR3.AmpSv.instMag.i[MX]	Internal Address
E03BUPSystem/Gos.GGIO.1	-
E03BPULD0/LLN0	-
E03BCUMeasurement/C.TCTR.4	-

Table 206. Subscriber To E03PIU

Subscriber To E03PIUCTCT/NTCTR4.AmpSv.instMag.i[MX]	Internal Address
E03BUPSystem/Gos.GGIO.1	-
E03BPULD0/LLN0	-
E03BCUMeasurement/N.TCTR.6	-

Table 207. Subscriber To E03PIU

Subscriber To E03PIUVTVT/ATVTR1.VolSv.instMag.i[MX]	Internal Address
E03BPULD0/LLN0	-
E03BCUMeasurement/A.TVTR.2	-

Table 208. Subscriber To E03PIU

Subscriber To E03PIUVTVT/BTVTR2.VolSv.instMag.i[MX]	Internal Address
E03BPULD0/LLN0	-
E03BCUMeasurement/B.TVTR.12	-

Table 209. Subscriber To E03PIU

Subscriber To E03PIUVTVT/CTVTR3.VolSv.instMag.i[MX]	Internal Address
E03BPULD0/LLN0	-
E03BCUMeasurement/C.TVTR.14	-

Table 210. Subscriber To E03PIU

Subscriber To E03PIUVTVT/NTVTR4.VolSv.instMag.i[MX]	Internal Address
E03BPULD0/LLN0	-
E03BCUMeasurement/N.TVTR.3	-

Table 211. Subscriber To E03PIU

### SMV Control BlockE04PIULD0/LLN0.SVCB.smvcba

Helinks default SMV Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E04PIU	DataSet	ds_smvcba	MAC Address	01-0C-CD-04-01-FF
Logical Device	LD0	DataSet Desc.	-	Configuration Revision	10000
SMV ID	E04PIULD0/LLN0smvcba	VLAN ID	000	APPID	4000
Vlan Prio.	4	Nr. of ASDU	1	Sample Mode	SmpPerPeriod
Sample Rate	80	Security Enabled	None	Opt. Time Stamp	false
Opt. DataRef	false	Opt. DataSet	false	Opt. Refresh Time	false

Attribute	Value	Attribute	Value	Attribute	Value
Opt.Sample Rate	false	Opt.Security	false	Opt. Sync. Source ID	false

Table 212. SMV Control Block

Subscriber To E04PIUCTCT/ATCTR1.AmpSv.instMag.i[MX]	Internal Address
E04BUPSystem/Gos.GGIO.1	-
E04BPULD0/LLN0	-
E04BCUMeasurement/A.TCTR.5	-

Table 213. Subscriber To E04PIU

Subscriber To E04PIUCTCT/BTCTR2.AmpSv.instMag.f[MX]	Internal Address
E04BUPSystem/Gos.GGIO.1	-
E04BPULD0/LLN0	-
E04BCUMeasurement/B.TCTR.1	-

Table 214. Subscriber To E04PIU

Subscriber To E04PIUCTCT/CTCTR3.AmpSv.instMag.i[MX]	Internal Address
E04BUPSystem/Gos.GGIO.1	-
E04BPULD0/LLN0	-
E04BCUMeasurement/C.TCTR.4	-

Table 215. Subscriber To E04PIU

Subscriber To E04PIUCTCT/NTCTR4.AmpSv.instMag.i[MX]	Internal Address
E04BUPSystem/Gos.GGIO.1	-
E04BPULD0/LLN0	-
E04BCUMeasurement/N.TCTR.6	-

Table 216. Subscriber To E04PIU

Subscriber To E04PIUVTVT/ATVTR1.VolSv.instMag.i[MX]	Internal Address
E04BPULD0/LLN0	-
E04BCUMeasurement/A.TVTR.2	-

Table 217. Subscriber To E04PIU

Subscriber To E04PIUVTVT/BTVTR2.VolSv.instMag.i[MX]	Internal Address
E04BPULD0/LLN0	-
E04BCUMeasurement/B.TVTR.12	-

Table 218. Subscriber To E04PIU

Subscriber To E04PIUVTVT/CTVTR3.VolSv.instMag.i[MX]	Internal Address
E04BPULD0/LLN0	-
E04BCUMeasurement/C.TVTR.14	-

Table 219. Subscriber To E04PIU

Subscriber To E04PIUVTVT/NTVTR4.VolSv.instMag.i[MX]	Internal Address
E04BPULD0/LLN0	-
E04BCUMeasurement/N.TVTR.3	-

Table 220. Subscriber To E04PIU

## SMV Control BlockE05PIUTrip/LLN0.SVCB.smvcba

Helinks default SMV Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E05PIU	DataSet	ds_smcba	MAC Address	01-0C-CD-04-01-FF
Logical Device	Trip	DataSet Desc.	-	Configuration Revision	10000
SMV ID	E05PIUTrip/ LLN0smcaba	VLAN ID	000	APPID	4000
Vlan Prio.	4	Nr. of ASDU	1	Sample Mode	SmpPerPeriod
Sample Rate	80	Security Enabled	None	Opt. Time Stamp	false
Opt. DataRef	false	Opt. DataSet	false	Opt. Refresh Time	false
Opt.Sample Rate	false	Opt.Security	false	Opt. Sync. Source ID	false

Table 221. SMV Control Block

Subscriber To E05PIUCTCT/ATCTR1.AmpSv.instMag.i[MX]	Internal Address
E05BUPOvercurrent/A.TCTR.5	-
E05BCUMaster/GGIO.3	-
E05BPUDifferential/A.TCTR.2	-

Table 222. Subscriber To E05PIU

Subscriber To E05PIUCTCT/BTCTR2.AmpSv.instMag.f[MX]	Internal Address
E05BUPOvercurrent/B.TCTR.1	-
E05BCUMaster/GGIO.3	-
E05BPUDifferential/B.TCTR.3	-

Table 223. Subscriber To E05PIU

Subscriber To E05PIUCTCT/CTCTR3.AmpSv.instMag.i[MX]	Internal Address
E05BUPOvercurrent/C.TCTR.4	-
E05BCUMaster/GGIO.3	-
E05BPUDifferential/C.TCTR.1	-

Table 224. Subscriber To E05PIU

Subscriber To E05PIUCTCT/NTCTR4.AmpSv.instMag.i[MX]	Internal Address
E05BUPOvercurrent/N.TCTR.6	-
E05BCUMaster/GGIO.3	-
E05BPUDifferential/N.TCTR.4	-

Table 225. Subscriber To E05PIU

Subscriber To E05PIUVTVT/ATVTR1.VolSv.instMag.i[MX]	Internal Address
E05BCUMaster/GGIO.3	-

Table 226. Subscriber To E05PIU

Subscriber To E05PIUVTVT/BTVTR2.VolSv.instMag.i[MX]	Internal Address
E05BCUMaster/GGIO.3	-

Table 227. Subscriber To E05PIU

Subscriber To E05PIUVTVT/CTVTR3.VolSv.instMag.i[MX]	Internal Address
E05BCUMaster/GGIO.3	-

Table 228. Subscriber To E05PIU

Subscriber To E05PIUVTVT/NTVTR4.VolSv.instMag.i[MX]	Internal Address
E05BCUMaster/GGIO.3	-

Table 229. Subscriber To E05PIU

**SMV Control BlockE06PIULD0/LLN0.SVCB.smvcba**

Helinks default SMV Control Block

Attribute	Value	Attribute	Value	Attribute	Value
IED	E06PIU	DataSet	ds_smvcba	MAC Address	01-0C-CD-04-01-FF
Logical Device	LD0	DataSet Desc.	-	Configuration Revision	10000
SMV ID	E06PIULD0/LLN0smvcba	VLAN ID	000	APPID	4000
Vlan Prio.	4	Nr. of ASDU	1	Sample Mode	SmpPerPeriod
Sample Rate	80	Security Enabled	None	Opt. Time Stamp	false
Opt. DataRef	false	Opt. DataSet	false	Opt. Refresh Time	false
Opt.Sample Rate	false	Opt.Security	false	Opt. Sync. Source ID	false

Table 230. SMV Control Block

Subscriber To E06PIUCTCT/ATCTR1.AmpSv.instMag.i[MX]	Internal Address
E06BCUMeasurement/A.TCTR.5	-
E06BPULD0/LLN0	-
E06BUPSystem/Gos.GGIO.1	-

Table 231. Subscriber To E06PIU

Subscriber To E06PIUCTCT/BTCTR2.AmpSv.instMag.f[MX]	Internal Address
E06BCUMeasurement/B.TCTR.1	-
E06BPULD0/LLN0	-
E06BUPSystem/Gos.GGIO.1	-

Table 232. Subscriber To E06PIU

Subscriber To E06PIUCTCT/CTCTR3.AmpSv.instMag.i[MX]	Internal Address
E06BCUMeasurement/C.TCTR.4	-
E06BPULD0/LLN0	-
E06BUPSystem/Gos.GGIO.1	-

Table 233. Subscriber To E06PIU

Subscriber To E06PIUCTCT/NTCTR4.AmpSv.instMag.i[MX]	Internal Address
E06BCUMeasurement/N.TCTR.6	-
E06BPULD0/LLN0	-
E06BUPSystem/Gos.GGIO.1	-

Table 234. Subscriber To E06PIU

Subscriber To E06PIUVTVT/ATVTR1.VolSv.instMag.i[MX]	Internal Address
E06BCUMeasurement/A.TVTR.2	-
E06BPULD0/LLN0	-

Table 235. Subscriber To E06PIU



Subscriber To E06PIUVTVT/BTVTR2.VolSv.instMag.i[MX]	Internal Address
E06BCUMeasurement/B.TVTR.12	-
E06BPULD0/LLN0	-

*Table 236. Subscriber To E06PIU*

Subscriber To E06PIUVTVT/CTVTR3.VolSv.instMag.i[MX]	Internal Address
E06BCUMeasurement/C.TVTR.14	-
E06BPULD0/LLN0	-

*Table 237. Subscriber To E06PIU*

Subscriber To E06PIUVTVT/NTVTR4.VolSv.instMag.i[MX]	Internal Address
E06BCUMeasurement/N.TVTR.3	-
E06BPULD0/LLN0	-

*Table 238. Subscriber To E06PIU*