



High**PROTEC**

IEC 61850 | PICS

MCDLV4

Software-Version: 3.3.c

Protocol Implementation Conformance Statement (PICS)

UCA International Users Group Testing Sub Committee

English

General

This document is applicable for MCDLV4 Version 3.3.c (Firmware-Build 33091).

- ASCI basic conformance statement
- ACSI models conformance statement
- ACSI service conformance statement

The statements specify the communication features mapped to IEC 61850-8-1.

ASCI basic conformance statement

The basic conformance statement is defined in Table A.1.

Table A.1 – Basic conformance statement

| | | Client/ Subscriber | Server/ Publisher | Value/ Comments |
|--|---|-----------------------|----------------------|-----------------|
| Client-Server roles | | | | |
| B11 | Server side (of TWO-PARTY-APPLICATION-ASSOCIATION) | – | Y | |
| B12 | Client side of (TWO-PARTY-APPLICATION-ASSOCIATION) | – | – | |
| | | | | |
| SCSMs supported | | | | |
| B21 | SCSM: IEC 6185-8-1 used | – | Y | |
| B22 | SCSM: IEC 6185-9-1 used | – | N | |
| B23 | SCSM: IEC 6185-9-2 used | – | Y | |
| B24 | SCSM: other | – | N | |
| | | | | |
| Generic substation event model (GSE) | | | | |
| B31 | Publisher side | – | Y | |
| B32 | Subscriber side | Y | – | |
| | | | | |
| Transmission of sampled value model (SVC) | | | | |
| B41 | Publisher side | – | N | |
| B42 | Subscriber side | – | – | |
| – Y = supported N or empty = not supported | | | | |

ACSI models conformance statement

The ACSI models conformance statement is defined in Table A.2.

Table A.2 – ACSI models conformance statement

| | | Client/ Subscriber | Server/ Publisher | Value/ Comments |
|---|----------------------------------|-----------------------|----------------------|--------------------|
| If Server or Client side (B11/12) supported | | | | |
| M1 | Logical device | – | Y | |
| M2 | Logical node | – | Y | |
| M3 | Data | – | Y | |
| M4 | Data set | – | Y | |
| M5 | Substitution | – | N | |
| M6 | Setting group control | – | N | |
| | Reporting | | | |
| M7 | Buffered report control | – | Y | |
| M7-1 | sequence-number | – | Y | |
| M7-2 | report-time-stamp | – | Y | |
| M7-3 | reason-for-inclusion | – | Y | |
| M7-4 | data-set-name | – | Y | |
| M7-5 | data-reference | – | Y | |
| M7-6 | buffer-overflow | – | Y | |
| M7-7 | entryID | – | Y | |
| M7-8 | BufTim | – | Y | |
| M7-9 | IntgPd | – | Y | |
| M7-10 | GI | – | Y | |
| M7-11 | conf-revision | – | Y | |
| M8 | Unbuffered report control | – | Y | |
| M8-1 | sequence-number | – | Y | |
| M8-2 | report-time-stamp | – | Y | |
| M8-3 | reason-for-inclusion | – | Y | |
| M8-4 | data-set-name | – | Y | |
| M8-5 | data-reference | – | Y | |
| M8-6 | BufTim | – | Y | |

ACSI models conformance statement

| | | Client/ Subscriber | Server/ Publisher | Value/ Comments |
|--|----------------------|-----------------------|----------------------|-----------------|
| M8-7 | IntgPd | - | Y | |
| M8-8 | GI | - | Y | |
| M8-9 | conf-revision | - | Y | |
| | Logging | - | N | |
| M9 | Log control | - | N | |
| M9-1 | IntgPd | - | N | |
| M10 | Log | - | N | |
| M11 | Control | - | Y | |
| If GSE (B31/32) is supported | | | | |
| M12 | GOOSE | Y | Y | |
| M13 | GSSE | N | N | |
| If SVC (41/42) is supported | | | | |
| M14 | Multicast SVC | - | N | |
| M15 | Unicast SVC | - | N | |
| If Server or Client side (B11/12) supported | | | | |
| M16 | Time | Y | N | scheduled |
| M17 | File Transfer | N | N | scheduled |
| <p>Y = service is supported</p> <p>N or empty = service is not supported</p> | | | | |

ACSI service conformance statement

The ACSI service conformance statement is defined in Table A.3 (depending on the statements in Table A.1).

Table A.3 – ACSI service Conformance statement

| | Services | AA: TP/MC | Client (C) | Server (S) | Comments |
|--------------------------------|------------------------|--------------|---------------|---------------|----------|
| Server | | | | | |
| S1 | ServerDirectory | TP | – | Y | |
| Application association | | | | | |
| S2 | Associate | | – | Y | |
| S3 | Abort | | – | Y | |
| S4 | Release | | – | Y | |
| Logical device | | | | | |
| S5 | LogicalDeviceDirectory | TP | – | Y | |
| Logical node | | | | | |
| S6 | LogicalNodeDirectory | TP | – | Y | |
| S7 | GetAllDataValues | TP | – | Y | |
| Data | | | | | |
| S8 | GetDataValues | TP | – | Y | |
| S9 | SetDataValues | TP | – | Y | |
| S10 | GetDataDirectory | TP | – | Y | |
| S11 | GetDataDefinition | TP | – | Y | |
| Data set | | | | | |
| S12 | GetDataSetValues | TP | – | Y | |
| S13 | SetDataSetValues | TP | – | Y | |
| S14 | CreateDataSet | TP | – | Y | |
| S15 | DeleteDataSet | TP | – | Y | |
| S16 | GetDataSetDirectory | TP | – | Y | |
| Substitution | | | | | |

| | Services | AA: TP/MC | Client (C) | Server (S) | Comments |
|-----|---------------|--------------|---------------|---------------|----------|
| S17 | SetDataValues | TP | - | N | |

| Setting group control | | | | | |
|-----------------------|---------------------|----|---|---|-----------|
| S18 | SelectActiveSG | TP | - | N | scheduled |
| S19 | SelectEditSG | TP | - | N | |
| S20 | SetSGValues | TP | - | N | |
| S21 | ConfirmEditSGValues | TP | - | N | |
| S22 | GetSGValues | TP | - | N | |
| S23 | GetSGCBValues | TP | - | N | |

| Reporting | | | | | |
|--|--------------------|----|---|---|--|
| Buffered report control block (BRCB) | | | | | |
| S24 | Report | TP | - | Y | |
| S24-1 | data-change (dchg) | | - | Y | |
| S24-2 | qchg-change (qchg) | | - | Y | |
| S24-3 | data-update (dupd) | | - | N | |
| S25 | GetBRCBValues | TP | - | Y | |
| S26 | SetBRCBValues | TP | - | Y | |
| Unbuffered report control block (URCB) | | | | | |
| S27 | Report | TP | - | Y | |
| S27-1 | data-change (dchg) | | - | Y | |
| S27-2 | qchg-change (qchg) | | - | Y | |
| S27-3 | data-update (dup) | | - | N | |
| S28 | GetURCBValues | TP | - | Y | |
| S29 | SetURCBValues | TP | - | Y | |

| Logging | | | | | |
|-------------------|----------------|----|---|---|--|
| Log control block | | | | | |
| S30 | GetLCBValues | TP | - | N | |
| S31 | SetLCBValues | TP | - | N | |
| Log | | | | | |
| S32 | QueryLogByTime | TP | - | N | |

| | Services | AA: TP/MC | Client (C) | Server (S) | Comments |
|-----|--------------------|--------------|---------------|---------------|----------|
| S33 | QueryLogByEntry | TP | - | N | |
| S34 | GetLogStatusValues | TP | - | N | |
| | | | | | |

| Generic substation event model (GSE) | | | | | |
|--------------------------------------|-----------------------|----|---|---|--|
| GOOSE-CONTROL-BLOCK | | | | | |
| S35 | SendGOOSEMessage | MC | - | Y | |
| S36 | GetReference | TP | - | Y | |
| S37 | GetGOOSEElementNumber | TP | - | Y | |
| S38 | GetGoCBValues | TP | - | Y | |
| S39 | SetGoCBValues | TP | - | N | |
| GSSE-CONTROL-BLOCK | | | | | |
| S40 | SendGSSEMessage | MC | - | N | |
| S41 | GetReference | TP | - | N | |
| S42 | GetGSSEElementNumber | TP | - | N | |
| S43 | GetGsCBValues | TP | - | N | |
| S44 | SetGsCBValues | TP | - | N | |
| | | | | | |

| Transmission of sampled value model (SVC) | | | | | |
|---|----------------|----|---|---|--|
| Multicast SVC | | | | | |
| S45 | SendMSVMessage | MC | - | N | |
| S46 | GetMSVCBValues | TP | - | N | |
| S47 | SetMSVCBValues | TP | - | N | |
| Unicast SVC | | | | | |
| S48 | SendUSVMessage | TP | - | N | |
| S49 | GetUSVCBValues | TP | - | N | |
| S50 | SetUSVCBValues | TP | - | N | |
| | | | | | |

| Control | | | | | |
|---------|--------|--|---|---|--|
| S51 | Select | | - | N | |

ACSI service conformance statement

| | Services | AA: TP/MC | Client (C) | Server (S) | Comments |
|-----|-----------------------|--------------|---------------|---------------|----------|
| S52 | SelectWithValue | TP | - | Y | |
| S53 | Cancel | TP | - | Y | |
| S54 | Operate | TP | - | Y | |
| S55 | Command-Termination | TP | - | Y | |
| S56 | TimeActivated-Operate | TP | - | N | |

| File transfer | | | | | |
|---------------|------------------------|----|---|---|--|
| S57 | GetFile | TP | - | N | |
| S58 | SetFile | TP | - | N | |
| S59 | DeleteFile | TP | - | N | |
| S60 | GetFileAttributeValues | TP | - | N | |

| Time | | | | | |
|------|-----------------------------------|--|----|---|--|
| T1 | Time resolution of internal clock | | 10 | - | nearest negative power of 2 in seconds |
| T2 | Time accuracy of internal clock | | N | - | T0 |
| | | | Y | - | T1 |
| | | | N | - | T2 |
| | | | N | - | T3 |
| | | | N | - | T4 |
| | | | N | - | T5 |
| T3 | Supported TimeStamp resolution | | 10 | - | nearest negative power of 2 in seconds |