



High**PROTEC**

**MRA4-3.7-EN-IEC61850-PICS**

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**MRA4**

**Directional Feeder Protection**

**IEC 61850 - PICS**

Protocol Implementation Conformance Statement (PICS)

UCA International Users Group Testing Sub Committee

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# 1 General

This document is applicable for MRA4 Version 3.7.

- ASCI basic conformance statement,  "2 ASCI basic conformance statement"
- ACSI models conformance statement,  "3 ACSI models conformance statement"
- ACSI service conformance statement,  "4 ACSI service conformance statement"

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

## 2 ASCI basic conformance statement

The basic conformance statement is defined in the table below.

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


### 3 ACSI models conformance statement

The ACSI models conformance statement is defined in the table below.

		Client / Subscriber	Server / Publisher	Value / Comments
If <b>Server or Client</b> side (B11/12) supported				
M1	<b>Logical device</b>	-	Y	
M2	<b>Logical node</b>	-	Y	
M3	<b>Data</b>	-	Y	
M4	<b>Data set</b>	-	Y	
M5	<b>Substitution</b>	-	N	
M6	<b>Setting group control</b>	-	N	
<b>Reporting</b>				
M7	<b>Buffered report control</b>	-	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	<b>Unbuffered report control</b>	-	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	
M8-7	IntgPd	-	Y	
M8-8	GI	-	Y	

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

## 4 ACSI service conformance statement

The ACSI service conformance statement is defined in the table below (depending on the statements in the “Basic conformance statement” table  “2 ACSI basic conformance statement”).

	Services	AA: TP/MC	Client (C)	Server (S)	Comments
<b>Server</b>					
S1	ServerDirectory	TP	-	Y	
<b>Application association</b>					
S2	Associate		-	Y	
S3	Abort		-	Y	
S4	Release		-	Y	
<b>Logical device</b>					
S5	LogicalDeviceDirectory	TP	-	Y	
<b>Logical node</b>					
S6	LogicalNodeDirectory	TP	-	Y	
S7	GetAllDataValues	TP	-	Y	
<b>Data</b>					
S8	GetDataValues	TP	-	Y	
S9	SetDataValues	TP	-	Y	
S10	GetDataDirectory	TP	-	Y	
S11	GetDataDefinition	TP	-	Y	
<b>Data set</b>					
S12	GetDataSetValues	TP	-	Y	
S13	SetDataSetValues	TP	-	Y	
S14	CreateDataSet	TP	-	Y	
S15	DeleteDataSet	TP	-	Y	
S16	GetDataSetDirectory	TP	-	Y	
<b>Substitution</b>					
S17	SetDataValues	TP	-	N	
<b>Setting group control</b>					
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	
<b>Reporting</b>					
Buffered report control block (BRCB)					



	Services	AA: TP/MC	Client (C)	Server (S)	Comments
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	
<b>Logging</b>					
Log control block					
S30	GetLCBValues	TP	-	N	
S31	SetLCBValues	TP	-	N	
Log					
S32	QueryLogByTime	TP	-	N	
S33	QueryLogByEntry	TP	-	N	
S34	GetLogStatusValues	TP	-	N	
<b>Generic substation event model (GSE)</b>					
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	
<b>Transmission of sampled value model (SVC)</b>					
Multicast SVC					
S45	SendMSVMessage	MC	-	N	

4 ACSI service conformance statement

	Services	AA: TP/MC	Client (C)	Server (S)	Comments
S46	GetMSVCBValues	TP	-	N	
S47	SetMSVCBValues	TP	-	N	
Unicast SVC					
S48	SendUSVMessage	TP	-	N	
S49	GetUSVCBValues	TP	-	N	
S50	SetUSVCBValues	TP	-	N	
<b>Control</b>					
S51	Select		-	N	
S52	SelectWithValue	TP	-	Y	
S53	Cancel	TP	-	Y	
S54	Operate	TP	-	Y	
S55	Command-Termination	TP	-	Y	
S56	TimeActivated-Operate	TP	-	N	
<b>File transfer</b>					
S57	GetFile	TP	-	N	
S58	SetFile	TP	-	N	
S59	DeleteFile	TP	-	N	
S60	GetFileAttributeValues	TP	-	N	
<b>Time</b>					
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

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