



High **PROTEC**

MRDT4-3.7-EN-IEC61850-PICS

MRDT4

Transformer Differential Protection

IEC 61850 - PICS

Protocol Implementation Conformance Statement (PICS)

UCA International Users Group Testing Sub Committee

Version: 3.7

Original document · English

Revision: - 47547 · © 2020

Woodward Kempen GmbH

Krefelder Weg 47 • D-47906 Kempen (Germany)

Postfach 10 07 55 (P.O.Box) • D-47884 Kempen (Germany)

Telephone: +49 (0) 21 52 145 1

Internet: www.woodward.com

Sales

Telephone: +49 (0) 21 52 145 331

Fax: +49 (0) 21 52 145 354

Email: SalesPGD_EMEA@woodward.com

Service

Telephone: +49 (0) 21 52 145 614

Fax: +49 (0) 21 52 145 354

Email: industrial.support@woodward.com




© 2020 Woodward Kempen GmbH

Table of Contents

1	General	4
2	ASCI basic conformance statement	5
3	ACSI models conformance statement	6
4	ACSI service conformance statement	8

1 General

This document is applicable for MRDT4 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
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				


3 ACSI models conformance statement

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

		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	
M8-7	IntgPd	-	Y	
M8-8	GI	-	Y	

		Client / Subscriber	Server / Publisher	Value / Comments
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
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
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					
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)					

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

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	
Control					
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	
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

We appreciate your comments about the content of our publications.

Send comments to: kemp.doc@woodward.com

Please reference publication MRDT4-3.7-EN-IEC61850-PICS

https://wss.woodward.com/manuals/Library/Protection_Relays/HighPROTEC



Woodward Kempen GmbH reserves the right to update any portion of this publication at any time. Information provided by Woodward Kempen GmbH is believed to be correct and reliable. However, Woodward Kempen GmbH assumes no responsibility unless otherwise expressly undertaken.



Woodward Kempen GmbH
Krefelder Weg 47 • D-47906 Kempen (Germany)
Postfach 10 07 55 (P.O.Box) • D-47884 Kempen (Germany)
Telephone: : +49 (0) 21 52 145 1

Internet: — www.woodward.com

Sales

Telephone: : +49 (0) 21 52 145 331
Fax: : +49 (0) 21 52 145 354
Email: : SalesPGD_EMEA@woodward.com

Service

Telephone: : +49 (0) 21 52 145 614
Fax: : +49 (0) 21 52 145 354
Email: : industrial.support@woodward.com

Woodward has company-owned plants, subsidiaries, and branches, as well as authorized distributors and other authorized service and sales facilities throughout the world.

Complete address / phone / fax / email information for all locations is available on our website.