

# MiCOM P746

Numerical Busbar Protection

P746/EN TC/A11

Version      Software version: E03A  
                 Hardware version: K

TICS

Content      Tissues Conformance Statement

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## 1. IEC 61850 TISSUES CONFORMANCE STATEMENT

### 1.1 Introduction

This document specifies the conformance level of MiCOM Px40 range products to the logged Technical Issues (TISSUES) against the IEC 61850 set of standards. According to the UCA IUG QAP, the Technical Issues Conformance Statement is required to perform a conformance test and is referenced on the certificate.

For more details on the logged Technical Issues, refer to the website:

<http://www.tissues.iec61850.com>

### 1.2 Mandatory IntOp Tissues

During the October 2006 meeting, IEC TC57 Working Group 10 decided that:

- Green Tissues with the category “IntOp” are mandatory for IEC 61850 Edition 1
- Tissues with the category “Ed.2” should not be implemented.

The below table gives an overview of the implemented IntOp Tissues and testing status.

- Tissues 45, 46, 49, 190 and 278 are not mandatory, all other (technical) Tissues in the table are mandatory if applicable.

Part	Tissue	Description	Category	Compliance	Notes
8-1	116	GetNameList with empty response?	IntOp	COMPLIANT	
	165	Improper Error Response for GetDataSetValues	IntOp	COMPLIANT	
	183	GetNameList error handling	IntOp	COMPLIANT	
7-3	28	Definition of APC	IntOp	COMPLIANT	
	54	Point def xVal, not cVal	IntOp	COMPLIANT	Documentation only
	55	Ineut = Ires?	IntOp	COMPLIANT	
	60	Services missing in tables	IntOp	COMPLIANT	
	63	mag in CDC CMV	IntOp	COMPLIANT	
	65	Deadband calculation of a Vector and trigger option	IntOp	COMPLIANT	
	219	operTm in ACT	IntOp	n/a	operTm is Optional in ACT, not included in Px4x products.
7-2	270	WYE and DEL rms values	IntOp	COMPLIANT	
	30	control parameter T	IntOp	COMPLIANT	
	31	Typo	IntOp	COMPLIANT	Documentation only
	32	Typo in syntax	IntOp	COMPLIANT	
	35	Typo Syntax Control time	IntOp	COMPLIANT	
	36	Syntax parameter DSet-Ref missing	IntOp	COMPLIANT	
	37	Syntax GOOSE "T" type	IntOp	COMPLIANT	
	39	Add DstAddr to GoCB	IntOp	COMPLIANT	
	40	GOOSE Message "AppID" to "GoID"	IntOp	COMPLIANT	
	41	GsCB "AppID" to "GsID"	IntOp	n/a	GSSE not implemented
	42	SV timestamp: "EntryTime" to "TimeStamp"	IntOp	n/a	SV model not implemented
	43	Control "T" semantic	IntOp	COMPLIANT	
	44	AddCause - Object not sel	IntOp	COMPLIANT	
	47	"," in LD Name?	IntOp	COMPLIANT	
50	LNNName start with number?	IntOp	COMPLIANT		
51	ARRAY [0..num] missing	IntOp	COMPLIANT		

Part	Tissue	Description	Category	Compliance	Notes
	52**	Ambiguity GOOSE SqNum	IntOp	COMPLIANT	
	53	Add DstAddr to GsCB, SV	IntOp	n/a	GSSE & SV model not implemented
	151	Name constraint for control blocks etc.	IntOp	COMPLIANT	
	166	DataRef attribute in Log	IntOp	n/a	Logging not implemented
	185	Logging - Integrity period	IntOp	n/a	Logging not implemented
	189	SV Format	IntOp	n/a	SV model not implemented
	191**	BRCB: Integrity and buffering reports	IntOp	COMPLIANT	
	234**	New type CtxInt	IntOp	COMPLIANT	
	275**	Confusing statement on GI usage	IntOp	COMPLIANT	
	297	BRCB: SqNum generation	IntOp	COMPLIANT	
	298	BRCB: SqNum attribute data type	IntOp	COMPLIANT	
	305	BufTim=0 with 2 or more data set changes	IntOp	COMPLIANT	
	322	BRCB: Buffer purge when changing configuration	IntOp	COMPLIANT	
	329	BRCB: Conditions for setting buffer overflow	IntOp	COMPLIANT	
	335	BRCB: Clearance of BufOvl flag	IntOp	COMPLIANT	
	348	TimeOfEntry is independent of EntryId	IntOp	COMPLIANT	
	349	TimeOfEntry has two definitions	IntOp	COMPLIANT	
6	1	Syntax	IntOp	COMPLIANT	
	5	tExtensionAttributeNameEnum is restricted	IntOp	COMPLIANT	
	8	SIUnit enumeration for W	IntOp	COMPLIANT	
	10	Base type for bitstring usage	IntOp	COMPLIANT	
	17	DAI/SDI elements syntax	IntOp	COMPLIANT	
	169	Ordering of enum differs from 7-3	IntOp	n/a	angRef is Optional in WYE, not included in Px4x products.

(\*) = Tissue is not clarified in enough detail for testing

\*\* = Tissue status is not green, but is clarified in enough detail for testing

Compare <http://www.tissues.iec61850.com> for details.

### 1.3 Optional IntOp Tissues

After the approval of the server conformance test procedures version 2.2 the following IntOp Tissues were added or changed. It is optional to implement these Tissues.

Part	Tissue Nr	Description	Implemented Y/N/na	Notes
8-1	246	Control negative response (SBOs)	Yes	
	545	File directories with no files	No	
7-2	333	Enabling of an incomplete GoCB	Yes	
	453	Combination of all reporting and logging tissues	-	See individual Tissues
	46(*)	Synchro check cancel	n/a	Synchro check not supported
	49(*)	BRCB TimeOfEntry?	Yes	
	190(*)	BRCB: EntryId and TimeOfEntry	Yes	GetBRCBValues when BRCB is disabled returns EntryId value of last set of events sent
	278(*)	EntryId not valid for a server	No	
6	245	Attribute RptId in SCL	Yes	
	529	Replace sev - Unknown by unknown	Yes	

### 1.4 Other implemented Tissues

Part	Tissue Nr	Description	Implemented Y/N/na
6	9	Data Set reference in CBs	Y
	272	Private section type	Y
7-2	37	Syntax GOOSE "T" type	Y
	39	Add DstAddr to GoCB	Y
	40	GOOSE Message <i>AppID</i> to <i>GoID</i>	Y
	52	Ambiguity GOOSE SqNum	Y
	325	TimeStamp definition	Y
	348	URCB class and report	Y
	474	GI for URCB	
7-3	28	Definition of APC	Y
	62	RMS and avg Values	Y
	65	Deadband calculation of a Vector and trigger option	Y
	68	New CDC ACI	Y
	205	Device name plate – missing description "d" and "dU"	Y
7-4	79	AutoRecSt and Lockout	Only new enum value 'unsuccessful' has been implemented
8-1	118	File directory	Y
	438	EntryTime base should be GMT	Y

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