

RELION® PROTECTION AND CONTROL

TISSUES Implementation Conformance Statement (TICS)

REX640 IEC 61850 interface



PRODUCT	PRODUCT VERSION	DOCUMENT ID.	REV.	LANG.	PAGE
REX640	PCL4	1MRS759027	B	en	1/9

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1. Introduction

This document provides the Tiger platform Technical Issues Conformance Statement (TICS). According to the UCA IUG QAP the tissue conformance statement is required to perform a conformance test and is referenced on the certificate. For more details to technical issues check following official web page: <http://www.tissues.iec61850.com>.

1.1. Document information

Revision	Date	Note
A	20.4.2018	REX640 PCL1
B	14.11.2022	REX640 PCL4

Applicability

This manual is applicable to all REX640 Protection and Control IED versions mentioned in document Revision History above or newer versions if document update is not required.

1.2. Safety Information

There are safety warnings and notes in the following text. They are in a different format to distinguish them from normal text.

Safety warning

The safety warnings should always be observed. Non-observance can result in death, personal injury, or substantial damages to property. Guarantee claims might not be accepted when safety warnings are not respected. They look like below:



Do not make any changes to the REX640 configuration unless you are familiar with the REX640 and its configuration tool. This might result in disoperation and loss of warranty.

Note

A note contains additional information worth noting in the specific context, and looks like below:



The selection of this control mode requires caution, because operations are allowed both from the HMI and remotely.

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2. Mandatory Edition 2 Tissues

2.1. Part 6

ID	Description	Implemented
658	Tracking related features	n/a
663	FCDA element cannot be a "functionally constrained logical node"	Y
668	Autotransformer modeling	n/a
687	SGCB ResvTms	n/a
719	ConfDataSet - maxAttributes definition is confusing	Y
721	Log element name	n/a
768	bType VisString65 is missing	n/a
779	object references	Y
788	SICS S56 from optional to mandatory	n/a
789	ConfLdName as services applies to both server and client	n/a
804	valKind and IED versus System configuration	n/a
806	Max length of log name inconsistent between -6 and -7-2	n/a
807	Need a way to indicate if "Owner" present in RCB	n/a
822	Extension of IED capabilities	Y
823	ValKind for structured data attributes	Y
824	Short addresses on structured data attributes	n/a
825	Floating point value	n/a
845	SGCB ResvTms	n/a
853	SBO and ProtNs	Y
855	Recursive SubFunction	n/a
856	VoltageLevel frequency and phases	n/a
857	Function/SubFunction for ConductingEquipment	n/a
886	Missing 8-1 P-types	n/a

ID	Description	Implemented
901	tServices as AP or as IED element	Y
Y936	SupSubscription parameter usage is difficult	n/a
1147	tServices – FileHandling not consistent with 7-2	Y
1175	IPv6 address lowercase only	n/a
1185	Valkind value Conf for EX FC data	Y
1284	SCSM mapping may require a communication section in an ICD file	Y
1328	Limitation on the size of data type templates identifiers	Y
1395	Client LN attributes	Y
1402	Extref during engineering	n/a
1415	SICS-S110 IID import mandatory for Edition2	n/a
1419	Support of IdName on other IEDs	Y
1444	Need to support fixed and SCT controlled datasets	n/a
1445	ConfReportControl and a fixed ReportSettings	n/a
1450	originalSclXxx computation rules	Y
1485	Need to supercede Tissue 1398 to clarify SCT behavior	n/a

2.2. Part 7-1

ID	Description	Implemented
828	Data model namespace revision IEC 61850-7-4:2007[A]	Y
948	Enumeration (String values format)	Y
1151	simulated GOOSE disappears after 1st appearance when LPHD.Sim = TRUE	Y
1396	The use and configuration flow of LGOS and LSVS is unclear	n/a
1447	Restriction on ENUMtypes in SCL	Y
1457	Multiple DOI nodes with the same name	Y

ID	Description	Implemented
1468	Re-use DO from other LN	Y
1491	CmdBlk blocks itself?	Y
1495	GetVariableAccessAttributes error code Return MMS error access/object-non-existent if the object does not exist	Y

2.3. Part 7-2

ID	Description	Implemented
697	persistent command / PulseConfig	Y
698	Wrong case is BAC.dB attribute	n/a
711	blkEna freeze data update while setting its quality to operatorblocked	n/a
722	Units for 'h' and 'min' not in UnitKind enumeration.	Y
919	Presence Condition for sVC	n/a
925	Presence of i or f attribute - Problem with writing	n/a
926	Presence Conditions within RangeConfig	Y
954	Data attributes with FC=CF should have trgOp=dchg	Y
1078	CMV.t update if rangeAng changed	n/a
1565	db = 0 behaviour	n/a
1578	dataAttribute NameSpace content	Y

2.4. Part 7-4

ID	Description	Implemented
671	mistake in definition of Mod & Beh	Y
674	CDC of ZRRCLocSta is wrong	n/a
675	SIML LN	Y
676	Same data object name used with different CDC	n/a

ID	Description	Implemented
677	MotStr is used with different CDC in PMMS and SOPM LN classes	n/a
679	Remove CycTrMod Enum	n/a
680	SI unit for MHYD.Cndct	n/a
681	Enum PIDAlg	n/a
682	ANCR.ParColMod	n/a
683	Enum QVVR.IntrDetMth	n/a
685	Enum ParTraMod	Y
686	New annex H - enums types in XML	Y
694	Data object CmdBlk	n/a
696	LSVS.St (Status of subscription)	n/a
712	interpretation of quality operatorBlocked	Y
713	DO Naming of time constants in FFIL	n/a
714	Enums for ShOpCap and SwOpCap	n/a
715	RBDR.ChNum1	n/a
716	TAXD text for condition	n/a
724	ANCR.Auto	n/a
725	Loc in LN A-group	n/a
734	LLN0.OpTmh vs. LPHD.OpTmh	n/a
735	ISAF.Alm and ISAF.AlmReset	n/a
736	PFSign	n/a
742	GAPC.Str, GAPC.Op and GAPC.StrVal	Y
743	CCGR.PmpCtl and CCGR.FanCtl	n/a
744	LN STMP, EEHealth and EEName	n/a
772	LPHD.PwrUp/PwrDn shall be transient	Y
773	Loc, LocKey and LocSta YPSH and YLTC	n/a
774	ITCI.LockKey	n/a
775	KVLV.ClsLim and OpnLim	n/a
776	LPHD.OutOv/InOv and LCCH.OutOv/InOv	n/a

ID	Description	Implemented
800	Misspelling in CSYN	n/a
802	CCGR and Harmonized control authority	Y
808	Presence condition of ZMOT.DExt and new DOs	n/a
831	Setting of ConfRevNum in LGOS	n/a
838	Testing in Beh=Blocked	Y
844	MFLK.PhPiMax, MFLK.PhPiLoFil, MFLK.PhPiRoot DEL->WYE	n/a
849	Presence conditions re-assessing in case of de- rived statistical calculation	n/a
877	QVUB -settings should be optional	n/a
908	ARIS.StrSeq – transient	Y
909	Remove ANCR.ColOpR and ColOpL	n/a
912	Clarification of PwrRtg/VARtg	n/a
920	Resetable Counter is NOT resetable	Y
932	Rename AVCO.SptVol to AVCO.VolSpt	n/a
933	Presence of LCCH.RedFerCh and RedRxCnt	n/a
939	Change CDC for ANCR.FixCol	Y
991	LGOS: GoCBRef (as well as LSVS.SvCBRef) should be mandatory	n/a
1007	PTRC as fault indicator - Update of description re- quired	Y
1044	TapChg in AVCO	n/a
1077	Rename DOnames within LTIM	Y
1256	New DO for LTIM to set time “manually”	n/a
1331	Mod, Beh, and Health with q=TEST, client can't re- ceive their states	Y
1426	Add two DO for leap seconds in LTIM	n/a
1456	Annex A and Mod/Beh/Health	Y
1568	ISAF.AlmReset -> transient	n/a

2.5. Part 8-1

ID	Description	Implemented
770	GoID type mismatch 18.1.1 and 18.1.2.5.2	Y
784	Tracking of control	n/a
817	Fixed-length GOOSE float encoding	Y
827	Mandatory ACSI services (Part of 7-2 TISSUE resolution)	Y
834	File dir name length 64	Y
951	Encoding of Owner attribute	n/a
1040	More associate error codes	n/a
1178	Select Response+ is non-null value	Y
1324	The response- for DeleteNamedVariableList is not defined	n/a
1345	Fixed-length GOOSE ASN.1 length encoding	n/a
1441	Optional fields in buffered reports	Y
1442	Journal variableTag for ReasonCode	n/a
1453	Purge buffer on write to BRCB	Y
1495	GetVariableAccessAttributes error code	Y
1500	the response for DeleteNamedVariableList with a non-existent LN is not specified	n/a
1626	PICS for Information Report is incorrect	Y