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# **TISSUES Implementation Conformance Statement for the IEC 61850 Interface in SEL Real-Time Automation Controllers**

June 28, 2017

UCA International Users Group Testing Sub Committee

Template Ed2 for TPCL 1.0



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## 1 INTRODUCTION

This document specifies the TISSUES Implementation Conformance Statement (TICS) of the IEC 61850 interface for the SEL Real-Time Automation Controllers (RTAC).

This document applies specifically to the following RTAC models and firmware versions.

Model	Firmware Version
SEL-3530 RTAC	SEL-3530- R139-V1-Z001001-D20170628
SEL-3530-4 RTAC	SEL-3530-4- R139-V1-Z001001-D20170628
SEL-2241 RTAC	SEL-2241- R139-V1-Z001001-D20170628
SEL-3505 RTAC	SEL-3505- R139-V1-Z001001-D20170628
SEL-3505-3 RTAC	SEL-3505-3- R139-V1-Z001001-D20170628
SEL-3532 RTAC	SEL-3532-N- R139-V1-Z001001-D20170628
SEL-3555 RTAC	SEL-3555- R139-V1-Z001001-D20170628
SEL-3560 RTAC	SEL-3560- R139-V1-Z001001-D20170628

## 2 MANDATORY EDITION 2 TISSUES

The following tables list the applicable mandatory TISSUES.

Part 6 Tissue	Description	Implemented Y/na
658	Tracking related features	na
663	FCDA element cannot be a "functionally constrained logical node"	Y
668	Autotransformer modeling	na
687	SGCB ResvTms	na
719	ConfDataSet - maxAttributes definition is confusing	Y
721	Log element name	na
768	bType VisString65 is missing	Y
779	object references	na
788	SICS S56 from optional to mandatory	na
789	ConfLdName as services applies to both server and client	na
804	valKind and IED versus System configuration	Y
806	Max length of log name inconsistent between -6 and -7-2	na
807	Need a way to indicate if Owner is present in RCB	na



822	Certain IED capabilities cannot be defined in an SCL file (services element)	Y
823	ValKind for structured data attributes	Y
824	Short addresses on structured data attributes	na
825	Floating point value	Y
845	SGCB ResvTms	na
853	SBO and ProtNs	na
855	Recursive SubFunction	na
856	VoltageLevel frequency and phases	na
857	Function/SubFunction for conducting equipment	na
886	Missing 8-1 P-types	na
901	tServices as AP or as IED element	Y
936	SupSubscription parameter usage is difficult	na
1168	doName and daName of ExtRef; doName may have one dot (DO.SDO)	
1175	IPv6 address lowercase only	na

<b>Part 7-1 Tissue</b>	<b>Description</b>	<b>Implemented Y/na</b>
828	Data model namespace revision IEC 61850-7-4:2007[A]	Y
1129	Rules for extending nameplate information (new CDC VSD)	na
1151	Simulated GOOSE disappears after 1st appearance when LPHD.Sim = TRUE	na
1196	Extensions to standardized LN classes made by third parties	Y

<b>Part 7-2 Tissue</b>	<b>Description</b>	<b>Implemented Y/na</b>
778	AddCause values—add value not-supported	Y
780	What are unsupported trigger option at a control block?	Y
783	TimOper Resp—add Authorization check	na
786	AddCause values 26 and 27 are switched	Y
820	Mandatory ACSI services (use for PICS template)	Y
858	Typo in enumeration ServiceType	na
861	dchg of ConfRev attribute	na



876	GenLogicINodeClass and SGCB, GoCB, MsvCB, UsvCB	Y
1038	Loss of info detection after resynch	Y
1050	GTS Phycomaddr definition in SCL	na
1062	Entrytime not used in CDC	na
1071	Length of DO name	Y
1091	The sentence "The initial value of EditSG shall be 0", must be stated in part 7.2, not in 8.1	na
1127	Missing owner attribute in BTS and UTS	na
1163	Old report in URCB	Y
1202	GI not optional	Y

<b>Part 7-3 Tissue</b>	<b>Description</b>	<b>Implemented Y/na</b>
697	Persistent command/PulseConfig	na
698	Wrong case is BAC.dB attribute	na
722	Units for 'h' and 'min' not in UnitKind enumeration	na
919	Presence Condition for sVC	na
925	Presence of i or f attribute—problem with writing	na
926	Presence conditions within RangeConfig	na

<b>Part 7-4 Tissue</b>	<b>Description</b>	<b>Implemented Y/na</b>
671	Mistake in definition of Mod & Beh	Y
674	CDC of ZRRC.LocSta is incorrect	Y
676	Same data object name used with different CDC	Y
677	MotStr is used with different CDC in PMMS and SOPM LN classes	Y
679	Remove CycTrMod Enum	na
680	SI unit for MHYD.Cndct	na
681	Enum PIDAlg	na
682	ANCR.ParColMod	na
683	Enum QVVR.IntrDetMth	na
685	Enum ParTraMod	na
686	New annex H—enums types in XML	Y
694	Data object CmdBlk	na



696	LSVS.St (status of subscription)	na
712	Interpretation of quality operatorBlocked	na
713	DO Naming of time constants in FFIL	na
724	ANCR.Auto	Y
725	Loc in LN A-group	Y
734	LLN0.OpTmh vs. LPHD.OpTmh	Y
736	PFSign	na
742	GAPC.Str, GAPC.Op, and GAPC.StrVal	Y
743	CCGR.PmpCtl and CCGR.FanCtl	Y
744	LN STMP, EEHealth, and EEName	Y
773	Loc, LocKey, and LocSta YPSH and YLTC	Y
774	ITCI.LockKey	Y
800	Misspelling in CSYN	na
802	CCGR and Harmonized control authority	Y
808	Presence condition of ZMoT.DExt and new DOs	Y
831	Setting of ConfRevNum in LGOS	Y
838	Testing in Beh=Blocked	na
844	MFLK.PhPiMax, MFLK.PhPiLoFil, MFLK.PhPiRoot DEL->WYE	Y
849	Presence conditions reassessing in case of derived statistical calculation	na
877	QVUB—settings should be optional	na
909	Remove ANCR.ColOpR and ColOpL	Y
912	Clarification of PwrRtg/VARtg	na
920	Resettable counter is NOT resettable	Y
932	Rename AVCO.SptVol to AVCO.VolSpt	Y
939	Change CDC for ANCR.FixCol	na
991	LGOS: GoCBRef (as well as LSVS.SvCBRef) should be mandatory	na
1007	PTRC as fault indicator—update of description required	Y
1044	TapChg in AVCO	Y
1077	Rename DOnames within LTIM	na



<b>Part 8 Tissue</b>	<b>Description</b>	<b>Implemented Y/na</b>
784	Tracking of control (CTS)	na
817	Fixed-length GOOSE float encoding	na
834	File dir name length 64	Y
951	Encoding of Owner attribute	na
1040	More associate error codes	Y
1178	Select response+ is non-null value	na
1324	The response- for DeleteNamedVariableList is not defined	na

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