

TISSUES Implementation Conformance Statement  
for the IEC 61850 interface in SEL-451

October 11, 2017  
Revision 1.0

UCA International Users Group  
Testing Sub Committee

Template Ed2 for TPCL 1.0

## Introduction

This document provides a TISSUES conformance statement for SEL-451 with firmware version R321, LIB61850ID=5FEA494D, and hardware board 4xx MB5E. The following are variants of the SEL-451: SEL-487E with firmware version R315, SEL-487B with firmware version R312, and SEL-421 with firmware version R323. All variants have LIB61850ID=5FEA494D.

## Mandatory Edition 2 TISSUES

The tables below lists 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" 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 (yes for 401 with merging unit)	na
856	VoltageLevel frequency and phases	na

<b>Part 6 Tissue</b>	<b>Description</b>	<b>Implemented Y/na</b>
857	Function/SubFunction for ConductingEquipment	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)	Y
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	Y
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	GenLogicNodeClass 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

<b>Part 7-2 Tissue</b>	<b>Description</b>	<b>Implemented Y/na</b>
1091	The sentence "The initial value of EditSG shall be 0", has to 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 ZRRCLocSta is wrong	na
676	Same data object name used with different CDC	na
677	MotStr is used with different CDC in PMMS and SOPM LN classes	na
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

<b>Part 7-4 Tissue</b>	<b>Description</b>	<b>Implemented Y/na</b>
713	DO Naming of time constants in FFIL	na
724	ANCR.Auto	na
725	Loc in LN A-group	na
734	LLN0.OpTmh vs. LPHD.OpTmh	na
736	PFSign	na
742	GAPC.Str, GAPC.Op and GAPC.StrVal	na
743	CCGR.PmpCtl and CCGR.FanCtl	na
744	LN STMP, EEHealth and EEName	na
773	Loc, LockKey and LocSta YPSH and YLTC	na
774	ITCI.LockKey	na
800	Misspelling in CSYN	na
802	CCGR and Harmonized control authority	na
808	Presence condition of ZMoT.DExt and new DOs	na
831	Setting of ConfRevNum in LGOS	na
838	Testing in Beh=Blocked	na
844	MFLK.PhPiMax, MFLK.PhPiLoFil, MFLK.PhPiRoot DEL->WYE	na
849	Presence conditions re-assessing in case of derived statistical calculation	na
877	QVUB -settings should be optional	na
909	Remove ANCR.ColOpR and ColOpL	na
912	Clarification of PwrRtg/VARtg	na
920	Resetable Counter is NOT resetable	na
932	Rename AVCO.SptVol to AVCO.VolSpt	na
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	na
1077	Rename DOnames within LTIM	na

Note: Tissues 675, 735, 772, 775, 776, 878 are not relevant for conformance testing

<b>Part 8-1 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

Compare the TISSUE database for more details: [www.tissues.iec61850.com](http://www.tissues.iec61850.com)