

TECHNICALLY QUALIFIED SUPPLIERS



CONTROL AND PROTECTION SYSTEM

Specifications: [TCSP-EU_TSE&C-SBST-00065](#)

[TCSP-EU_E&C-SBST-00059](#)

PLATFORM	VOLTAGE	EQUIPMENT	MANUFACTURER/MODEL	COMMENTS
EU&BR (except France)	HV	UCP Line Bay	ABB/INGETEAM	- REC 650 of ABB for SUBs 2T/L // Or equivalent INGETEAM - REC 670 of ABB for SUBs T/L // Or equivalent INGETEAM
		Line Differential Protection (87L)	ABB RED 670 IEC61850	To be confirmed according to connection point characteristics – requirements of transmission system operator (TSO) or distribution system operator (DSO)
		Distance Protection (21)	SEL-311-C-1 (part number 0311C10HA3H53X2- C664, USB connection)	To be confirmed according to connection point characteristics – requirements of transmission system operator (TSO) or distribution system operator (DSO)
		Tripping Circuit Supervision	- ABB Sper 1b1c4-AA with base pc-ZL2 - ZIV 8SCT: o Spain/Romania/Poland/Italy: 8SCT C 1N 3 0 1 000 P o France/Belgium: 8SCT C 1N 3 G 1 000 P o Brazil: 8SCT C 1N 3 E 1 000 P	
		Busbar Differential Protection	SEL 487B-1 (part number 0487B1X4X52XC2XDHADDDDX)	For all substations with at least two transformer bays and one line bay (2T/L) or with more bays (up to 4)
		UCP Trafo Bay	ABB/INGETEAM	- REC 650 of ABB for SUBs 2T/L // Or equivalent INGETEAM - REC 670 of ABB for SUBs T/L // Or equivalent INGETEAM
		Trafo Differential Protection (87T)	SEL 387-E (part number: 0387E013X5HXX35)	
	MV	ALSTOM Network Analyzer	M87220800YE1Y4X	
		MV cubicles Protections	ABB or Ingeteam	
		Protection of Earthing Reactance	ABB or Ingeteam	REF 615 (only protection functions) of ABB or equivalent one of Ingeteam
IC&P System	-	ABB or Ingeteam		
FRANCE	PDL	RTU	RTU560 ABB	
		MV PROTECTIONS	SEPAM S48 E23 + MES 114	