

TECHNICALLY QUALIFIED SUPPLIERS



STEP-UP TRANSFORMERS

Specifications: [TCSP-EU E&C-SBST-00002](#)

PLATFORM	COUNTRY	MANUFACTURER	FACTORY	COMMENTS
EU	All	ABB	EU COUNTRIES	Included autotrafos shell and core type
		SIEMENS	GERMANY	Included autotrafos shell and core type
		EFACEC	PORTUGAL/BRASIL	Included autotrafos shell and core type
		KONCAR	ZAGREB (CROATIA)	
		SGB	NETHERLANDS GERMANY	
		CG POWERS	BUDAPEST	Included autotrafos core type
		TAMINI	MILAN (ITALY)	Included autotrafos core type
		IMEFY	SPAIN	UP TO 220 kV and 170 MA
BRAZIL	--	TOSHIBA	BELO HORIZONTE	
		SIEMENS	Jundiaí	
		ABB BRASIL	Guarulhos	

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INSULATED CABLES

Specifications: [TCSP-EU-TSE&C-MV&HV-00002](#) [TCSP-EU-TSE&C-MV&HV-00003](#)

PLATFORM	COUNTRY	MANUFACTURER	FACTORY	COMMENTS
EU+BR	All	NEXANS	FRANCE & BRAZIL	MV & HV
		GENERAL CABLE	EU COUNTRIES & BRAZIL	MV & HV
		NKT	GERMANY	MV & HV
		PRYSMIAN	EU COUNTRIES & BRAZIL	MV & HV
		BRUGG	SWITZERLAND	MV & HV
		SOLIDAL	PORTUGAL	MV & HV
		CABELTE	PORTUGAL	ONLY MV Cables
		TELEFONIKA	POLAND	MV & HV up to 170 kV
		ABB		HV

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HV DISCONNECTOR

Specifications: [TCSP-EU TSE&C-SBST-00070](#)

PLATFORM	COUNTRY	MANUFACTURER	FACTORY	MODEL
EU+BR	All	MESA	SPAIN	SG3C/SG3CT
		ALSTOM	GERMANY & BRAZIL	S3C/S3CT
		HAPAM	HOLLAND	SSIII-AM /// ASB 123
		SIEMENS	EUROPE & BRAZIL	3DN2
		COELME EGIC (Only in Italy)	ITALY	TCB-E

HV CIRCUIT BREAKERS

Specifications: [TCSP-EU TSE&C-SBST-00064](#)

PLATFORM	COUNTRY	MANUFACTURER	FACTORY	MODEL
EU+BR	All	ALSTOM	GERMANY & BRAZIL	GL-F1
		ABB		LTB ---D1/B -- BLK 222
		SIEMENS		3AP1FG

HV CURRENT TRANSFORMERS

Specifications: [ESP-E-ING-SBT-00025](#)

PLATFORM	COUNTRY	MANUFACTURER	FACTORY	MODEL
EU+BR	All	ALSTOM (Only in Brazil)	BRAZIL	CTH
		ABB		PA
		SIEMENS/TRENCH		IOSK
		PIFFNER		JOE
		ARTECHE		CA

HV VOLTAGE TRANSFORMERS

Specifications: [ESP-E-ING-SBT-00026](#)

PLATFORM	COUNTRY	MANUFACTURER	FACTORY	MODEL
EU+BR	All	ALSTOM (Only in Brazil)	BRAZIL	OTEF
		ABB		EMF
		SIEMENS/TRENCH		VEOT
		PIFFNER		EGF
		ARTECHE		UTE up to 170 kV UTF for 245 kV and 420 kV

HV SURGE ARRESTERS

Specifications: [TCSP-EU TSE&C-SBST-00067](#)

PLATFORM	COUNTRY	MANUFACTURER	FACTORY	MODEL
EU+BR	ALL	ABB		PEXLM-Q-X
		TRIDELTA		HTS
		SIEMENS		3EL2-XXX-2PJ31-4DA1-Z

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MV CUBICLES

Specification: [TCSP-EU E&C-SBST-00055](#)

PLATFORM	VOLTAGE	MANUFACTURER	MODEL	COMMENTS
EU&BR	≤ 24 kV	SIEMENS	NXPlus-C	
		SCHNEIDER ELECTRIC	GMA	
		MESA	CGBS-0	
	≥ 36 kV	SIEMENS	NXPlus & 8DA	
		SCHNEIDER ELECTRIC	GHA	

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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 0487B1X4X52XC2XDHADDDX)	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)	
		ALSTOM Network Analyzer	M87220800YE1Y4X	
	MV	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	

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METERING EDPR

Specification: [TCSP-EU-TSE&C-SBST-00073](#)

PLATFORM	COUNTRY	MANUFACTURER	MODEL	COMMENTS
EU&BR	ALL	Landis&Gyr	See TCSP-EU-TSE&C-SBST-00073 for exact model for each country	