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TECHNICAL SPECIFICATION

PASS M0

R01	Main reference standards		IEC 62271-1 IEC 62271-205
R02	Environmental		
R02.01	Application		Outdoor
R02.02	Maximum ambient air temperature (with maximum continuous current rating)	°C	40
R02.03	Minimum ambient air temperature	°C	-30
R02.04	Altitude above sea level (with standard bushings)	m	1000
R02.05	Relative humidity	%	95
R02.06	Resistance to corrosion (ISO 12944-2 / -6, standard configuration)		C4-H
R02.07	Air salinity	kg/m3	≤ 56
R02.08	Wind speed	m/s	34
R02.09	Maximum solar radiation	W/m2	1000
R02.10	Seismic qualification standards		IEC 62271-207 Ed. 2.0 IEEE 693-2005
R02.11	Seismic qualification ZPA	*g [m/s2]	0,5
R02.18	Pollution class (IEC 60815)		E - Very Heavy
R03	Protection characteristics		
R03.01	IP Class (acc. IEC 60529)		IP55
R03.02	IK Class (acc. IEC 62262)		IK10
R03.03	Internal fault protection of enclosures - Reference standard		IEC 62271-203
R03.04	Internal fault protection of enclosures - Protection stage		2
R03.05	Internal fault protection of enclosures - Current	kA	40
R03.06	Internal fault protection of enclosures - Duration	s	0,3
R04	Gas system		
R04.01	Gas composition		SF6 (100%)
R04.02	Annual leakage rate		< 0.5%
R04.03	Nominal filling pressure at +20°C	kPa (rel.)	580
R04.04	Minimum pressure (lock-out) at +20°C	kPa (rel.)	500
R04.05	Design pressure of enclosures	kPa (rel.)	800
R04.06	Routine test pressure of enclosures	kPa (rel.)	1600
R04.07	Burst pressure of enclosures	kPa (rel.)	4000
R04.08	Pressure relief device set-up	kPa (rel.)	1300
R05	Rated frequency	Hz	50 & 60

R06 Insulation capability

R06.01	Rated voltage (Ur)	kV	72,5
R06.02	Power frequency withstand voltage, 50 & 60 Hz, 1 min, dry - phase-to-ground & across CB	kV	160
R06.03	Power frequency withstand voltage, 50 & 60 Hz, 1 min, dry - across DS contacts	kV	160
R06.04	Power frequency withstand voltage, 50 & 60 Hz, 1 min, wet - phase-to-ground	kV	140
R06.05	Power frequency withstand voltage, 50 & 60 Hz, 15 min, dry @ 0 bar rel. gas pressure	kV	70
R06.07	Lightning impulse withstand voltage, 1.2/50 μ s - phase-to-ground & across CB	kV	325
R06.08	Lightning impulse withstand voltage, 1.2/50 μ s - across DS contacts	kV	375
R06.09	Chopped wave withstand voltage, 2 μ s - phase-to-ground & across CB	kV	452
R06.13	Partial discharge level @ 1.2*Ur/V3	pC	<5
R06.14	Partial discharge level @ 1.2*Ur	pC	<5

R07 Current capability

R07.01	Rated continuous current @ Max ambient air temperature	A	2500
R07.02	Rated short-time withstand current	kA	40
R07.03	Rated duration of short circuit current	s	3
R07.04	Rated dynamic peak withstand current	kAp	104

R08 Circuit breaker (CB)

R08.01	Reference standard	IEC 62271-100 Ed. 2.2	
R08.02	Operating mechanism model	FSA1	
R08.03	Operating mechanism principle	3PO	
R08.04	Mechanical endurance class	M2	
R08.05	Rated operating sequence	O-0.3"-CO-1'-CO	
R08.06	Stored switching sequence	O-CO	
R08.07	Rated short-circuit breaking current	kA	40
R08.08	Rated peak making current	kAp	104
R08.09	Breaking and making class (IEC 62271-100)		
R08.10	Breaking time	ms	≤ 50
R08.11	Making time	ms	≤ 60
R08.12	Terminal fault - First-pole-to-clear factor (kpp)	1.3 / 1.5	
R08.13	Terminal fault - DC time constant (τ)	ms	45
R08.14	Terminal fault - T100a asymmetry current peak factor	1.21 (50 Hz) 1.27 (60 Hz)	
R08.15	Out-of-phase - OP2 First-pole-to-clear factor (kpp)	2,5	
R08.16	Short-line fault - TRV time delay on line side (tdL)	μ s	< 0.1
R08.17	Capacitive switching - Line charging - breaking current	A	50

R08.18	Capacitive switching - Line charging - voltage factor (kC)		1,4
R08.19	Capacitive switching - Line charging - probability of restrike class		C2
R08.20	Capacitive switching - Cable charging - breaking current	A	160
R08.21	Capacitive switching - Cable charging - voltage factor (kC)		1,4
R08.22	Capacitive switching - Cable charging - probability of restrike class		C2
R08.23	Capacitive switching - Single capacitor bank - breaking current	A	400
R08.24	Capacitive switching - Single capacitor bank - voltage factor (kC)		1
R08.25	Capacitive switching - Single capacitor bank - probability of restrike class		C2
R08.26	Capacitive switching - Back-to-back capacitor bank - breaking current	A	400
R08.27	Capacitive switching - Back-to-back capacitor bank - voltage factor (kC)		1
R08.28	Capacitive switching - Back-to-back capacitor bank - probability of restrike class		C2
R08.29	Auxiliary voltage levels - Drive coils and motor	V	48 / 110-125 / 220 1b (48 V)
R08.30	Maximum operating current - coils	Arms	6.5 (110-125 V) 4.0 (220 V) 15 (48 V)
R08.31	Maximum operating current - motor	Arms	13.5 (110 V) 7 (220 V)
R08.32	Maximum operating current - digital input	ADC	
R08.33	Maximum operating current - capacitor charge	ADC/AC	
R08.34	Spring charging time	s	≤15

R09	Disconnecter and Earthing Switch (DS/ES)		
R09.01	Reference standard		IEC 62271-102 Ed. 2.0
R09.02	Operating mechanism		BES7
R09.03	Mechanical endurance class		M2
R09.04	Electrical endurance class of ES		E0
R09.05	Operation time (between adjacent positions)	s	< 5
R09.06	Bus transfer switching voltage (Double Bus-Bar)	V	100
R09.07	Bus transfer switching current (Double Bus-Bar)	A	1600
R09.10	Induced current switching class of ES		A B (optional)
R09.11	Maximum induced current switching current - electromagnetic coupling	A	80
R09.12	Maximum induced current switching voltage - electromagnetic coupling	kV	2
R09.13	Maximum induced current switching current - electrostatic coupling	A	2
R09.14	Maximum induced current switching voltage - electrostatic coupling	kV	6
R09.15	Auxiliary voltage levels	V	110-125 / 220
R09.16	Maximum operating current - motor	ADC	< 5 (110-125 V) < 4 (220 V)

R10	Fast-Acting Earthing Switch (FAES)		
R10.01	Reference standard		IEC 62271-102 Ed. 2.0

R10.02	Operating mechanism		BES7 TPO
R10.03	Mechanical endurance (N° of CO operations)		5000
R10.04	Electrical endurance class of ES		E1
R10.05	Motor operating time	s	< 2
R10.06	Making time	ms	<50
R10.07	Induced current switching class		B
R10.08	Maximum induced current switching current - electromagnetic coupling	A	80
R10.09	Maximum induced current switching voltage - electromagnetic coupling	kV	2
R10.10	Maximum induced current switching current - electrostatic coupling	A	2
R10.11	Maximum induced current switching voltage - electrostatic coupling	kV	6
R10.12	Auxiliary voltage levels	V	110-125 / 220
R10.13	Maximum operating current - motor	Arms	< 6 (110-125 V) < 5 (220 V)
R11	Current transformer (CT)		
R11.01	Reference standards		IEC 61869-2 IEEE C57.13
R11.02	Insulation type		Resin / Air
R11.03	Maximum burden	VA	50
R11.04	Best accuracy class - Protection (ref. IEC 61869-2)		3P
R11.05	Best accuracy class - Measuring (ref. IEC 61869-2)		0,2
R11.06	Maximum height on standard CT fitting	mm	310
R12	Voltage transformer (VT)		
R12.01	Reference standards		IEC 61869-3
R12.02	Insulation type		SF6
R12.03	Voltage factor (continuous)	*U0	1,2
R12.04	Voltage factor (30 s)	*U0	1,5
R12.05	Voltage factor (8 h)	*U0	1,9
R12.06	Best accuracy class - Protection (ref. IEC 61869-3)		3P
R12.07	Best accuracy class - Measuring (ref. IEC 61869-3)		0,2
R13	Bushings (standard type - max altitude 1000 m a.s.l.)		
R13.01	Min. creepage distance	mm	4500
R13.02	Maximum static terminal load	N	2020
R13.03	Maximum dynamic terminal load (MML)	N	2500