

E³ Vertigroup Fuse-Switches Vertical Design

Overview

System

With the Vertigroup Fuse-Switches Vertical Design series, you receive a product which is fit for all current and future requirements. It was designed specifically for the responsible use of energy resources. The new mounting technique will set a benchmark for assembling and mounting devices. Excellent electrical data (120 kA rated conditional short circuit current) makes it a unique product.

Features

All components are made of high quality material. The wide range of available accessories, especially developed for controlling and measurement, offer a wide range of possibilities. Mounting without drilling is possible from size 00 - 3. For personal safety, all devices can be locked or be put in park-position.

Product Range Overview

TYPE	SIZE 00	SIZE 2	SIZE 3
BUSBAR SYSTEM 100mm	•		
BUSBAR SYSTEM 185mm	•	•	•
MULTIPLE USE TERMINAL (screw terminal)	•	•	•
THREADED BOLT M12x30		•	•
INSERTED SCREW NUT		•	•
V2N-SHAPED		•	•
MICROSWITCH FOR POSITION INDICATING	•	•	•

Technical data for Vertigroup Fuse-Switches, vertical design acc. To VDE 0660 T107/IEC/EN 60947-3/AS/NZ3439.1

		UNIT	00/60	00/100	00/185	2	3
FOR VERTIGROUP FUSE-LINKS ACC. TO DIN 43620/1		SIZE	000/00	000/00	000/00	2	3
RATED OPERATIONAL CURRENT I_e	400V 500V 690V	A A A	160 160 160	160 160 160	160 160 160	400 400 315	630 630 500
CONVENTIONAL FREE AIR THERMAL CURRENT I_{th}		A	220	220	220	400	630
RATED OPERATIONAL VOLTAGE U_e		V	690	690	690	690	690
RATED INSULATION VOLTAGE U_i		V	1000	1000	1000	1000	1000
RATED IMPULSE WITHSTAND VOLTAGE U_{imp}		KV	8	8	8	12	12
RATED CONDITIONAL SHORT CIRCUIT CURRENT	400V 500V 690V	KA KA KA	100 100 100	100 100 100	120 120 100	120 120 100	120 120 100
UTILIZATION CATEGORY VDE 0660 T107/EN/IEC 60947-3	400V 500V 690V		AC-23B AC-22B AC-22B	AC-23B AC-22B AC-22B	AC-23B AC-22B AC-22B	AC-23B AC-22B AC-21B	AC-23B AC-22B AC-21B
MECHANICAL DURABILITY		CYCLES	1400	1400	1400	800	800
ELECTRICAL DURABILITY		CYCLES	200	200	200	200	200
TYPE OF PROTECTION ACC. DIN/EN 60529/VDE 0470 T1		IP	30	30	30	20	20
MAXIMUM POWER DISSIPATION OF THE NH FUSE-LINKS		W	12	12	12	34	48
TOTAL POWER LOSS AT I_{th} (without fuse links)		W	20	20	22	56	111
DEGREE OF POLLUTION			3	3	3	3	3
OVERVOLTAGE CATEGORY			IV	IV	IV	IV	IV
RATED FREQUENCY		Hz	50-60	50-60	50-60	50-60	50-60
WEIGHT WITHOUT NH FUSE-LINKS		KG	1.20	1.30	2.00	5.00	5.60

Technical data for parallel Vertigroup Fuse-Switches

		UNIT		
FOR VERTIGROUP FUSE-LINKS ACC. TO DIN 43620/1		SIZE	2	3
RATED OPERATIONAL CURRENT I_e	400V 500V 690V	A A A	800 800 630	1260 1260 1000
CONVENTIONAL FREE AIR THERMAL CURRENT I_{th}		A	800	1260
RATED OPERATIONAL VOLTAGE U_e		V	690	690
RATED INSULATION VOLTAGE U_i		V	1000	1000
RATED IMPULSE WITHSTAND VOLTAGE U_{imp}		KV	12	12
RATED CONDITIONAL SHORT CIRCUIT CURRENT	400V 500V 690V	KA KA KA	120 120 100	120 120 100
UTILIZATION CATEGORY VDE 0660 T107/EN/IEC 60947-3	400V 500V 690V		AC-23B AC-22B AC-21B	AC-23B AC-22B AC-21B
MECHANICAL DURABILITY		CYCLES	800	800
ELECTRICAL DURABILITY		CYCLES	200	200
TYPE OF PROTECTION ACC. DIN/EN 60529/VDE 0470 T1		IP	20	20
MAXIMUM POWER DISSIPATION OF THE NH FUSE-LINKS		W	68	96
TOTAL POWER LOSS AT I_{th} (without fuse links)		W	112	222
DEGREE OF POLLUTION			3	3
OVERVOLTAGE CATEGORY			IV	IV
RATED FREQUENCY		Hz	50-60	50-60
WEIGHT WITHOUT NH FUSE-LINKS		KG	5.00	5.60

Conductor Types and Sizes

TYPE OF TERMINAL	CONDUCTOR TYPE		SIZE 00	SIZE 2	SIZE 3
MULTIPLE USE TERMINAL (screw terminal)			M8	M12	M12
V CONNECTION FOR SCTOR CABLE	Cu	RE/RM/SE/SM		25 – 240	25 - 240
V CONNECTION FOR SCTOR CABLE	Al	RE/RM/SE/SM		25 – 240	25 - 240
MAX LUGGED CABLE*	mm			1 X 300	1 X 300
	mm			2 X 240	2 X 240

*For other cable configurations, special tags can be fitted to suit the application.

1000A/2000A Technical Data Acc. IEC/EN 60947-1/-3 AS/NZ3439.1

SIZE	DESCRIPTION	UNIT	1000A	2000A
RATED OPERATIONAL VOLTAGE	U_e	Vac	690	690
RATED OPERATIONAL CURRENT	I_e	A	1000	2000
RATED INSULATION VOLTAGE	U_i	Vac	1000	1000
RATED IMPULSE WITHSTAND VOLTAGE	U_{imp}	kV	12	12
RATED FREQUENCY	I_{cw}	Hz	50-60	50-60
RATED WITHSTAND SHORT CIRCUIT CURRENT		kA	15 25*	22 40*
UTILISATION CATEGORY AC	400 V 500 V 690 V		AC-22B AC-21B AC-21B	AC-22B AC-21B AC-21B
MECHANICAL DURABILITY - CYCLES		N	800	800
ELECTRICAL DURABILITY - CYCLES		N	200	200
MAXIMUM POWER DISSIPATION WITHOUT FUSE LINKS		W	270	540
IP PROTECTION (With Front Lid Open)	IP		20	20
DEGREE OF POLLUTION			3	3
OVERVOLTAGE CATEGORY			IV	IV
MATERIAL	ALL MATERIAL CONFORMS TO ROHS			

*With handle lock

Current transformer size 2 - 3

Technical data acc. VDE 0414 T 44-1 / IEC/EN 60044-1 AS/NZ3439.1

PRIMARY RATED CURRENT	I_{1N}	150, 250, 400, 600, 800
RATED SECONDARY CURRENT	I_{2N}	5 A
ACCURACY CLASS		1
BURDEN	VA	2.5 (150), 5 (250, 400, 600, 800)
RATED FREQUENCY		50-60 Hz
HIGHEST VOLTAGE FOR EQUIPMENT	U_m	720 V
RATED POWER-FREQUENCY WITHSTAND VOLTAGE (R.M.S)		3 kV
INSTRUMENT SECURITY FACTOR (FS)		FS 5
RATED CONTINUOUS THERMAL CURRENT		1.2 X L_{1N}
RATED SHORT-TIME THERMAL CURRENT		$I_{TH} = 60 X I_{1N}$ MAX. 50 KA
RATED DYNAMIC CURRENT		$I_{DYN} = 2.5 X I_{TH}$ MAX. 120 KA
CLASS OF INSULATION IN ACCORDANCE WITH IEC 60085		E
DEGREE OF PROTECTION DIN/EN 60529/VDE 0470 T1		IP 20
HULL TYPE		CLOSED PLASTIC HULL
HULL MATERIAL		POLYAMIDE 6
TYPE OF CONNECTION		BOX TERMINAL 1.5-4 MM ² LITZ WITH SLEEVE
TIGHTENING TORQUE SECONDARY TERMINALS		0.8 Nm