General data

Technical specifications

Standards		IEC 60947-1, IEC 60947-3, VDE 0660 Part 107				
Type		**3NP40 1**	**3NP40 7**	**3NP42 7**	**3NP43 7**	**3NP44 7**
Rated uninterrupted current I_u For fuse links acc. to DIN 43620	A Size	160[1)] 00C/000	160 00	250 1 and 0	400 2 and 1	630 3 and 2
Continuous thermal current I_{th}	A	160[1)]	160	250	400	630
Rated operating voltage U_e AC 50 Hz/60 Hz DC	 V V	 690 220 (3 conducting paths in series)		 690 440 (2 conducting paths in series)		
Rated insulation voltage U_i	V	690	690	800[4)]	800[4)]	800[4)]
Rated impulse withstand voltage U_{imp}	kV	6	6	6	6	6
Rated conditional short-circuit current with fuses (on rapid closing)						
With fuse links Rated current at AC 400 V (690 V)	 Size/A kA (rms value)	 000/100 (35) 50 (50)	 00/160 50	 1/250 50	 2/400 50	 3/630 50
Maximum permissible let-through I^2t value	kA^2s	56 (7.8)	158	551	1515	4340
Permissible let-through current of the fuse	kA (peak value)	11 (5)	15	25	35	55
Short-circuit strength with fuses (with closed disconnector)						
With fuse links Rated current at 690 V	 Size/A kA (rms value)	 000/100 100	 00/160 50	 1/250 50	 2/400 50	 3/630 50
Permissible let-through current of the fuse	kA (peak value)	15	15	25	35	55
Rated making and breaking capacity (Feed-in from top or bottom)						
At AC 400 V, with fuse links or isolating links	Size	000	00	1	2	3
Rated breaking current I_c (p.f. = 0.35)	A (rms value)	800 (p.f. = 0.45)	800	2000	3200	5040
Rated operating current I_e at AC-21B, AC-22B AC-23B	 A A	 160 100	 160 100	 250 250	 400 400	 630 630
At AC 500 V, with fuse links or isolating links	Size	000	00	1	2	3
Rated breaking current I_c (p.f. = 0.35)	A (rms value)	320 (p.f. = 0.45)	320	750	1200	1890
Rated operating current I_e at AC-21 B AC-22B AC-23B	 A A A	 160 100 40	 160 100 40	 250 250 –	 400 400 –	 630 630 –
At AC 690 V, with fuse links or isolating links	Size	000	00	1	2	3
Rated breaking current I_c (p.f. = 0.35)	A (rms value)	200/240 (p.f. = 0.45/0.95)	200/240 (p.f. = 0.45/0.95)	375	600	945
Rated operating current I_e at AC-21 B AC-22B AC-23B	 A A A	 160 50 25	 160 50 25	 250 – –	 400 – –	 630 – –
At DC 220 V/240 V, with fuse links[3)5)6)] or isolating links	Size	000	00	1	2	3
Rated operating current I_e at 220 V DC-23B/DC-21B 440 V DC-21B	 A A	 80/160 –	 80/160 –	 – 250	 – 400	 – 630

1) 125/160 A only with 3NY1 236 supply terminals and with 21 mm wide fuse links 3NY1 822 (125 A) and 3NY1 824 (160 A); see Accessories.

2) Only for isolating links; otherwise note instructions of the fuse manufacturer.

3) For no-load switching (AC-20 B, DC-20 B), DC voltages up to DC 690 V can be applied.

4) For safety monitoring max. 690 V.

5) For pollution severity 2, the switch disconnectors can be used up to 1000 V AC-20 B, DC-20 B (no-load switching).

6) Conducting paths in series: 3 at 3NP40; 2 at 3NP42, 3NP43 and 3NP44.

General data

Standards		IEC 60 947-1, IEC 60 947-3, VDE 0660 Part 107				
Type		**3NP40 1**	**3NP40 7**	**3NP42 7**	**3NP43 7**	**3NP44 7**
Capacitor switching capacity						
at AC 400 V						
Capacitor power	kvar	50	50	–	–	–
Rated current I_n	A	72	72	–	–	–
at AC 525 V						
Capacitor power	kvar	50	50	–	–	–
Rated current I_n	A	55	55	–	–	–
Permissible ambient temperature	°C	–25 ... +55[1] for operation, –50 ... +80 for storage				
Mechanical endurance	Operations	2000	2000	1600	1000	1000
Degree of protection (with respect to the operator side)						
Without molded-plastic masking frame/cable lug cover		IP00 (3NP40 with box terminal and properly connected conductors: IP20)				
With molded-plastic blanking plate/cable lug cover		IP30 (contacts closed), IP20 (contacts open)				
Power loss of the switch disconnector at I_{th} (plus power loss of the fuse links)				a		
Without busbar adapter	W	4.5 (at 100 A)	10	15	30	47
With busbar adapter	W	8.5 (at 100 A)	20	47	83	127
Main conductor connection						
Flat pad connection for cable lug, max. conductor cross-section (stranded)	mm^2	–	up to 2 × 70 (M 8)	up to 150 (M 10)	up to 240 (M 10)	up to 2 × 240 (M 12)
Box terminal/supply terminal (finely stranded with end sleeve)	mm^2	1.5 ... 50 (35)	2.5 ... 70 (50)	70 ... 150	120 ... 240	150 ... 300
Conductor bar (width x thickness)	mm	–	22 × 5	22–30 × 5–10	22–30 × 5–10	25–40 × 5–10
Louvered Cu strips, unperforated in terminals (width × thickness)	mm	8 × 8	up to 9 × 8	up to 16 × 8	up to 20 × 10	up to 24 × 10
Tightening torque for terminal screws						
For flat pad connection	Nm	–	10 ... 12	25	25	30
With SIGUT box terminal/connection terminal	Nm	3 ... 3.5	8 ... 10	6	8	8
Auxiliary switch 1 CO (Accessory)						
3NY3 035 AC 50 Hz/60 Hz up to 230 V Rated operating current I_e at AC-14	A	0.25 (I_{th} = 5 A), at DC 24 V: I_e = 0.45 A; flat connector to DIN 46244: A 2.8 × 0.5				
3NY3 030 AC 50 Hz/60 Hz up to 230 V Rated operating current I_e at AC-13	A	0.1 (I_{th} = 0.1 A); plug-in sleeve to DIN 46245: A 2.8 – 1				
Permissible mounting position		Vertical or horizontal (no reduction in specified switching capacity)				

1) Only for isolating links; otherwise note instructions of the fuse manufacturer.