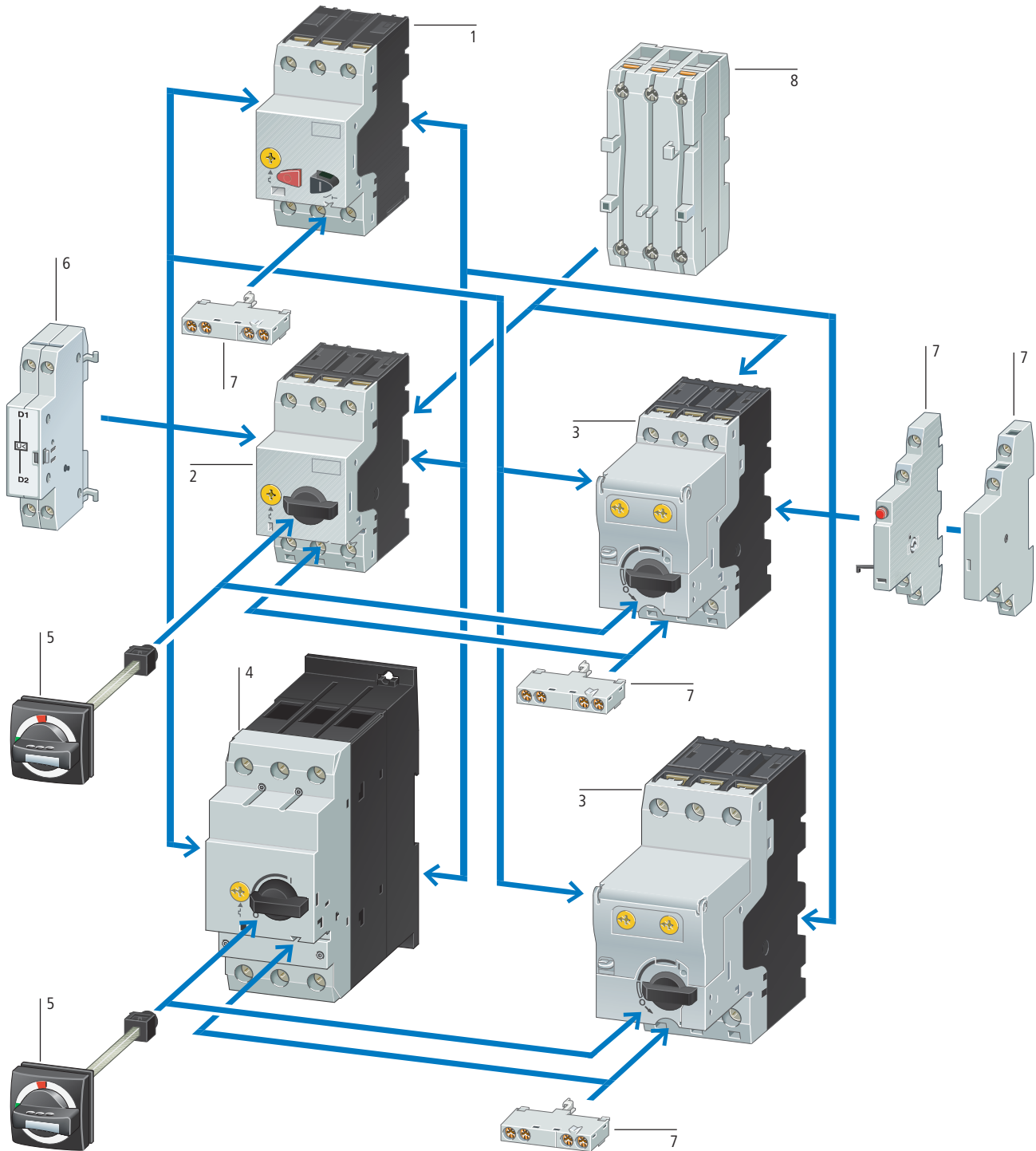


System overview



Basic devices

Motor-protective circuit-breaker PKZM01 1
→ Page 7/3

Motor-protective circuit-breaker PKZM0 2
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Motor-protective circuit-breaker with wide-range overload protection 3
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Motor-protective circuit-breaker PKZM4 4
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Add-on functions

Standard auxiliary contacts 7
→ Page 7/10

Shunt release 6
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Current limiters 8
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Mounting accessories

Door coupling handles IP65 5
→ Page 7/20

Insulated enclosure
→ Page 7/16

Mounting/wiring
→ Page 7/22

Circuit diagrams	Max. motor rating AC-3					Rated uninter-rupted current	Setting range		Screw terminals	Screw terminals on feed side, spring-loaded terminals on output side	
	220 V	380 V	440 V	500 V	660 V		Overload releases	Short-circuit releases			
	230 V	400 V			690 V			Part no. Article no.	Price See price list	Part no. Article no.	Price See price list
	240 V	415 V									
	P kW	P kW	P kW	P kW	P kW	I_u A	I_r A				
Motor-protective circuit-breakers, type "1" and type "2" coordination¹⁾											
	-	-	-	-	0.06	0.16	0.1...0.16	2.2	PKZM0-0.16-SC 072730	PKZM0-0.16-SC 229828	
	-	0.06	0.06	0.06	0.12	0.25	0.16...0.25	3.5	PKZM0-0.25 072731	PKZM0-0.25-SC 229829	
	0.06	0.09	0.12	0.12	0.18	0.4	0.25...0.4	5.6	PKZM0-0.4 072732	PKZM0-0.4-SC 229830	
	0.09	0.12	0.18	0.25	0.25	0.63	0.4...0.63	8.8	PKZM0-0.63 072733	PKZM0-0.63-SC 229831	
	0.12	0.25	0.25	0.37	0.55	1	0.63...1	14	PKZM0-1 072734	PKZM0-1-SC 229832	
	0.25	0.55	0.55	0.75	1.1	1.6	1...1.6	22	PKZM0-1.6 072735	PKZM0-1.6-SC 229833	
	0.37	0.75	1.1	1.1	1.5	2.5	1.6...2.5	35	PKZM0-2.5 072736	PKZM0-2.5-SC 229834	
	0.75	1.5	1.5	2.2	3	4	2.5...4	56	PKZM0-4 072737	PKZM0-4-SC 229835	
	1.1	2.2	3	3	4	6.3	4...6.3	88	PKZM0-6.3 072738	PKZM0-6.3-SC 229836	
	2.2	4	4	4	7.5	10	6.3...10	140	PKZM0-10 072739	PKZM0-10-SC 229837	
	3	5.5	5.5	5.5	11	12	8...12	168	PKZM0-12 278486	PKZM0-12-SC 278487	
	4	7.5	9	9	12.5	16	10...16	224	PKZM0-16 046938	PKZM0-16-SC 229838	
	5.5	9	11	12.5	15	20	16...20	280	PKZM0-20 046988		
	5.5	12.5	12.5	15	22	25	20...25	350	PKZM0-25 046989		
	7.5	15	15	22	30	32	25...32	448	PKZM0-32 278489		
Motor-protective circuit-breakers, type "1" and type "2" coordination¹⁾											
	4	7.5	9	9	12.5	16	10...16	224	PKZM4-16 222350		
	5.5	12.5	12.5	15	22	25	16...25	350	PKZM4-25 222352		
	7.5	15	17.5	22	22	32	25...32	448	PKZM4-32 222353		
	11	20	22	24	30	40	32...40	560	PKZM4-40 222354		
	14	25	30	30	45	50	40...50	700	PKZM4-50 222355		
	17	30	37	37	55	58	50...58	812	PKZM4-58 222394		
	18.5	34	37	45	55	65	55...65	882	PKZM4-63 222413		
Circuit-breakers²⁾ For line and cable protection											
	-	-	-	-	-	16	10...16	224	PKZM4-16-CB 132591		
	-	-	-	-	-	25	16...25	350	PKZM4-25-CB 132592		
	-	-	-	-	-	32	25...32	448	PKZM4-32-CB 132593		

Spring-loaded terminals	Std. pack	Notes	Information relevant for export to North America	
			Part no. Article no.	Price See price list
Part no. Article no.	Price See price list			
PKZM0-0.16-C 229669				
PKZM0-0.25-C 229670				
PKZM0-0.4-C 229671				
PKZM0-0.63-C 229672				
PKZM0-1-C 229673				
PKZM0-1.6-C 229674				
PKZM0-2.5-C 229675				
PKZM0-4-C 229676				
PKZM0-6.3-C 229677				
PKZM0-10-C 229678				
PKZM0-12-C 278488				
PKZM0-16-C 229679				
<div style="display: flex; justify-content: space-between;"> <div> <p>1 off </p> <p></p> <p>Accessories</p> <p>3 Standard auxiliary contacts → 7/10</p> <p>5 Trip-indicating auxiliary contact → 7/12</p> <p>6 Shunt release, undervoltage release → 7/29</p> <p>Phase failure sensitivity to IEC/EN 60947-4-1, VDE 0660 Part 102. Can be snap-fit to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height</p> <p> PTB 02 ATEX 3151, see manual → 7/21</p> </div> <div> <p>1) Product Standards UL 508; CSA-C22.2 No. 14; IEC60947-4-1; CE marking</p> <p>UL File No. E36332</p> <p>UL CCN NLRV</p> <p>CSA File No. 12528</p> <p>CSA Class No. 3211-05</p> <p>NA Certification UL Listed, CSA certified</p> <p>Suitable for Branch circuit: Manual type E if used with terminal, or suitable for group installations</p> <p>See also → Page 7/34</p> </div> </div>				
<div style="display: flex; justify-content: space-between;"> <div> <p>1 off </p> <p></p> <p>Not usable as a main switch</p> <p>Phase failure sensitivity to IEC/EN 60947-4-1, VDE 0660 Part 102.</p> <p>Switching capacity of SCCR 65 kA (480 Y/277 V) 22 kA (600 Y/347 V)</p> </div> <div> <p>2) Product Standards UL 489; CSA-C22.2 no. 5-09; IEC60947-4-1; CE marking</p> <p>NA Certification Request filed for UL and CSA</p> <p>Specially designed for NA Yes</p> <p>Suitable for Feeder and branch circuit as BCPD</p> </div> </div>				

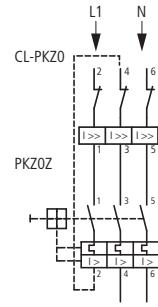
PKZ, PKZM

Engineering

1- and 2-pole-connected PKZM0, PKZM4 and PKZ2 with AC and DC



2-pole-connected PKZM0(1) and PKZM4 with CL-PKZO



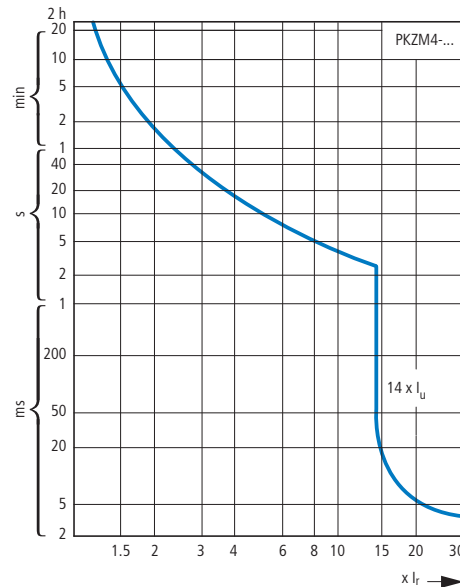
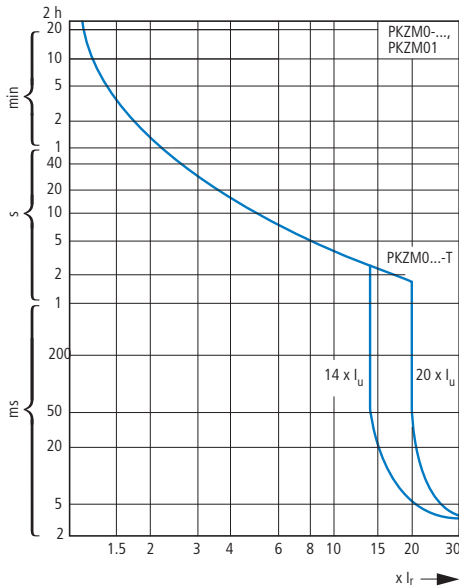
Protection of PVC-insulated cables against thermal overload on short-circuits

The table specifies which minimum conductor cross-sections are protected by motor-protective circuit-breaker PKZ(M) up to their rated conditional short-circuit current I_q .

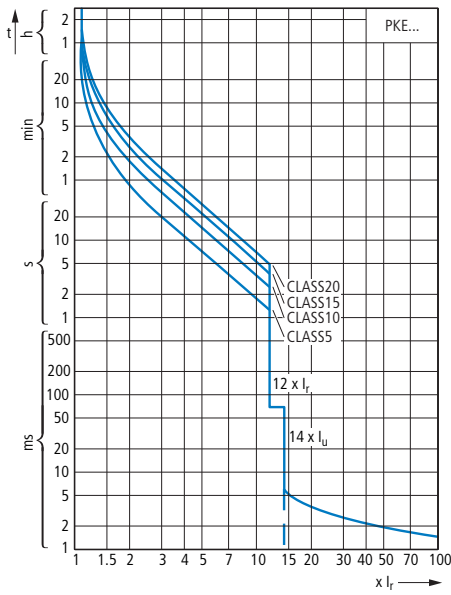
Min. cross-section protected 380 – 415 V, 50 Hz, Cu mm ²					Device Part no.
4	2.5	1.5	1	0.75	
					PKZM0-0,16
					PKZM0-6,3
					PKZM0-10
					PKZM0-12
					PKZM0-16
					PKZM0-20
					PKZM0-25
					PKZM0-32
					PKZM4-16
					PKZM4-25
					PKZM4-32
					PKZM4-40
					PKZM4-50
					PKZM4-58
					PKZM4-63

Min. cross-section protected 380 – 415 V, 50 Hz, Cu mm ²		Device Part no.
		PKZ2/ZM-0,6
		PKZ2/ZM-2,4
		PKZ2/ZM-4
		PKZ2/ZM-6
		PKZ2/ZM-10
		PKZ2/ZM-16
		PKZ2/ZM-25
		PKZ2/ZM-32
PKZ2/ZM-40		

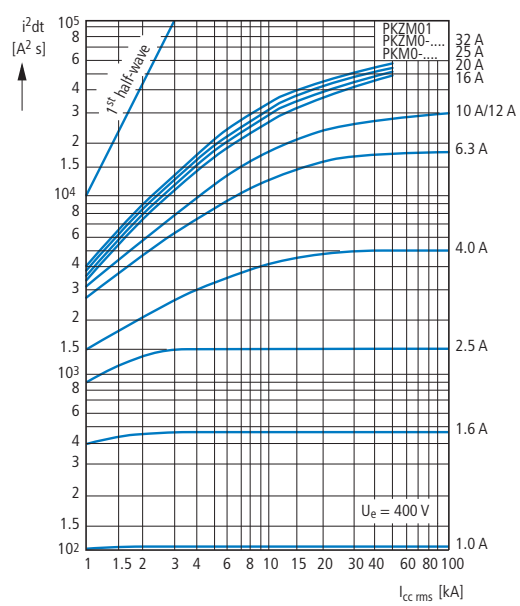
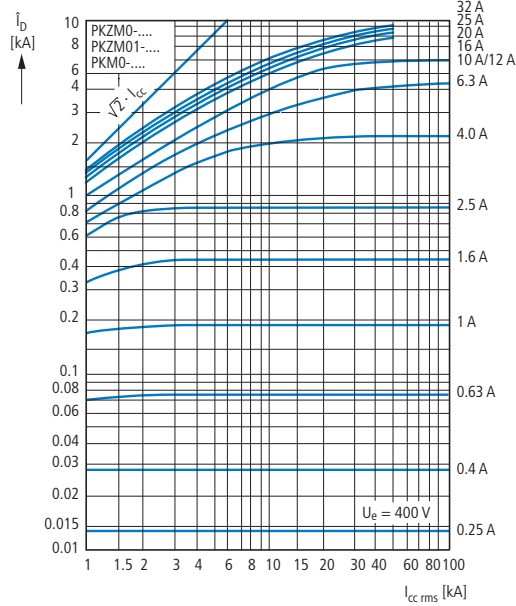
PKZM0-...T tripping characteristics (not for PKM0-...), PKZM01



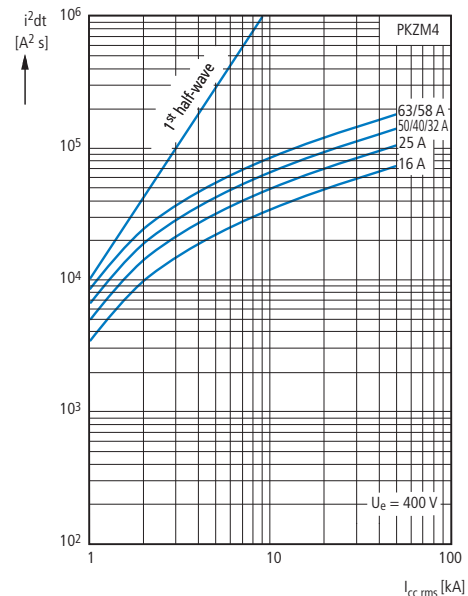
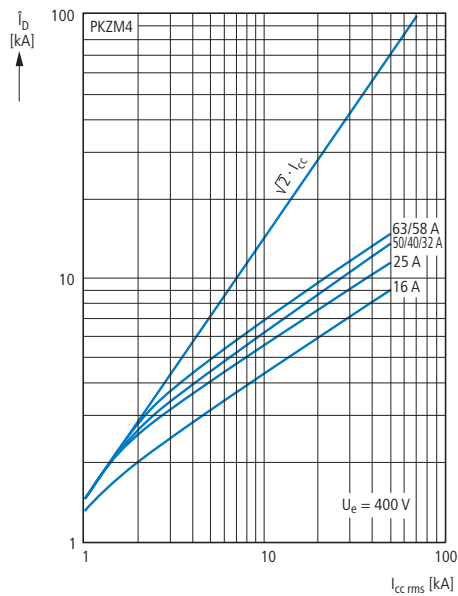
Tripping characteristic curves, wide-range circuit-breaker PKE



Let-through characteristics, motor-protective circuit-breaker, transformer-protective circuit-breakers, circuit-breaker for starter combinations



Motor-protective circuit-breaker let-through characteristics



Circuit-breaker switching capacity from serial no. 04

Rated uninterrupted current I_u

Rated conditional short-circuit current I_q IEC/EN 60947-4-1

Rated ultimate short-circuit breaking capacity I_{cu} } IEC/EN 60947-2

Rated breaking capacity I_{cs}

I_u A	230 V				400 V				440 V				500 V				690 V			
	I_q kA	I_{cu} kA	I_{cs} kA	A ¹⁾	I_q kA	I_{cu} kA	I_{cs} kA	A ¹⁾	I_q kA	I_{cu} kA	I_{cs} kA	A ¹⁾	I_q kA	I_{cu} kA	I_{cs} kA	A ¹⁾	I_q kA	I_{cu} kA	I_{cs} kA	A ¹⁾

PKZM0, PKZM0...-T, PKM0 with type "1" and "2" coordination

0.16 – 1	150	150	150	N	150	150	150	N				N				N				N
1.6	150	150	150	N	150	150	150	N				N				N				N
2.5	150	150	150	N	150	150	150	N				N				N	5	5	5	50
4	150	150	150	N	150	150	150	N				N				N	3	3	3	50
6.3	150	150	150	N	150	150	150	N				N	42	42	11	50	3	3	2	50
10	150	150	150	N	150	150	150	N	42	42	12	50	42	42	11	50	3	3	2	50
12	50	50	13	50	50	50	13	50	15	15	12	50	15	15	8	50	3	3	2	50
16	50	50	13	50	50	50	13	50	15	15	12	50	15	15	8	50	3	3	2	50
20	50	50	13	50	50	50	13	50	10	10	13	50	6	6	3	50	3	3	1	50
25	50	50	13	50	50	50	13	50	10	10	13	50	6	6	3	50	3	3	1	50
32	50	50	13	50	50	50	13	50	10	10	13	50	6	6	3	50	3	3	1	50

PKZM0 (PKZM0...-T, PKM0) + CL-PKZ0

0.16 – 1				N				N				N				N			20	N
1.6				N				N				N				N			20	N
2.5				N				N				N				N	20	20	20	N
4				N				N				N				N	20	20	20	N
6.3				N				N				N			50	N	20	20	20	N
10				N				N				N			20	N	20	20	20	N
12				N				N				N			20	N	5	5	2.5	N
16				N				N				N			20	N	5	5	2.5	N
20				N				N				N	10	10	10	N	5	5	2.5	N
25				N				N				N	10	10	10	N	5	5	2.5	N
32				N				N				N	10	10	10	N	5	5	2.5	N

PKZM0 (PKZM0...-T, PKM0) + 2 CL-PKZ0

0.16 – 1				N				N				N				N			20	N
1.6				N				N				N				N			20	N
2.5				N				N				N				N	40	40	20	N
4				N				N				N				N	40	40	20	N
6.3				N				N				N			50	N	20	20	20	N
10				N				N				N			40	N	20	20	20	N
12				N				N				N			40	N	10	10	2.5	N
16				N				N				N			40	N	10	10	2.5	N
20				N				N				N	20	20	20	N	10	10	2.5	N
25				N				N				N	20	20	20	N	10	10	2.5	N
32				N				N				N	20	20	20	N	10	10	2.5	N

Notes

■ No upstream protective device required, as it is the auto-protected range (100/150 kA)

N Not necessary

¹⁾ Required back-up fuse if the short-circuit current exceeds the device's rated conditional short-circuit current ($I_{cc} > I_q$).

Circuit-breaker switching capacity

Rated uninterrupted current I_u

Rated conditional short-circuit current I_q IEC/EN 60947-4-1

Rated maximum short-circuit breaking capacity I_{cu}
Rated breaking capacity I_{cs} } IEC/EN 60947-2

I_u A	230 V				400 V				440 V ²⁾				500 V ²⁾				690 V ²⁾			
	I_q kA	I_{cu} kA	I_{cs} kA	A ¹⁾	I_q kA	I_{cu} kA	I_{cs} kA	A ¹⁾	I_q kA	I_{cu} kA	I_{cs} kA	A ¹⁾	I_q kA	I_{cu} kA	I_{cs} kA	A ¹⁾	I_q kA	I_{cu} kA	I_{cs} kA	A ¹⁾
PKZM01 with type "1" and "2" coordination																				
0.16 – 1	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
1.6	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
2.5	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
4	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
6.3	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
10	50	50	50	50	50	50	50	50	42	42	10	50	42	42	10	50	42	42	10	50
12	50	50	10	50	50	50	10	50	15	15	10	50	15	15	10	50	15	15	10	50
16	50	50	10	50	50	50	10	50	15	15	10	50	15	15	10	50	15	15	10	50
20, 25	50	50	10	50	50	50	10	50	10	10	3	50	10	10	3	50	10	10	3	50
PKZM4 with type "1" and "2" coordination																				
16	150	150	25	N	150	150	25	N	45	45	25	100	15	15	100	8	8	2.5	100	
25	150	150	25	N	150	150	25	N	45	45	25	100	15	15	100	8	8	2.5	100	
32	50	50	25	100	50	50	25	100	45	45	25	100	15	15	100	5	5	2.5	100	
40	50	50	25	100	50	50	25	100	45	45	25	100	15	15	100	5	5	2.5	100	
50	50	50	25	100	50	50	25	100	45	45	25	100	15	15	100	5	5	2.5	100	
58	50	50	25	160	50	50	25	160	45	45	25	160	15	15	160	5	5	2.5	160	
63	50	50	25	160	50	50	25	160	45	45	25	160	15	15	160	5	5	2.5	160	
PKE12... ²⁾ with type of coordination „1" and																				
0.3 - 1.2	100		50		100		50		50		50		10		50		3		50	
1 - 4	100		50		100		50		50		50		10		50		3		50	
3 - 12	100		50		100		50		15		50		10		50		3		50	
PKE32... ²⁾ with type of coordination „1" and																				
3 - 12	100		50		100		50		15		50		6		50		3		50	
8 - 32	100		50		100		50		25		50		6		50		3		50	

Notes

- No upstream protective device required, as it is the auto-protected range (150 kA)
- N Not necessary

- ¹⁾ Fuse (A gG/gL) for increasing the switching capacity of the motor-protective circuit-breaker to 100 kA
- ²⁾ Please enquire for additional information regarding voltages >400 V and device combinations with CL-PKZ0.

Motor-protective circuit-breaker internal resistances

	Impedance	Heat dissipation (3 pole at operating temperature)	Rated uninterrupted current I_u
	Ω	W	A
PKZM0-0.16	78	6	0.16
PKZM0-0.25	32	6	0.25
PKZM0-0.4	13	6	0.4
PKZM0-0.63	5	6	0.63
PKZM0-1	2	6	1
PKZM0-1.6	0.8	6	1.6
PKZM0-2.5	0.32	6	2.5
PKZM0-4	0.13	6	4
PKZM0-6.3	0.050	6	6.3
PKZM0-10	0.020	6	10
PKZM0-12	0.014	6	12
PKZM0-16	0.008	6	16
PKZM0-20	0.005	6	20
PKZM0-25	0.003	6	25
PKZM0-32	0.002	6	32

	Impedance	Heat dissipation (3 pole at operating temperature)	Rated uninterrupted current I_u
	Ω	W	A
PKZM4-16	0.029	22	16
PKZM4-25	0.012	22	25
PKZM4-32	0.007	22	32
PKZM4-40	0.005	22	40
PKZM4-50	0.003	22	50
PKZM4-58	0.002	22	58
PKZM4-63	0.002	22	65
PKZ2-ZM-0.6	13	14	0.6
PKZ2-ZM-1	5	14	1
PKZ2-ZM-1.6	2	14	1.6
PKZ2-ZM-2.4	0.8	14	2.4
PKZ2-ZM-4	0.29	14	4
PKZ2-ZM-6	0.13	14	6
PKZ2-ZM-10	0.05	14	10
PKZ2-ZM-16	0.018	14	16
PKZ2-ZM-25	0.007	14	25
PKZ2-ZM-32	0.005	14	32
PKZ2-ZM-40	0.003	14	40



Approvals for world markets

Rating data for approved types ¹⁾ UL 508/CSA C 22.2 No. 14	Maximum motor rating				Setting ranges		Maximum protective device to UL/CSA						
	Three-phase current				Overload releases	Short-circuit-releases	Group protection ²⁾						
	200 V	230 V	460 V	575 V			Up to max. short-circuit current	Maximum fuse rating		Maximum circuit breaker			
	HP	HP	HP	HP	A	A	600 V	with CL	with CL	with CL	with CL	with CL	with CL
							kA	kA	A	A	A	A	A
Motor-protective circuit-breakers PKZM01	"Manual Motor Starter with thermal and magnetic trip"												
PKZM01-0,16	3)				0.1 – 0.16	2.2	50	600	600				
PKZM01-0.25					0.16 – 0.25	3.4	50	600	600				
PKZM01-0.4					0.25 – 0.4	5.6	50	600	600				
PKZM01-0.63					0.4 – 0.63	8.8	50	600	600				
PKZM01-1					0.63 – 1	14	50	600	600				
PKZM01-1,6			¾	¾	1 – 1.6	22	50	600	600				
PKZM01-2.5	½	½	1	1½	1.6 – 2,5	35	50	600	600				
PKZM01-4	¾	¾	2	3	2.5 – 4	56	50	600	600				
PKZM01-6,3	1	1½	3	5	4 – 6.3	88	50	600	600				
PKZM01-10	3	3	7½	10	6.3 – 11	140	22	50	150	600	125	600	
PKZM01-12	3	3	7½	10	9 – 12	168	18	50	150	600	125	600	
PKZM01-16	3	5	10	10	10 – 16	224	10	50	150	600	125	600	
PKZM01-20	5	-	-	15	16 – 20	280	10	18	150	600	125	600	
PKZM01-25	-	7½	15	20	20 – 25	350	10	18	150	600	125	600	
Motor-protective circuit-breakers PKZM01	"Manual Motor Starter with thermal and magnetic trip"												
PKZM0-0,16	3)				0.1 – 0.16	2.2	50	600	600				
PKZM0-0.25					0.16 – 0.25	3.4	50	600	600				
PKZM0-0.4					0.25 – 0.4	5.6	50	600	600				
PKZM0-0.63					0.4 – 0.63	8.8	50	600	600				
PKZM0-1					0.63 – 1	14	50	600	600				
PKZM0-1.6			¾	¾	1 – 1.6	22	50	600	600				
PKZM0-2.5	½	½	1	1½	1.6 – 2,5	35	50	600	600				
PKZM0-4	¾	¾	2	3	2.5 – 4	56	50	600	600				
PKZM0-6.3	1	1½	3	5	4 – 6.3	88	50	600	600				
PKZM0-10	3	3	7½	10	6.3 – 11	140	22	50	150	600	125	600	
PKZM0-12	3	3	7½	10	9 – 12	168	18	50	150	600	125	600	
PKZM0-16	3	5	10	10	10 – 16	224	10	50	150	600	125	600	
PKZM0-20	5	-	-	15	16 – 20	280	10	18	150	600	125	600	
PKZM0-25	-	7½	15	20	20 – 25	350	10	18	150	600	125	600	
PKZM0-32	7½	10	20	25	24 – 32	448	10	18	150	600	125	600	
Motor-protective circuit-breakers PKZM4													
PKZM4-16	3	5	10	15	10 – 16	224	50	600	600				
PKZM4-25	7½	7½	20	25	16 – 25	350	50	600	600				
PKZM4-32	10	10	25	30	25 – 34	448	50	600	600				
PKZM4-40	10	15	30	40	32 – 42	560	50	600	600				
PKZM4-50	10	15	30	40	40 – 52	700	10	600	600				
PKZM4-58	15	15	40	50	50 – 56	812	10	600	600				
PKZM4-63	15	15	40	50	52 – 58	882	10	600	600				

Notes

Service factor (SF)

Set value I_r , on the current scale, depending on the load factor

$$SF = 1.15 \rightarrow I_r = 1 \times I_{n \text{ mot}}$$

$$SF = 1 \rightarrow I_r = 0.9 \times I_{n \text{ mot}}$$

¹⁾ Devices for world markets IEC \triangleq UL/CSA²⁾ Caution: Changed requirements for group protection³⁾ Calculate motor output in this range according to rated operational current. Specified values as per NEC Table 430 – 150

Rating data for approved types ¹⁾ UL 508/CSA C 22.2 No. 14		For use with	Pilot Duty	General Use	
Accessories					
Standard auxiliary contacts	NHI11-PKZ0	PKZM0(-T) PKZM4	A 600, Q 300	5 A – 600 V AC 1 A – 250 V DC	–
	NHI12-PKZ0				
	NHI21-PKZ0				
	NHI2-11S-PKZ0				
	NHI-E-11-PKZ0				
	NHI-E-10-PKZ0		E150	0.5 A – 250 V AC	–
Early-make auxiliary contacts	VHI20-PKZ0	PKZM0(-T)	E150	0.5 A – 250 V AC	–
	VHI20-PKZ01	PKZM01			
Trip indicators	AGM2-10-PKZ0	PKZM0(-T) PKZM4	A 600, Q 300	5 A – 600 V AC 1 A – 250 V DC	–
	AGM2-01-PKZ0				
Shunt release	A-PKZ0(...)	PKZM0(-T) PKZM4	–	–	Actuating voltages and ordering information → Products for the German market
	U-PKZ0(...)				
Auxiliary contact for contact module	HI11-S/EZ-PKZ0	PKZM0	A 600, Q 300	5 A – 600 V AC 1 A – 250 V DC	–



Notes

¹⁾ Devices for world markets IEC = UL/CSA

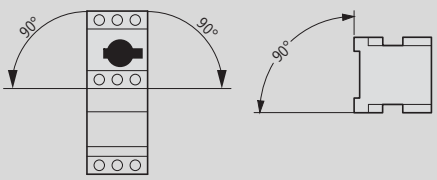
Motor-protective circuit-breakers PKZM0(4) used as "Manual self-protected Motor Starters" – UL 508 Type E

Maximum motor output AC				Setting ranges		Interrupting Capacity = Short Circuit Current (SCCR)			Components	Accessories
200 V	230 V	460 V	575 V	Overload releases	Short-circuit releases	240 V	480V/ 277 V ²⁾	600V/ 347 V ²⁾	Motor Protector	
208 V	240 V	480 V	600 V			[kA]	[kA]	[kA]	Part no.	Part no.
[HP]	[HP]	[HP]	[HP]	[A]	[A]					
¹⁾				0.1 – 0.16	2.2	65	65	50	PKZM0-0.16	BK25/3-PKZ0-E
				0.16 – 0.25	3.4	65	65	50	PKZM0-0.25	BK25/3-PKZ0-E
				0.25 – 0.4	5.6	65	65	50	PKZM0-0.4	BK25/3-PKZ0-E
				0.4 – 0.63	8.8	65	65	50	PKZM0-0.63	BK25/3-PKZ0-E
				0.63 – 1	14	65	65	50	PKZM0-1	BK25/3-PKZ0-E
		³ / ₄	³ / ₄	1 – 1.6	22	65	65	50	PKZM0-1.6	BK25/3-PKZ0-E
¹ / ₂	¹ / ₂	1	1½	1.6 – 2,5	35	65	65	50	PKZM0-2.5	BK25/3-PKZ0-E
³ / ₄	³ / ₄	2	3	2.5 – 4	56	65	65	50	PKZM0-4	BK25/3-PKZ0-E
1	1½	3	5	4 – 6.3	88	65	65	50	PKZM0-6.3	BK25/3-PKZ0-E
3	3	7½	10	6.3 – 11	140	65	65	50	PKZM0-10	BK25/3-PKZ0-E
3	3	7½	–	9 – 12	168	65	65	–	PKZM0-12	BK25/3-PKZ0-E
3	5	10	–	10 – 16	224	42	42	–	PKZM0-16	BK25/3-PKZ0-E
5	–	–	–	16 – 20	280	18	18	–	PKZM0-20	BK25/3-PKZ0-E
–	7½	15	–	20 – 25	350	18	18	–	PKZM0-25	BK25/3-PKZ0-E
7½	10	20	–	24 – 32	448	18	18	–	PKZM0-32	BK25/3-PKZ0-E
3	5	10	10	10 – 16	224	65	65	25	PKZM4-16	BK50/3-PKZ4-E
5	7½	15	20	16 – 27	350	65	65	25	PKZM4-25	BK50/3-PKZ4-E
7½	10	20	30	24 – 34	448	65	65	25	PKZM4-32	BK50/3-PKZ4-E
10	–	30	30	32 – 40	560	65	65	25	PKZM4-40	BK50/3-PKZ4-E
–	15	30	–	40 – 52	700	65	65	–	PKZM4-50	BK50/3-PKZ4-E
–	–	40	–	50 – 56	812	65	65	–	PKZM4-58	BK50/3-PKZ4-E
–	–	40	–	52 – 58	882	65	–	–	PKZM4-63	BK50/3-PKZ4-E

Notes

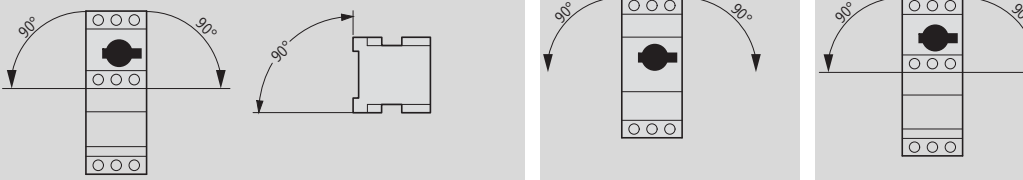
¹⁾ Calculate motor power in this range according to the rated current. Stated values to NEC Table 430 -150
²⁾ Suitable for networks with grounded star-point

Technical data

			PKZM01...	PKZM0-... ¹⁾
General				
Standards			IEC/EN 60947, VDE 0660, UL 508, CSA C 22.2 No. 14	
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30	
Ambient temperature	Storage	°C	-25...80	-25...80
	Open	°C	-25...55	-25...55
	Encapsulated	°C	-25...40	-25...40
Built-in position				
Direction of incoming supply			Any	Any
Degree of protection	Device		IP20	IP20
	Terminals		IP00	IP00
Contact protection to EN 50274			Finger- and back-of-hand proof	
Shock resistance, half-sinusoidal shock, 10 ms to IEC 60068-2-27		g	25	25
Installation altitude		m	max. 2000	max. 2000
Terminal capacity, screw terminals	Solid	mm ²	1 x (1 - 6) 2 x (1 - 6)	1 x (1 - 6) 2 x (1 - 6)
	Flexible with ferrule to DIN 46228	mm ²	1 x (1 - 6) 2 x (1 - 6)	1 x (1 - 6) 2 x (1 - 6)
	Solid or stranded	AWG	18 - 10	18 - 10
Terminal capacity, spring-loaded terminals	Solid	mm ²	–	1 x (1...2.5) 2 x (1...2.5)
	Flexible with ferrule to DIN 46228	mm ²	–	1 x (1...2.5) 2 x (1...2.5)
	Solid or stranded	AWG	–	18...14
Terminal screw tightening torque	Main conductors	Nm	1.7	1.7
	Auxiliary conductors	Nm	1	1
Main contacts				
Rated impulse withstand voltage	U_{imp}	V AC	6000	6000
Overvoltage category/pollution degree			III/3	III/3
Rated operational voltage	U_e	V AC	690	690
Rated uninterrupted current = rated operational current	$I_u = I_e$	A	16 or current setting of the overcurrent release	32 or current setting of the overcurrent release
Rated frequency		Hz	40 - 60	40 - 60
Heat dissipation (3 pole at operating temperature)		W	6	6
Lifespan, mechanical	Operations	x 10 ⁶	0.05	0.1
Lifespan, electrical (AC-3 at 400 V)	Operations	x 10 ⁶	0.05	0.1
Maximum operating frequency	Operations/h	Ops/h	25	40
Short-circuit rating				
AC			→ Page 7/33	→ Page 7/32
DC		kA	60	60 (up to PKZM0-16) 40 (PKZM0-20 to PKZM0-32)
Motor switching capacity				
AC-3 up to 690 V		A	16	32
DC-5 (up to 250 V)		A	16 (3 contacts in series)	25 (3 contacts in series)
Trip blocks				
Temperature compensation				
To IEC/EN 60947, VDE 0660		°C	-5...40	-5...40
Operating range		°C	-25...55	-25...55
Temperature compensation residual error for T > 40 °C		%/K	≤ 0.25	≤ 0.25
Setting range of overload releases		x I_u	0.6 - 1	0.6 - 1
Short-circuit releases tolerance		%	± 20	± 20
Phase-failure sensitivity			IEC/EN 60947-4-1, VDE 0660 Part 102	IEC/EN 60947-4-1, VDE 0660 Part 102

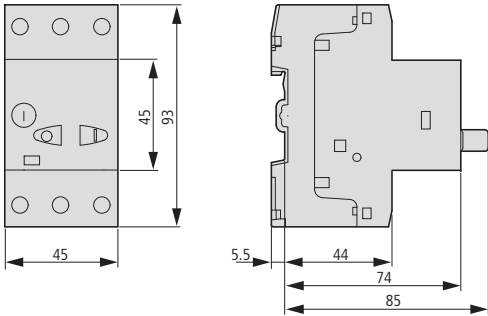
Notes

¹⁾ Tested according to IEC/EN 60947-1 (isolating characteristics) and IEC/EN 60947-2

PKM0-...	PKZM0-...-T	PKZM4	PKE
IEC/EN 60947, VDE 0660, UL 508, CSA C 22.2 No. 14			
Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30			
-25...80	-25...80	-25...70	-25...80
-25...55	-25...55	-25...55	-25...55
-25...40	-25...40	-25...40	-25...40
			
Any	Any	Any	Any
IP20	IP20	IP20	IP20
IP00	IP00	IP00	IP00
Finger- and back-of-hand proof			
25	25	15	25
max. 2000	max. 2000	max. 2000	max. 2000
1 x (1 - 6) 2 x (1 - 6)	1 x (1 - 6) 2 x (1 - 6)	1 x (1 - 50) 2 x (1 - 35)	1 x (1 - 6) 2 x (1 - 6)
1 x (1 - 6) 2 x (1 - 6)	1 x (1 - 6) 2 x (1 - 6)	1 x (1 - 35) 2 x (1 - 35)	1 x (1 - 6) 2 x (1 - 6)
18 - 10	18 - 10	14 - 2	18 - 10
1 x (1...2.5) 2 x (1...2.5)	–	–	1 x (1...2.5) 2 x (1...2.5)
1 x (1...2.5) 2 x (1...2.5)	–	–	1 x (1...2.5) 2 x (1...2.5)
18...14	–	–	18...14
1.7	1.7	3.3	1.7
1	1	1	1
6000	6000	6000	6000
III/3	III/3	III/3	III/3
690	690	690	690
32 or current setting of the overcurrent release	25 or current setting of the overcurrent release	65 Open 63 enclosed	32 A or set current of the overcurrent release
40 - 60	40 - 60	40 - 60	40 - 60
6	6	22	6
0.1	0.1	0.03	0.05
0.1	0.1	0.03	0.05
40	40	40	60
→ Page 7/32	→ Page 7/32	→ Page 7/33	→ Page 7/33
60 (up to PKM0-16) 40 (PKM0-20 to PKM0-32)	60 (up to PKZM0-16) 40 (PKZM0-20 to PKZM0-32)	60	–
32	25	65	32
25 (3 contacts in series)	25 (3 contacts in series)	63 (3 contacts in series)	–
-5...40	-5...40	-5...40	-5...40
-25...55	-25...55	-25...55	-25...55
≤ 0.25	≤ 0.25	≤ 0.25	–
0.6 - 1	0.6 - 1	0.6 - 1	0.25 - 1
± 20	± 20	± 20	± 20
–	IEC/EN 60947-1-1, VDE 0660 Part 102	IEC/EN 60947-4-1, VDE 0660 Part 102	Yes

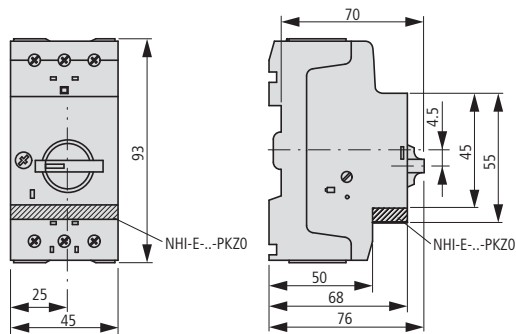
Dimensions

Motor-protective circuit-breaker
PKZM01...



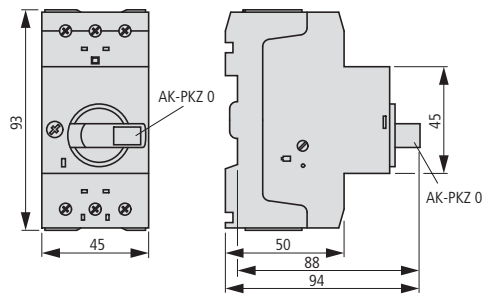
Motor-protective circuit-breaker
Transformer-protective circuit-breakers

Motor-protective circuit-breaker with
standard auxiliary contacts
PKZM0-...(+NHI-E-...-PKZ0)
PKZM0-...-T(+NHI-E-...-PKZ0)
PKM0-...(+NHI-E-...-PKZ0)

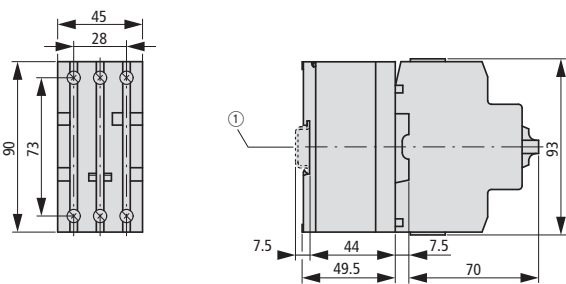


Motor-protective circuit-breakers with lockable rotary handles

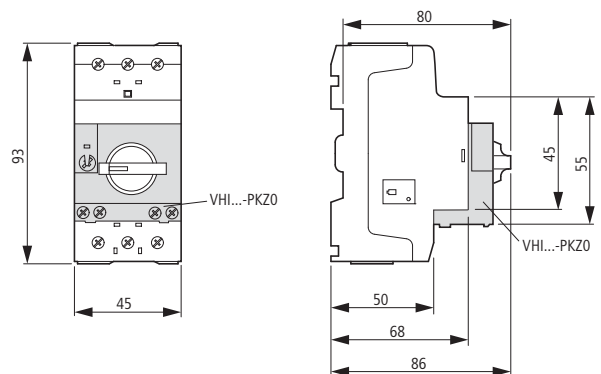
PKZM0-...+AK-PKZ0



Current limiters
CL-PKZ...



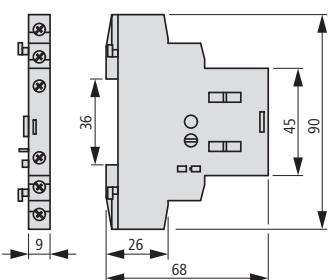
Motor-protective circuit-breakers with early-make auxiliary contacts
PKZM0-...+VHI-...-PKZ0



① Top-hat rail IEC/EN 60715

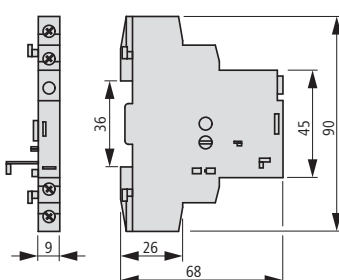
Standard auxiliary contacts

NHI-...-PKZ0



Trip indicators

AGM2-...-PKZ0



Shunt release

Undervoltage release

A-PKZ0...

U-PKZ0...

