PKZ and PKE motor-protective circuit breakers Flexible plug-in solutions: simple, intelligent, versatile.

ATEX

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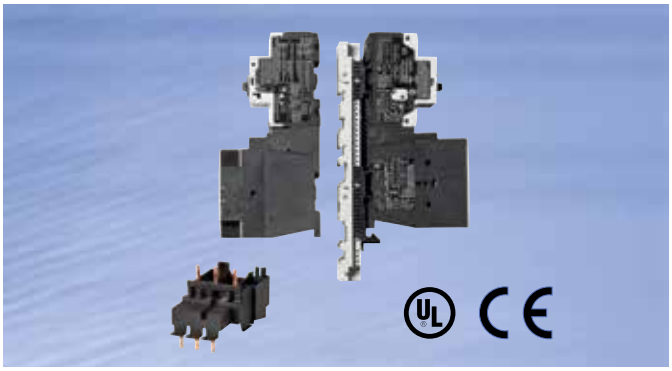
Machine and system downtimes should be kept as short as possible. Our fuseless PKZ motor-protective circuit breakers combine short-circuit and overload protection in a single device, thereby enabling fast reclosing. The PKZM0, PKZM01, PKZM4 and PKE devices share the same accessories, and they can be easily combined with the DILM contactors and the DS7 soft starters. Switching technology can be so simple.

Thanks to Push-in technology, the installation of our motor-protective circuit breakers is even easier, more reliable and, above all, tool-free. This results in easier handling with additional protection of the contacts against mechanical shocks and vibrations.

Eaton.com/pkz

Push-in connection technology speeds up wiring based on proven power feed design

With our new motor-protective circuit breakers with Push-in technology, we offer a universal product range for tool-free wiring of main and auxiliary circuits up to 32 A that also reduces installation times to a minimum. Our Push-in range boasts a winning combination that integrates both screw and Push-in connections in a single device. This means that the new devices can also be easily incorporated into existing control cabinet designs.



PKZM0-XDM32ME connection module for motor starters up to a motor rating of 15 kW

The connection module enables the assembly of motor starter combinations: The PKZM0, PKE12 or PKE32 motor-protective circuit breakers in combination with the DILM17...38 contactors or the DS7 soft starters with a rated current of 16 A to 32 A. Thanks to the new connection module, the motor starter is faster to assemble, more compact and safer than the previous solution.

Uniform accessories – tool-free installation

The two versions of the motor-protective circuit breakers come in 20 different types that cover the entire voltage range from 0.1 A to 63 A . The motor-protective circuit breakers are fully compatible with the DIL contactors and are thus ideally suited for use in motor starter combinations.

Modular design. Maximum flexibility. Powerful performance.

Thanks to their special features, the PKE motor- and system-protective circuit breakers with electronic overload protection offer a convincing alternative to bimetal solutions and make for an intelligent addition to the PKZ device family. The compact and modular design of the PKE devices with plug-in trip blocks for currents up to 65 A offers maximum flexibility.

Ideal for push and impact actuation (pressing or hitting)

The PKZM01 motor-protective circuit breaker for motors up to 25 A is ideal for small machines and other applications where push or impact actuation is the preferred means of operation. In addition to the auxiliary contacts from our PKZM0 range, we also offer special housings with IP65 and IP40 degree of protection, also in combination with an emergency-stop button. The devices have a short-circuit breaking capacity of 50 kA.

The PKE communication module enables transparent and open communication in any application. Thanks to the use of the established serial fieldbus Modbus RTU, the communication module acts as an open and standardized communication interface that can be easily integrated into existing systems.

Like our variable frequency drives, programmable logic controllers and circuit breakers, our motor starters can now also be controlled and configured via Modbus RTU. The PKE communication module is thus the perfect addition to our comprehensive product portfolio.

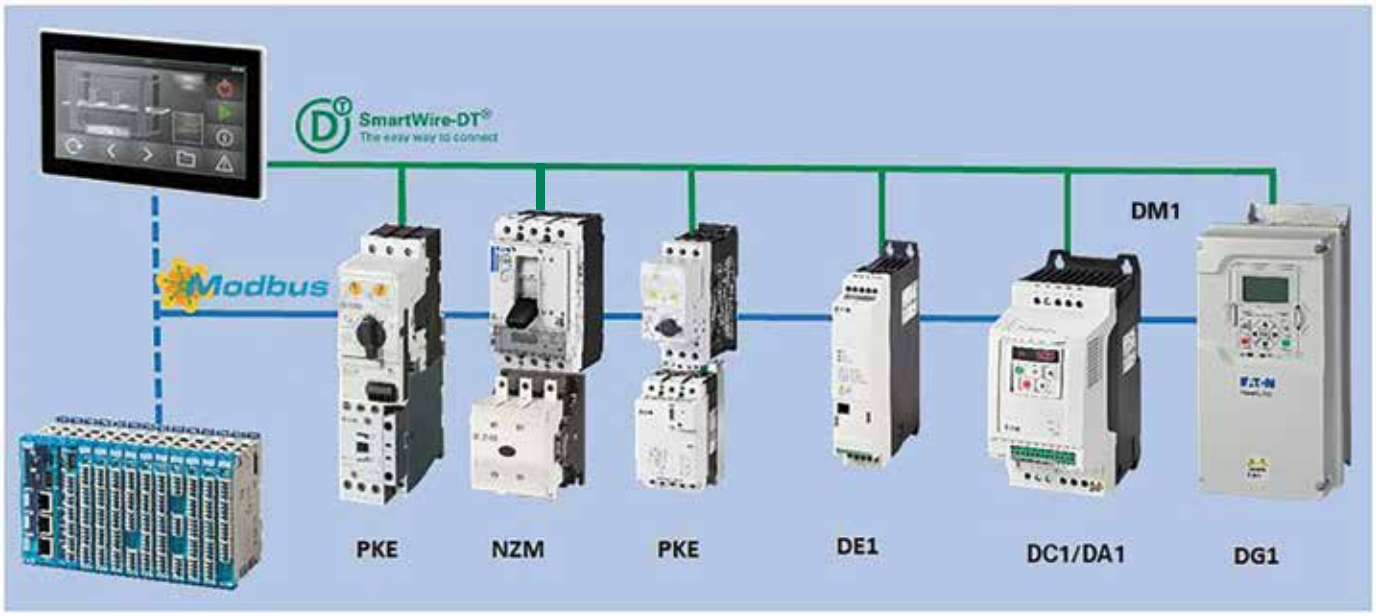
Data transparency

- Capturing the condition of the entire machine
  - On or off
  - Trip reason (e.g. overload, short circuit, unbalance, phase failure, etc.)
  - Number of power-up operations
  - Current detection
  - Thermal motor image
- Continuous and transparent condition monitoring supports the optimal planning of preventative maintenance

Flexible

- All-in-one: switching, protecting and measuring with just one device
- A single device for all applications from motor to system protection
- Simple, cost-effective and fast integration into existing systems
- Open and standardized communication via Modbus RTU
- Network range up to 1000 m with 63 addressable nodes
- No special software or proprietary peripherals required
- Simple addressing via dip switches

Continuous communication at the motor feeders



Future fit - all details at a glance

Status

- PKE contactor state
- Nominal current setting
- Time lag setting

Power/utilization

- Relative motor current
- Thermal motor load

Diagnostics

- Overcurrent (short circuit), overload, phase failure, test
- Thermal motor load

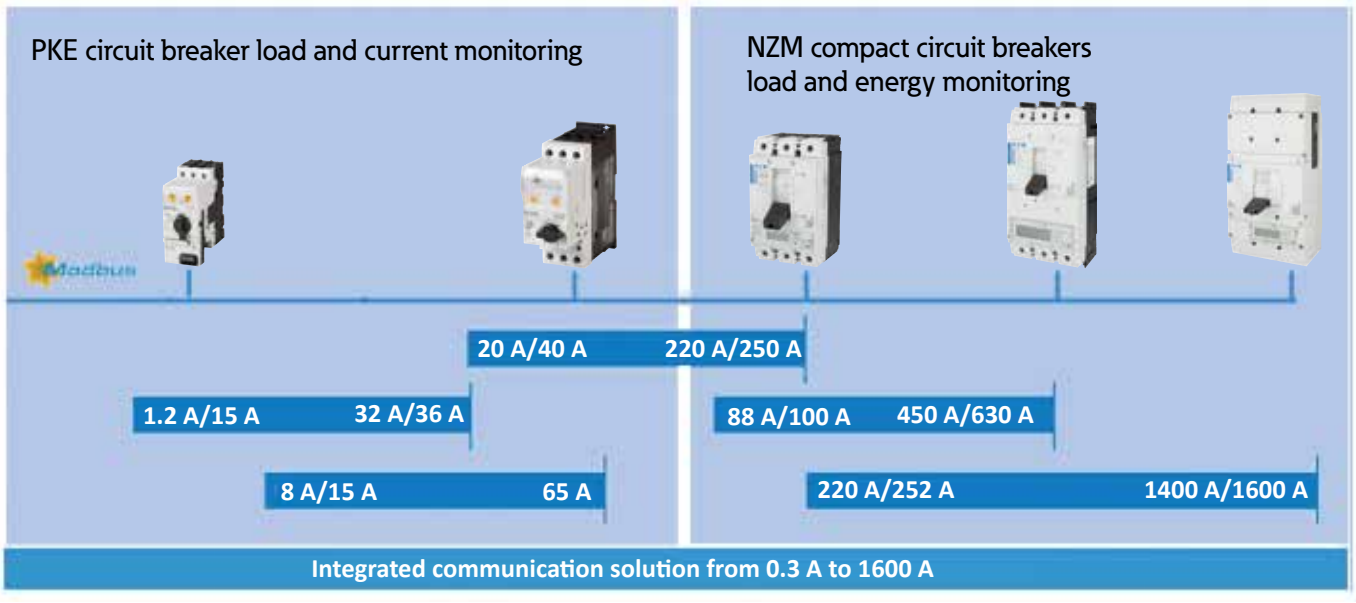
Additional functions

- Overcurrent (short circuit), overload, phase failure, test trip, unbalance
- Records the trip type and frequency and the number of power-up operations
- Remote control
- Readings transmitted as plain text (e.g. current in A)

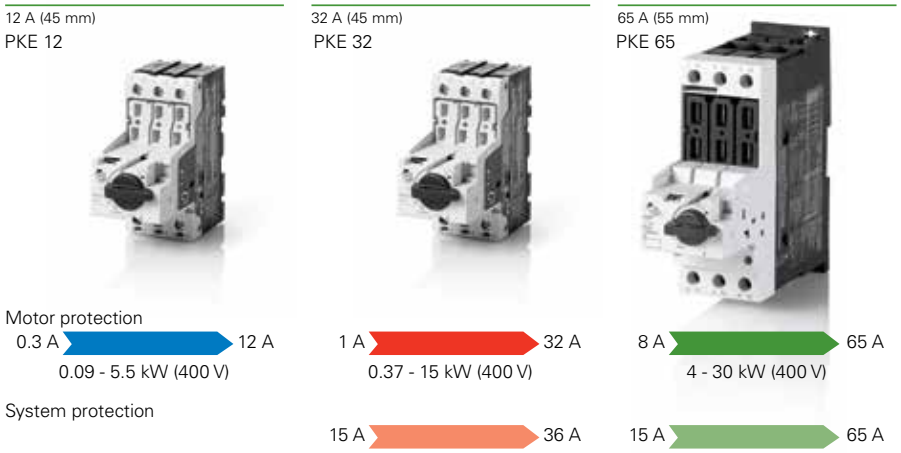
All the information at your fingertips thanks to SmartWire-DT

The PKZ and PKE motor starter combinations can be integrated into any automation environment via SmartWire-DT. In the case of the PKE, modular COM connections are used for various signaling functions, including real-time current detection. Data can be transferred directly to the controls and made available across the entire system.

Continuous communication at the motor feeders



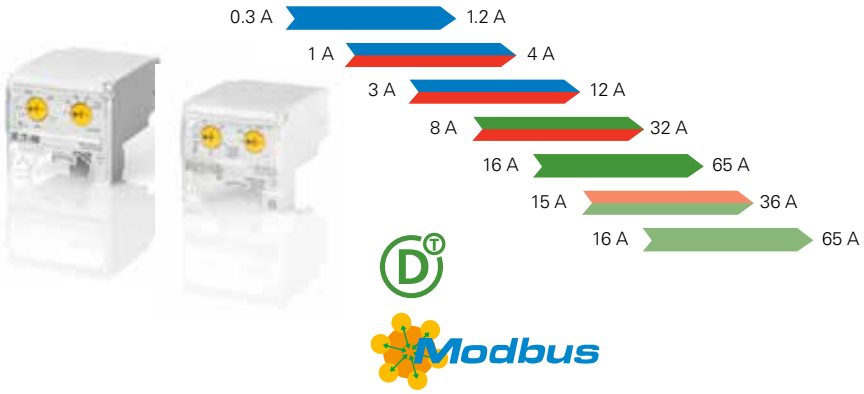
3 base devices + 8 trip blocks = current range up to 65 A



Modular design with wide setting range

The functional safety and service life of a motor crucially depend on how it is protected. Thanks to their special features, the PKE motor-protective circuit breakers with electronic overload protection offer a convincing alternative to bimetal solutions and make for an intelligent addition to the PKZ device family. The compact and modular design of the PKE devices with plug-in trip blocks up to 65 A offers maximum flexibility.
The wide current setting ranges significantly reduce the number of available versions, thereby minimizing the costs and effort involved in project planning.

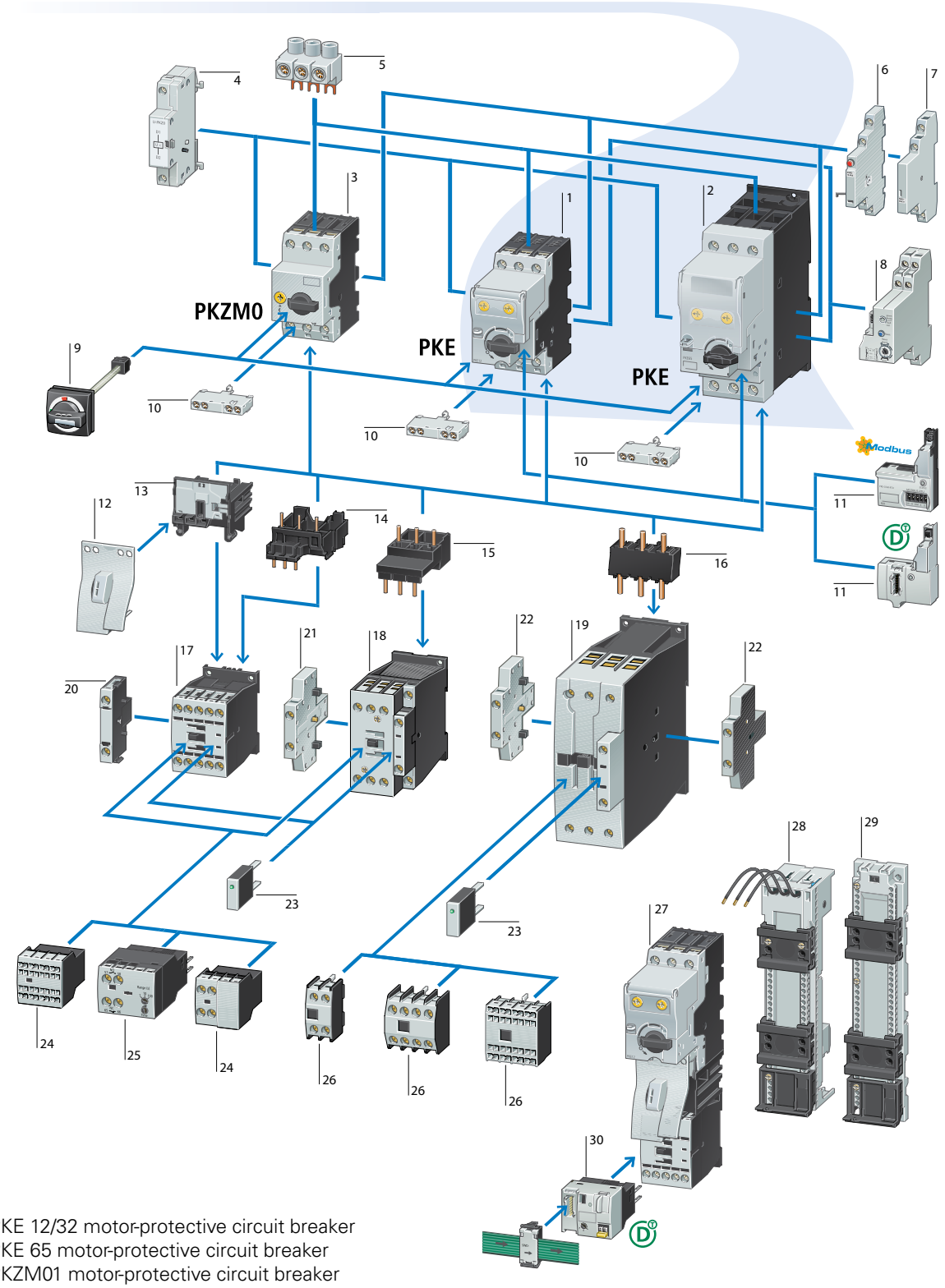
8 plug-in trip blocks up to 65 A in 2 versions.



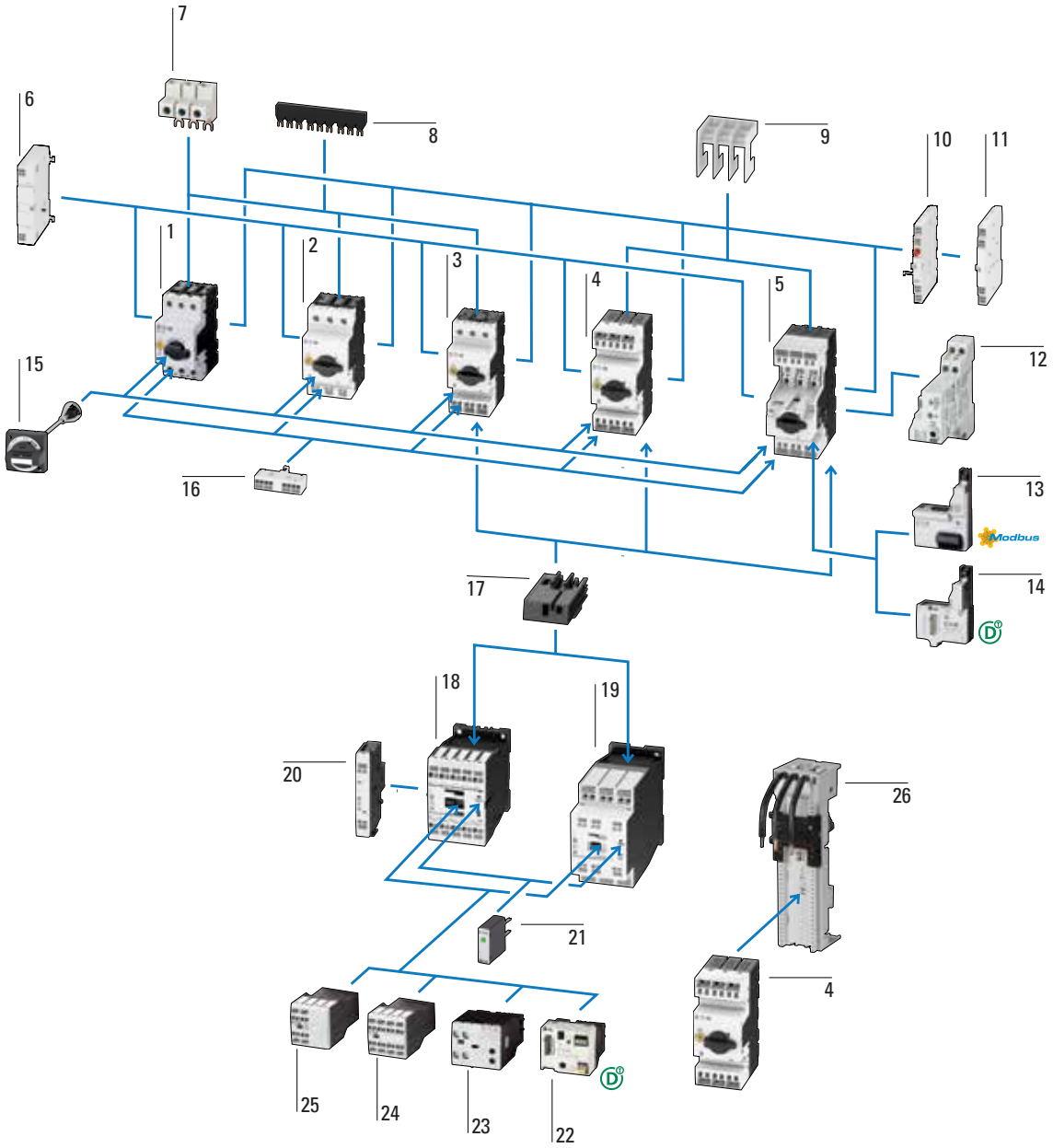
The PKE's electronic trip blocks not only enable wide setting ranges, low power dissipation and precise and highly stable tripping characteristics over long periods of time, but also provide a wealth of data on the machine status.
These data can be easily made available for system control and monitoring by means of the new PKE communication module and the thermal motor image. Regardless of which trip block is currently plugged in, it can be easily supplemented with the new PKE Modbus RTU communication module, without any need for special tools or cables.

PKZ and PKE within the xStart system

The PKZ and PKE motor-protective circuit breakers can be equipped with a wide range of approved accessories from the xStart range for safe and efficient control system design. Most applications require auxiliary contacts with different contact configurations for interlocking or signaling. Motor starter assemblies with two separate contact systems, including a visible isolating distance, enable the PKZ/PKE protective devices and the DIL switching devices to be clearly assigned. In addition, the switchgear can also be replaced individually.
Universal accessories from the xStart system simplify procurement and minimize the effort involved in project planning.



1 PKE 12/32 motor-protective circuit breaker
2 PKE 65 motor-protective circuit breaker
3 PKZM01 motor-protective circuit breaker
4 Undervoltage release/shunt release
5 Incoming power feed terminal
6 Trip indicator
7 Side-mounting auxiliary contact
8 PKE overload relay module
9 Door-coupling rotary handle and shaft extension
10 Front-mounting auxiliary contact
11 SmartWire-DT/Modbus communication interface for PKE
12 Combination plug-in connector
13 Mechanical connector
14 Motor starter module
15 Electrical connector
16 Electrical connector
17 Contactor up to 15 A
18 Contactor up to 38 A
19 Contactor up to 65 A
20 Side-mounting auxiliary contact
21 Side-mounting auxiliary contact
22 Side-mounting auxiliary contact
23 Suppressor circuit
24 Surface-mounting auxiliary contact
25 Electronic timer
26 Surface-mounting auxiliary contact
27 MSC-DEA DOL starter up to 5.5 kW with PKE
28 Busbar adapter
29 DIN-rail adapter
30 SmartWire-DT PKE module



1 PKZM0 motor-protective circuit breaker up to 32 A – screw terminal
2 PKZM0 motor-protective circuit breaker up to 16 A – screw/Push-in terminal
3 PKZM0 motor-protective circuit breaker up to 32 A – screw/Push-in terminal
4 PKZM0 motor-protective circuit breaker up to 32 A – Push-in terminal
5 PKE motor-protective circuit breaker/circuit breaker up to 32 A – Push-in terminal
6 Undervoltage/shunt release – Push-in terminal
7 IEC/UL power supply terminal for three-phase busbar link – screw terminal
8 Three-phase busbar link – screw terminal
9 PKZM0…-PI phase isolator for UL Type E and Type F applications
10 Trip indicator for overload and short circuit – Push-in terminal
11 Side-mounting auxiliary contact – Push-in terminal
12 Overload relay module – screw terminal
13 Modbus RTU networking module for PKE
14 SmartWire-DT networking module for PKE
15 Door-coupling rotary handle
16 Front-mounting auxiliary contact – Push-in terminal
17 Mechanical connection module for motor starters
18 DILA contactor relay/DILM contactors up to 7.5 kW – Push-in terminal
19 DILM contactor up to 18.5 kW – Push-in terminal
20 Side-mounting auxiliary contact – Push-in terminal
21 Coil protection circuits
22 SmartWire-DT networking module
23 Electronic timer module – screw terminal
24 Front-mounting auxiliary contact, 4-pole – Push-in terminal
25 Front-mounting auxiliary contact, 2-pole – Push-in terminal
26 Adapter for motor-protective circuit breakers / motor starters

	Setting range Overload release I_r A	Screw terminals Part no.	Article no.	Screw terminal / Push-in terminal Part no.	Article no.	Screw terminal / Push-in terminal Part no.	Article no.
PKZM01 motor-protective circuit breakers, type 1 and 2 coordination							
	0.1 - 0.16	PKZM01-0,16	278475	-	-	-	-
	0.16 - 0.25	PKZM01-0,25	278476	-	-	-	-
	0.25 - 0.4	PKZM01-0,4	278477	-	-	-	-
	0.4 - 0.63	PKZM01-0,63	278478	-	-	-	-
	0.63 - 1	PKZM01-1	278479	-	-	-	-
	1 - 1.6	PKZM01-1,6	278480	-	-	-	-
	1.6 - 2.5	PKZM01-2,5	278481	-	-	-	-
	2.5 - 4	PKZM01-4	278482	-	-	-	-
	4 - 6.3	PKZM01-6,3	278483	-	-	-	-
	6.3 - 10	PKZM01-10	278484	-	-	-	-
	8 - 12	PKZM01-12	278485	-	-	-	-
	10 - 16	PKZM01-16	283390	-	-	-	-
	16 - 20	PKZM01-20	283383	-	-	-	-
	20 - 25	PKZM01-25	288893	-	-	-	-
PKZM0 motor-protective circuit breakers, type 1 and 2 coordination							
	0.1 - 0.16	PKZM0-0,16	072730	-	-	-	-
	0.16 - 0.25	PKZM0-0,25	072731	-	-	-	-
	0.25 - 0.4	PKZM0-0,4	072732	-	-	-	-
	0.4 - 0.63	PKZM0-0,63	072733	-	-	-	-
	0.63 - 1	PKZM0-1	072734	-	-	-	-
	1 - 1.6	PKZM0-1,6	072735	-	-	-	-
	1.6 - 2.5	PKZM0-2,5	072736	-	-	-	-
	2.5 - 4	PKZM0-4	072737	-	-	-	-
	4 - 6.3	PKZM0-6,3	072738	-	-	-	-
	6.3 - 10	PKZM0-10	072739	-	-	-	-
	8 - 12	PKZM0-12	278486	-	-	-	-
	10 - 16	PKZM0-16	046938	-	-	-	-
	16 - 20	PKZM0-20	046988	-	-	-	-
	20 - 25	PKZM0-25	046989	-	-	-	-
	25 - 32	PKZM0-32	278489	-	-	-	-
PKZM4 motor-protective circuit breakers, type 1 and 2 coordination							
	10 - 16	PKZM4-16	222350	-	-	-	-
	16 - 25	PKZM4-25	222352	-	-	-	-
	24 - 32	PKZM4-32	222353	-	-	-	-
	32 - 40	PKZM4-40	222354	-	-	-	-
	40 - 50	PKZM4-50	222355	-	-	-	-
	50 - 58	PKZM4-58	222394	-	-	-	-
	55 - 65	PKZM4-63	222413	-	-	-	-
UL circuit breakers to NFPA79							
	10 - 16	PKZM4-16-CB	132591	-	-	-	-
	16 - 25	PKZM4-25-CB	132592	-	-	-	-
	24 - 32	PKZM4-32-CB	132593	-	-	-	-
PKZM0 motor-protective circuit breakers, type 1 and 2 coordination		Push-in terminals					
	0.1 - 0.16	PKZM0-0,16-PI	199148	PKZM0-0,16-SPI32	199189	PKZM0-0,16-SPI16	199177
	0.16 - 0.25	PKZM0-0,25-PI	199149	PKZM0-0,25-SPI32	199190	PKZM0-0,25-SPI16	199178
	0.25 - 0.4	PKZM0-0,4-PI	199150	PKZM0-0,4-SPI32	199191	PKZM0-0,4-SPI16	199179
	0.4 - 0.63	PKZM0-0,63-PI	199151	PKZM0-0,63-SPI32	199192	PKZM0-0,63-SPI16	199180
	0.63 - 1	PKZM0-1-PI	199152	PKZM0-1-SPI32	199193	PKZM0-1-SPI16	199181
	1 - 1.6	PKZM0-1,6-PI	199153	PKZM0-1,6-SPI32	199194	PKZM0-1,6-SPI16	199182
	1.6 - 2.5	PKZM0-2,5-PI	199154	PKZM0-2,5-SPI32	199195	PKZM0-2,5-SPI16	199183
	2.5 - 4	PKZM0-4-PI	199155	PKZM0-4-SPI32	199196	PKZM0-4-SPI16	199184
	4 - 6.3	PKZM0-6,3-PI	199156	PKZM0-6,3-SPI32	199197	PKZM0-6,3-SPI16	199185
	6.3 - 10	PKZM0-10-PI	199157	PKZM0-10-SPI32	199198	PKZM0-10-SPI16	199186
	8 - 12	PKZM0-12-PI	199158	PKZM0-12-SPI32	199199	PKZM0-12-SPI16	199187
	10 - 16	PKZM0-16-PI	199159	PKZM0-16-SPI32	199200	PKZM0-16-SPI16	199188
	16 - 20	PKZM0-20-PI	199160	PKZM0-20-SPI32	199201	-	-
	20 - 25	PKZM0-25-PI	199161	PKZM0-25-SPI32	199202	-	-
	25 - 32	PKZM0-32-PI	199162	PKZM0-32-SPI32	199203	-	-

Motor output	Rated motor current	Setting range	Base device with: standard handle, lockable rotary handle /AK	Complete device (with trip block) with: standard handle, lockable rotary handle /AK
	380 V / 400 V / 415 V	Overload release		
P	I	I_r	Part no.	Part no.
kW	A	A	Article no.	Article no.
Type of coordination: 1 and 2				
0.06	-	0.3 - 1.2	PKE12-PI 199474	PKE12-PI/XTU-1,2 199478
0.09	0.31		PKE12-PI/AK 199475	PKE12-PI/AK/XTU-1,2 199479
0.12	0.41			
0.25	0.6			
0.55	0.8			
0.75	1.1			
0.18	-	1 - 4	PKE12-PI 199474	PKE32-PI/XTU-4 199480
0.25	-		PKE12-PI/AK 199475	PKE32-PI/AK/XTU-4 199481
0.37	1.1			
0.55	1.5			
0.75	1.9			
1.1	2.6			
1.5	3.6			
0.75	-	3 - 12	PKE12-PI 199474	PKE32-PI/XTU-12 199482
1.1	-		PKE12-PI/AK 199475	PKE32-PI/AK/XTU-12 199483
1.5	3.6			
2.2	5			
3	6.6			
4	8.5			
5.5	11.3			
2.2	-	8 - 32	PKE32-PI 199476	PKE32-PI/XTU-32 199484
3	-		PKE32-PI/AK 199477	PKE32-PI/AK/XTU-32 199485
4	8.5			
5.5	11.3			
7.5	15.2			
11	21.7			
15	29.3			

PKE system-protective circuit breaker

Motor output	Rated current	Setting range	Base device with: standard handle, lockable rotary handle /AK	Complete device (with trip block) with: standard handle, lockable rotary handle /AK
	380 V / 400 V / 415 V	Overload release		
P	I	I_r	Part no.	Part no.
kW	A	A	Article no.	Article no.
-	36	15-36	PKE32-PI 199476	PKE32-PI/XTUCP-36 199486
			PKE32-PI/AK 199477	PKE32-PI/AK/XTUCP-36 199487

Setting range of overload release I_r A	Base device with standard handle		Motor protection trip block Standard		Motor protection trip block Expanded by Connection to SmartWire-DT and Modbus RTU		Complete device with standard handle	
	Part no.	Article no.	Part no.	Article no.	Part no.	Article no.	Part no.	Article no.
PKE motor-protective circuit breakers, type 1 and 2 coordination								
0.3 - 1.2	PKE12	121721	PKE-XTU-1,2	121723	PKE-XTUA-1,2	121727	PKE12/XTU-1,2	121731
1 - 4	PKE12	121721	PKE-XTU-4	121724	PKE-XTUA-4	121728	PKE12/XTU-4	121732
3 - 12	PKE12	121721	PKE-XTU-12	121725	PKE-XTUA-12	121729	PKE12/XTU-12	121733
8 - 32	PKE32	121722	PKE-XTU-32	121726	PKE-XTUA-32	121730	PKE32/XTU-32	121734
PKE system-protective circuit breaker, short-circuit release 5 - 8 x I_r								
15 - 36	PKE32	121722	PKE-XTUCP-36	153164	PKE-XTUACP-36	168795	PKE32/XTUCP-36	168972

Setting range of overload release I_r A	Base device with standard handle		Motor protection trip block Standard		Motor protection trip block Expanded Connection to SmartWire-DT and Modbus RTU		Complete device with standard handle	
	Part no.	Article no.	Part no.	Article no.	Part no.	Article no.	Part no.	Article no.
PKE motor-protective circuit breakers, type 1 and 2 coordination								
8 - 32	PKE65	138258	PKE-XTUW-32	138261	PKE-XTUWA-32	138262	PKE65/XTUW-32	138517
16 - 65	PKE65	138258	PKE-XTU-65	138259	PKE-XTUA-65	138260	PKE65/XTU-65	138516
PKE system-protective circuit breakers, short-circuit release 5 - 8 x I_r								
15 - 36	PKE65	138258	PKE-XTUWCP-36	168796	PKE-XTUWACP-36	168797	PKE65/XTUWCP-36	168973
30 - 65	PKE65	138258	PKE-XTUCP-65	168798	PKE-XTUACP-65	168799	PKE65/XTUCP-65	168974

Setting range Overload release I_r A	Screw terminals		Push-in terminal/ Push-in terminal	
	Part no.	Article no.	Part no.	Article no.
Transformer-protective circuit breaker				
0.1 - 0.16	PKZM0-0,16-T	088907	PKZM0-0,16-T-PI	199163
0.16 - 0.25	PKZM0-0,25-T	088908	PKZM0-0,25-T-PI	199164
0.25 - 0.4	PKZM0-0,4-T	088909	PKZM0-0,4-T-PI	199165
0.4 - 0.63	PKZM0-0,63-T	088910	PKZM0-0,63-T-PI	199166
0.63 - 1	PKZM0-1-T	088911	PKZM0-1-T-PI	199167
1 - 1.6	PKZM0-1,6-T	088912	PKZM0-1,6-T-PI	199168
1.6 - 2.5	PKZM0-2,5-T	088913	PKZM0-2,5-T-PI	199169
2.5 - 4	PKZM0-4-T	088914	PKZM0-4-T-PI	199170
4 - 6.3	PKZM0-6,3-T	088915	PKZM0-6,3-T-PI	199171
6.3 - 10	PKZM0-10-T	088916	PKZM0-10-T-PI	199172
8 - 12	PKZM0-12-T	278492	PKZM0-12-T-PI	199173
10 - 16	PKZM0-16-T	088917	PKZM0-16-T-PI	199174
16 - 20	PKZM0-20-T	088918	PKZM0-20-T-PI	199175
20 - 25	PKZM0-25-T	278493	PKZM0-25-T-PI	199176

		Part no.	Article no.
PKE communication module			
	For connecting motor-protective circuit breakers with PKE-XTU(W)A-... trip blocks (motor protection) to SmartWire-DT Messages PKE contactor state, motor current in % Thermal motor image in % Trip indication (overload, short circuit, etc.) Set value of the overload release Set time lag (CLASS) Part no. of trip block Commands Remote disconnect	**PKE-SWD-SP**	150614
For connecting PKE circuit breakers with PKE-XTU(W)ACP-... trip blocks (motor protection) to SmartWire-DT			
	For connecting PKE circuit breakers with PKE-XTU(W)ACP-... trip blocks (system protection) to SmartWire-DT	**PKE-SWD-CP**	172735
	For connecting motor-protective circuit breakers with PKE-XTU(W)A-... trip blocks (motor protection) and circuit breakers with trip blocks PKE-XTU(W)ACP-... (system protection) to Modbus-RTU	**PKE-COM-RTU**	199344

	Rated operational current I_e A	For use with	Part no.	Article no.
Busbar adapter for PKZ and PKE				
	25	PKZM0 + DILM7 (9) (12) (15) PKE + DILM7 (9) (12) (15) MSC-D-0,25-M7… - MSC-D-16-M15…	**BBA0-25**	101451
		PKZM0…-PI + DILM7 (9) (12) (15) -PI MSC-D-0,25-M7… -PI - MSC-D-16-M15… -PI	**BBA0-25-PI**	199467
	25	PKZM0 + 2 x DILM7-01 (9) (12) PKE + 2 x DILM7-01 (9) (12) MSC-R-0,25-M7… - MSC-R-12-M12…	**BBA0R-25**	101453
		PKZM0…-PI + 2 x DILM7-01 (9) (12)-PI PKE…-PI + 2 x DILM7-01 (9) (12)-PI MSC-R-0,25-M7… -PI - MSC-R-16-M15… -PI	**BBA0R-25-PI**	199468
	32	PKZM0 + DILM17 (25) (32) PKE + DILM17 (25) (32)	**BBA0-32**	101452
		PKZM0...-PI + DILM8 (11) (14) (17) (25) (32) -PI PKE...-PI + DILM7(9)(12)(15)-PI PKE...-PI + DILM8 (11) (14) (17) (25) (32) -PI	**BBA0-32-PI**	199469
		PKZM0…-PI PKE12...-PI, PKE32...-PI	**BBA0K-32-PI**	199635
	32	PKZM0 + 2 x DILM17-01 (25) (32) PKE + 2 x DILM17-01 (25) (32)	**BBA0R-32**	101454
		PKZM0...-PI + 2x DILM8 (11) (14) (17) (25) (32) -PI PKE…-PI + 2 x DILM8 (11) (14) (17) (25) (32)-PI	**BBA0R-32-PI**	199470
	63	PKZM4, PKE65 + DILM(C)40 PKZM4, PKE65 + DILM(C)50 PKZM4, PKE65 + DILM(C)65	**BBA4L-63**	101459

	Contacts N/O = normally open	Contacts N/C = normally closed	For use with	Part no.	Article no.
Standard auxiliary contacts					
	1 N/O	1 N/C	PKZM01 PKZM0-..(-PI)(-SPI32) PKZM0-..-T(-PI) PKZM4 PKE12..(-PI) PKE32..(-PI)	**NHI11-PKZ0-PI**	199328
	1 N/O	1 N/C		**NHI-E-11-PKZ0-PI**	199325
	1 N/O	1 N/C		**NHI-B-11-PKZ0-PI**	199326
	1 N/O	-		**NHI-E-10-PKZ0-PI**	199327
Trip indicators					
	2 x 1 N/O	-	PKZM01 PKZM0..(-PI)(-SPI32) PKZM0-..-T(-PI) PKZM0-..-T(-PI) PKZM4 PKM0 PKE32..(-PI) PKE12..(-PI)	**AGM2-10-PKZ0-PI**	199329
	-	2 x 1 N/C		**AGM2-01-PKZ0-PI**	199330
Shunt releases					
	-	-	PKZM01 PKZM0..(-PI)(-SPI32) PKZM0-..-T(-PI) PKZM0-..-T(-PI) PKZM4 PKM0 PKE32..(-PI) PKE12..(-PI)	**A-PKZ0(230V50 HZ)-PI**	199339
	-	-		**A-PKZ0(24VDC)-PI**	199336
Undervoltage release					
	-	-	PKZM01 PKZM0..(-PI)(-SPI32) PKZM0-..-T(-PI) PKZM0-..-T(-PI) PKZM4 PKM0 PKE32..(-PI) PKE12..(-PI)	**U-PKZ0(230V50 HZ)-PI**	199334
	-	-		**U-PKZ0(24VDC)-PI**	199331

	For use with	Part no.	Article no.
PKZM0 Type E phase isolator			
	PKZM0…-PI	**LSA-PKZ0-E-PI**	199341
Wiring set			
For DOL starters			
	PKZM0…-PI / SPI32, PKE…-PI + DILM7…-PI PKZM0…-PI / SPI32, PKE…-PI + DILM9 …-PI PKZM0…-PI / SPI32, PKE…-PI + DILM12 …-PI PKZM0…-PI / SPI32, PKE…-PI + DILM15 …-PI	**PKZM0-XDM12-PI**	199463
	PKZM0…-PI / SPI32, PKE…-PI + DILM8…-PI PKZM0…-PI / SPI32, PKE…-PI + DILM11…-PI PKZM0…-PI / SPI32, PKE…-PI + DILM14 …-PI PKZM0…-PI / SPI32, PKE…-PI + DILM17…-PI PKZM0…-PI / SPI32, PKE…-PI + DILM25…-PI PKZM0…-PI / SPI32, PKE…-PI + DILM32…-PI	**PKZM0-XDM32-PI**	199465
	PKZM0..-PI(-SPI32) PKE12../32..-PI, + DILM7..-PI - DILM38..-PI	**PKZM0-XDM32M-PI**	199462
For reversing starters			
	PKZM0…-PI / SPI32, PKE…-PI + DILM7-01…-PI PKZM0…-PI / SPI32, PKE…-PI + DILM9-01…-PI PKZM0…-PI / SPI32, PKE…-PI + DILM12-01…-PI PKZM0…-PI / SPI32, PKE…-PI + DILM15-01…-PI	**PKZM0-XRM12-PI**	199464
	PKZM0…-PI / SPI32, PKE…-PI + DILM8-11…-PI PKZM0…-PI / SPI32, PKE…-PI + DILM11-11…-PI PKZM0…-PI / SPI32, PKE…-PI + DILM14-11…-PI PKZM0…-PI / SPI32, PKE…-PI + DILM17-11…-PI PKZM0…-PI / SPI32, PKE…-PI + DILM25-11…-PI PKZM0…-PI / SPI32, PKE…-PI + DILM32-11…-PI	**PKZM0-XRM32-PI**	199466

	Contacts N/O = normally open	N/C = normally closed	For use with	Part no.	Article no.
Standard auxiliary contacts					
	1 N/O	1 N/C	PKZM01 PKZM0..(-PI)(-SPI32) PKZM0-..-T(-PI) PKM0 PKZM4 PKE12..(-PI) PKE32..(-PI)	**NHI11-PKZ0**	072896
	1 N/O	2 N/C		**NHI12-PKZ0**	072895
	2 N/O	1 N/C		**NHI21-PKZ0**	072894
	1 N/O	1 N/C		**NHI-E-11-PKZ0**	082882
	1 N/O	-		**NHI-E-10-PKZ0**	082884
Trip indicators					
	2 x 1 N/O	-	PKZM01 PKZM0..(-PI)(-SPI32) PKZM0-..-T(-PI) PKM0 PKZM4 PKE12..(-PI) PKE32..(-PI)	**AGM2-10-PKZ0**	072898
	-	2 x 1 N/C		**AGM2-01-PKZ0**	072899
	2 x 1 N/O	-			
Early-make auxiliary contacts					
	2 N/O	-	PKZM0 PKZM0-T PKM0 PKZM4	**VHI20-PKZ0**	203595
	2 N/O	-	PKZM01	**VHI20-PKZ01**	278495
Shunt releases					
	-	-	PKZM01 PKZM0..(-PI)(-SPI32) PKZM0-..-T(-PI) PKM0 PKZM4 PKE12..(-PI) PKE32..(-PI)	**A-PKZ0(230V50HZ)**	073187
				A-PKZ0(24VDC)	073200
	-	-			
Undervoltage releases					
	-	-	PKZM01 PKZM0..(-PI)(-SPI32) PKZM0-..-T(-PI) PKM0 PKZM4 PKE12..(-PI) PKE32..(-PI)	**U-PKZ0(230V50HZ)**	073135
				U-PKZ0(24VDC)	157862
	-	-			
Overload relay function module					
	1 N/O	1 N/C	PKE12 PKE32 PKE65 with XTUA trip block from release 04 and up	**PKE-XZMR(24VDC)**	173425
	1 N/O	1 N/C		**PKE-XZMR(230V50HZ)**	173416
Lockable rotary handle					
	for locking the PKZM0, PKZM4 and PKE motor-protective circuit breakers when used as main switches as per EN 60204 Lockable in the “0” position by means of a padlock Shackle thickness 3 - 6.35 mm			**AK-PKZ0**	030851

	For use with	Part no.	Article no.
Three-phase busbar link, power supply via terminals 1, 3, 5			
For PKZM0-..(-SPI16), (-SPI32) or PKE12/32 without lateral auxiliary contacts or voltage releases			
	-	**B3.0/2-PKZ0**	063961
	-	**B3.0/3-PKZ0**	232289
	-	**B3.0/4-PKZ0**	063960
	-	**B3.0/5-PKZ0**	232290
For PKZM0-..(-SPI16), (-SPI32) or PKE12/32 with one lateral auxiliary contact or one trip indicator mounted on the right			
	-	**B3.1/2-PKZ0**	044945
	-	**B3.1/3-PKZ0**	044946
	-	**B3.1/4-PKZ0**	044947
	-	**B3.1/5-PKZ0**	044948
For PKZM0-..(-SPI16), (-SPI32) or PKE12/32 with one lateral auxiliary contact mounted on the side or one trip-indicating auxiliary contact mounted on the right or one voltage release mounted on the left			
	-	**B3.2/2-PKZ0**	063963
	-	**B3.2/4-PKZ0**	063959
Incoming terminal			
	PKZM0-.. , PKZM0..-SPI16, PKZM0..-SPI32	**BK25/3-PKZ0** **BK25/3-PKZ0-E**	032720 262518
Shroud for unused terminals			
	Touch safe To cover unused terminals on the B3...-PKZ0 three-phase busbar link	**H-B3-PKZ0**	032721
PKZM0 Type E phase isolator			
	PKZM0-...	**LSA-PKZ0-E**	197479
Wiring set			
For DOL starters			
Plug-in version 	PKZM0, PKE + DILM7 PKZM0, PKE + DILM9 PKZM0, PKE + DILM12 PKZM0, PKE + DILM15	**PKZM0-XDM12**	283149
Screw-in version 	PKZM0, PKE + DILM7 PKZM0, PKE + DILM9 PKZM0, PKE + DILM12 PKZM0, PKE + DILM15	**PKZM0-XDM15ME**	179646
Screw-in version 	PKZM0, PKE + DILM17 PKZM0, PKE + DILM25 PKZM0, PKE + DILM32 PKZM0, PKE + DS7	**PKZM0-XDM32ME**	190312
	PKZM0, PKE + DILM7 PKZM0, PKE + DILM9 PKZM0, PKE + DILM12 PKZM0, PKE + DILM15	**PKZM4-XDM65**	101053
For reversing starters			
	PKZM0, PKE + DILM7-01 PKZM0, PKE + DILM9-01 PKZM0, PKE + DILM12-01	**PKZM0-XRM12**	283185
	PKZM0, PKE + DILM17 PKZM0, PKE + DILM25 PKZM0, PKE + DILM32	**PKZM0-XRM32**	283189
Electrical contact module			
	PKZM0, PKE + DILM17 PKZM0, PKE + DILM25 PKZM0, PKE + DILM32 DS7-34…SX016… DS7-34…SX024… DS7-34…SX032…	**PKZM0-XM32DE**	239349
	PKZM4, PKE65 + DILM40 PKZM4, PKE65 + DILM50 PKZM4, PKE65 + DILM65	**PKZM4-XM65DE**	101056

	Description	For use with	Part no.	Article no.
Door coupling handles				
	For use as a main switch according to EN 60204	PKZM0 PKZM4	**PKZ0-XH**	106132
	For use as a main switch according to EN 60204 in MCC distribution boards with the PKZM0 rotated by 90°.	PKZM0 PKZM4	**PKZ0-XH-MCC**	106136
	For use as a main switch according to EN 60204	PKE	**PKE-XH**	142416
	For use as a main switch according to EN 60204 in MCC distribution boards with the PKE rotated by 90°.	PKE	**PKE-XH-MCC**	142418
	For use as a main switch with emergency-stop according to EN 60204	PKZM0 PKZM4	**PKZ0-XRH**	106133
	For use as a main switch with emergency-stop function according to EN 60204 in MCC distribution boards with the PKZM0 rotated by 90°.	PKZM0 PKZM4	**PKZ0-XRH-MCC**	106137
	For use as a main switch with emergency-stop according to EN 60204	PKE	**PKE-XRH**	142417
	For use as a main switch with emergency-stop function according to EN 60204 in MCC distribution boards with the PKE rotated by 90°.	PKE	**PKE-XRH-MCC**	142419

Manual self-protected combination controller, UL 60947-4-1, Type E

PKZM0(4) motor-protective circuit breakers, for use as "Manual self-protected motor starters" – UL 508 Type E

Maximum motor output (three-phase current) HP = hp				Setting range		Interrupting capacity = short-circuit current rating (SCCR)			Components	
200 V 208 V	230 V 240 V	460 V 480 V	575 V 600 V	Overload release	Short-circuit release	240 V	480Y/ 277 V[2]	600Y/ 347 V[2]	Motor-protective circuit breaker	Incoming terminal[3]
[HP]	[HP]	[HP]	[HP]	[A]	[A]	[kA]	[kA]	[kA]	**Part no.**	**Part no.**
[1]				0.1 - 0.16	2.5	65	65	50	**PKZM0 - 0,16 -(S)PI**	**BK25/3-PKZ0-E /**
				0.16 - 0.25	3.9	65	65	50	**PKZM0 -0,25 -(S)PI**	
				0.25 - 0.4	6.2	65	65	50	**PKZM0 -0,4 -(S)PI**	
				0.4 - 0.63	9.8	65	65	50	**PKZM0 - 0,63 -(S)PI**	
				0.63 - 1	16	65	65	50	**PKZM0 -1 -(S)PI**	
		¾	¾	1 - 1.6	25	65	65	50	**PKZM0 - 1,6 -(S)PI**	
½	½	1	1½	1.6 - 2.5	39	65	65	50	**PKZM0 - 2,5 -(S)PI**	
¾	¾	2	3	2.5 - 4	62	65	65	50	**PKZM0 - 4 -(S)PI**	
½	1½	3	5	4 - 6.3	98	65	65	50	**PKZM0 - 6,3 -(S)PI**	
2	3	5	7½	6.3 - 10	155	65	65	50	**PKZM0 - 10 -(S)PI**	
3	3	7½	10	8 - 12	186	65	65	–	**PKZM0 - 12 -(S)PI**	
3	5	10	10	10 - 16	248	42	42	–	**PKZM0 - 16 -(S)PI**	
5	–	–	15	16 - 20	310	18	18	–	**PKZM0 - 20 -(S)PI**	
–	7½	15	20	20 – 25	388	18	18	–	**PKZM0 - 25 -(S)PI**	
7½	10	20	25	25 - 32	496	18	18	–	**PKZM0 - 32 -(S)PI**	
3	5	10	10	10 - 16	248	65	65	25	**PKZM4 - 16**	**BK50/3-PKZ4-E**
5	7½	15	20	16 - 25	388	65	65	25	**PKZM4 - 25**	
7½	10	20	30	25 - 32	496	65	65	25	**PKZM4 - 32**	
10	–	30	30	32 - 40	620	65	65	25	**PKZM4 - 40**	
–	15	30	40	40 - 50	775	65	65	–	**PKZM4 - 50**	
–	–	40	50	50 - 58	899	65	65	–	**PKZM4 - 58**	
–	–	40	50	55 - 65	977	65	65	–	**PKZM4 - 63**	

Notes

[1] In this range, calculate the motor power according to the rated current. Specified values according to NEC Table 430-150
[2] Suitable for star-point grounded networks
[3] For PKZM0-... Feed-in terminal BK25/3-PKZ0-E or LSA-PKZ-E, for PKZM0-...-SPI BK25/3-PKZ0-E, for PKZM0-...-PI LSA-PKZ0-E-PI

Switching capacity of circuit breakers from serial no. 04 and up

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 operational short-circuit breaking capacity I_{cs} IEC/EN 60947-2

	230 V				400 V				440 V				500 V				690 V			
I_u	I_q	I_{cu}	I_{cs}		I_q	I_{cu}	I_{cs}		I_q	I_{cu}	I_{cs}		I_q	I_{cu}	I_{cs}		I_q	I_{cu}	I_{cs}	
A	kA	kA	kA	A[1]	kA	kA	kA	A[1]	kA	kA	kA	A[1]	kA	kA	kA	A[1]	kA	kA	kA	A[1]
PKZM0, PKZM0...-T, PKM0 with type 1 and 2 coordination																				
0.16 - 1	150	150	150	N	150	150	150	N	150	150	150	N	150	150	150	N	150	150	150	N
1.6	150	150	150	N	150	150	150	N	150	150	150	N	150	150	150	N	150	150	150	N
2.5	150	150	150	N	150	150	150	N	150	150	150	N	150	150	150	N	5	5	5	50
4	150	150	150	N	150	150	150	N	150	150	150	N	150	150	150	N	3	3	3	50
6.3	150	150	150	N	150	150	150	N	150	150	150	N	42	42	42	N	3	3	3	50
10	150	150	150	N	150	150	150	N	50	50	50	50	42	42	11	50	3	3	2	50
12	50	50	38	50	50	50	38	50	50	15	12	50	15	15	4	50	3	3	2	50
16	50	50	38	50	50	50	38	50	50	15	12	50	15	15	4	50	3	3	2	50
20	50	50	38	50	50	50	38	50	50	10	3	50	10	3	3	50	3	3	1	50
25	50	50	38	50	50	50	38	50	50	10	3	50	10	3	3	50	3	3	1	50
32	50	40	10	50	50	40	10	50	50	10	3	50	10	3	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 protection necessary, as the device is intrinsically safe (100/150 kA range)

N Not required

[1] Required back-up fuse if the short-circuit current exceeds the conditional rated short-circuit current of the devices (I_{cc} . I_q).

Switching capacity of circuit breaker

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 operational short-circuit breaking capacity I_{cs} IEC/EN 60947-2

	230 V				400 V				440 V				500 V[2]				690 V			
I_u	I_q	I_{cu}	I_{cs}		I_q	I_{cu}	I_{cs}		I_q	I_{cu}	I_{cs}		I_q	I_{cu}	I_{cs}		I_q	I_{cu}	I_{cs}	
A	kA	kA	kA	A[1]	kA	kA	kA	A[1]	kA	kA	kA	A[1]	kA	kA	kA	A[1]	kA	kA	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								
1.6	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								
4	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								
10	50	50	50	50	50	50	50	50	42	42	10	50								
12	50	50	10	50	50	50	10	50	15	15	10	50								
16	50	50	10	50	50	50	10	50	15	15	10	50								
20, 25	50	50	10	50	50	50	10	50	10	10	3	50								
PKZM4 with type 1 and 2 coordination																				
16	150		25	N	150		25	N	45	45	12	100	15	15	4	100	8	8	2.5	100
25	150		25	N	150		25	N	45	45	12	100	15	15	4	100	8	8	2.5	100
32	50	50	25	100	50	50	25	100	45	45	12	100	15	15	4	100	5	5	2.5	100
40	50	50	25	100	50	50	25	100	45	45	12	100	15	15	4	100	5	5	2.5	100
50	50	50	25	100	50	50	25	100	45	45	12	100	15	15	4	100	5	5	2.5	100
58	50	50	25	160	50	50	25	160	45	45	12	160	15	15	4	160	5	5	2.5	160
63	50	50	25	160	50	50	25	160	45	45	12	160	15	15	4	160	5	5	2.5	160

Notes

No upstream protection necessary, as the device is intrinsically safe (100/150 kA range)

N Not required

[1] Fuse (A gG/gL) for increasing the breaking capacity of the motor-protective circuit breaker to 100 kA

	230/400V			415 V			440 V			500 V			525 V			690 V		
I_u	I_q	I_{cu}	I_{cs}	I_q	I_{cu}	I_{cs}	I_q	I_{cu}	I_{cs}	I_q	I_{cu}	I_{cs}	I_q	I_{cu}	I_{cs}	I_q	I_{cu}	I_{cs}
A	kA	kA	kA	kA	kA	kA	kA	kA	kA	kA	kA	kA	kA	kA	kA	kA	kA	kA
PKE12/XTU(A)-... with type 1 and 2 coordination																		
1.2	100	N	N	50	N	N	15	N	N	10	N	N	10	N	N	3	N	N
4	100	N	N	50	N	N	50	N	N	10	N	N	10	N	N	3	N	N
12	100	N	N	50	N	N	20	N	N	20	N	N	10	N	N	3	N	N
PKE32/XTU(A)-... with type 1 and 2 coordination																		
32	100			50	N	N	25	N	N	6	N	N	3	N	N	3	N	N
PKE32/XTUCP(A)-... with type 1 and 2 coordination																		
36	N	50	12.5	N	-	-	N	-	-	N	-	-	N	-	-	N	-	-
PKE65/XTU(W)(A) with type 1 and 2 coordination																		
32 - 65	80	N	N	80	N	N	45	N	N	15	N	N	10	N	N	5	N	N
Motor starter combinations MSC-DE(A)-...-M7(12)... with type 1 coordination																		
1.2	100	N	N	50	N	N	15	N	N	10	N	N	-	N	N	-	N	N
4	100	N	N	50	N	N	50	N	N	50	N	N	-	N	N	-	N	N
12	100	N	N	50	N	N	50	N	N	20	N	N	-	N	N	-	N	N
Motor starter combinations MSC-DE(A)-...-M17(32)... with type 1 coordination																		
12	100	N	N	65	N	N	65	N	N	50	N	N	50	N	N	3	N	N
32	100	N	N	100	N	N	50	N	N	50	N	N	5	N	N	5	N	N
Motor starter combinations MSC-DE(A)-...-M17(32)... with type 2 coordination																		
1.2	100	N	N	65	N	N	65	N	N	10	N	N	3	N	N	-	N	N
4	100	N	N	65	N	N	65	N	N	50	N	N	3	N	N	-	N	N
12	100	N	N	65	N	N	65	N	N	50	N	N	50	N	N	-	N	N
32	100	N	N	100	N	N	65	N	N	50	N	N	20	N	N	5	N	N
PKE12/XTU-...+DILM17+CL-PKZ0 with type 2 coordination																		
1.2 - 12	100	N	N	100	N	N	100	N	N	100	N	N	50	N	N	-	N	N
PKE32/XTU-32+DILM32+CL-PKZ0 with type 2 coordination																		
32	100	N	N	100	N	N	100	N	N	100	N	N	50	N	N	25	N	N
PKE65/XTU(A)-65+DILM(40, 50)65 with type 2 coordination																		
65	80	N	N	50	N	N	50	N	N	50	N	N	-	N	N	10	N	N