

Motor Applications
Automation

Command and Signalling
Power Management



Product Overview for Machinery

EATON

Powering Business Worldwide



Motor-Protective Circuit-Breakers PKZ and PKE Flexible Solutions: Simple, Intelligent, Pluggable, Versatile



Motor-protective circuit-breakers PKZ have been manufactured by Eaton since 1932. Our ideas and developments have decisively influenced the trends in the protection of motors since then. The results are progressive concepts and marketable product innovations that again and again assume the role of international trendsetting, pioneering products, e.g. such as the motor-protective circuit-breaker PKE. Standstill times of machines and installation should be as short as possible. The fuseless motor-protective circuit-breakers PKZ combine short-circuit protection and overload protection in a single device. This enables a short recovery time. PKZM0, PKZM01, PKZM4 and PKE feature the same range of accessories. They can be easily combined with contactors DILM and soft starters DS7. Switching technology can be this easy.



Perfect for actuation by pressing or hitting

The motor-protective circuit-breaker PKZM01 for motors up to 25 A is ideal for small machines and other applications, which primarily prefer the use of push or impact operation. In addition to the auxiliary contacts from the PKZM0 range, there are also special enclosures in IP65 and IP40 degree of protection, also with an EMERGENCY STOP button. The short-circuit breaking capacity is 50kA.



Common accessories – tool-less installation

Only two motor-protective circuit-breakers are required to cover the range from 0.1 to 63 A. And this with only 20 different types. The motor-protective circuit-breakers are matched to the contactor series DIL and can be easily combined to motor starters.



All possibilities in the range

Motor-protective circuit-breaker PKM0 does not feature an overload protection function. These switches are used for protection of resistive loads where overload currents can not occur. Eaton offers additional transformer-protective circuit-breakers, where the response values of the short-circuit trip are even higher than with the motor-protective circuit-breakers, to master even higher peak inrush currents of idling motors without causing a trip.



Modular design. Highest level of flexibility. Highest level of performance

Motor- and system-protective circuit-breaker PKE with electronic overload protection offers here an interesting alternative to the bimetal solution and complements the intelligent PKZ series. The motor-protective circuit-breaker PKE provides the highest level of flexibility featuring a compact and modular design with plug-in control unit for motor currents up to 65 A.



Information at your fingertips thanks to SmartWire-DT

Motor starter combinations with PKZ and PKE enable integration into the automation environment via SmartWire-DT. The actual flow of current in the PKE can also be detected via the modular COM circuits. The data can be transferred directly into the control and is available across the system.

3 basic units + 8 trip blocks = current range up to 65 A

12 A (45 mm)
PKE 12



32 A (45 mm)
PKE 32



65 A (55 mm)
PKE 65



Motor protection

0.3 A → 12 A
0.09 - 5.5 kW (400 V)

1 A → 32 A
0.37 - 15 kW (400 V)

8 A → 65 A
4 - 30 kW (400 V)

System protection

15 A → 36 A

15 A → 65 A

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

0.3 A → 1.2 A

1 A → 4 A

3 A → 12 A

8 A → 32 A

16 A → 65 A

15 A → 36 A

16 A → 65 A



Modular with a wide setting range

The functional safety and the service life of a motor depends mainly on the motor protection. Motor-protective circuit-breaker PKE with electronic overload protection offers here an interesting alternative to the bimetal solution and complements the intelligent PKZ series from Eaton. The motor-protective circuit-breaker PKE provides the highest level of flexibility featuring a compact and modular design with plug-in control unit for motor currents up to 65 A. The large current setting ranges decisively reduce the number of variants and minimise the engineering work and costs accordingly.

PKZ and PKE in system xStart

The motor-protective circuit-breakers PKZ and PKE feature versatile, approved accessories available from the xStart range for safe and rational control panel construction. With most applications, an auxiliary switch is required with varying contact assignment for interlock or for signalling purposes. The motor starter design with two separate contact systems including visible isolating gaps enables a unique assignment of the protective devices PKZ or PKE and switching device DIL, whereby switchgear devices can be exchanged individually. A universal accessory series from the system xStart facilitates economy in logistical terms and reduces engineering costs.

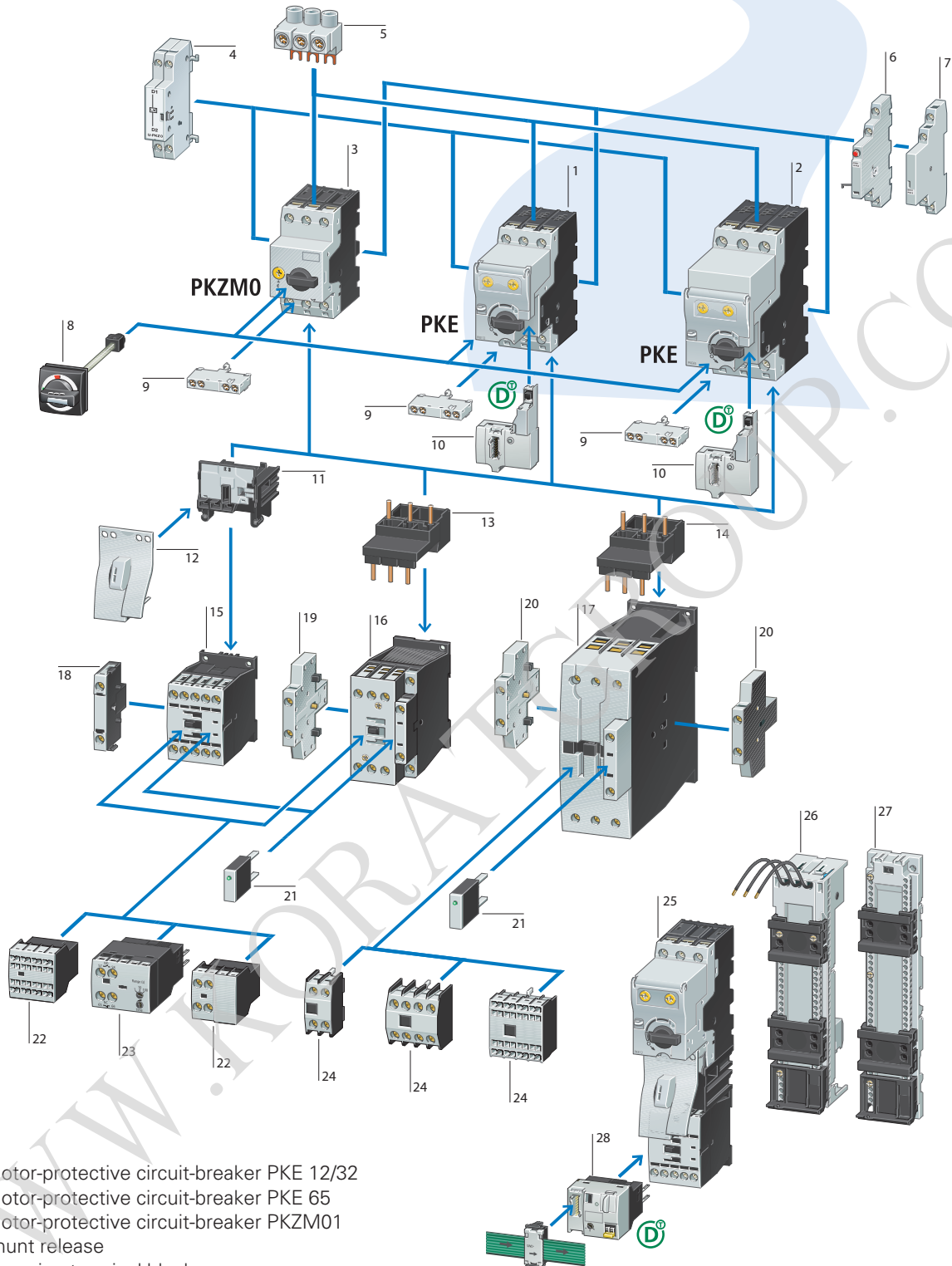
Information at your fingertips thanks to SmartWire-DT

Motor starter combinations with PKZ and PKE enable integration into the automation environment via SmartWire-DT. The most varying array of signalling functions can be transferred with the PKZ using the modular COM circuits. The motor-protective circuit-breaker PKE also utilizes diagnostics, status and overload messages and detects the current flow. The data can be transferred directly into the control and is available across the system. The data transparency created enhances the efficiency and the operational reliability of the drives in the operation environment of the motor-protective circuit-breaker.

Always well informed

- Current values
- Diagnostics data
- Status messages
- Overload relay function










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

Switching, Protecting and Driving Motors

Motor-protective circuit-breakers

Basic devices

Moeller® series

Setting range Overload releases	Screw terminals		Incoming side screw terminals outgoer side springloaded terminals		Spring-loaded terminals		
	Part no.	Article no.	Part no.	Article no.	Part no.	Article no.	
 PKZM01 motor-protective circuit-breaker, Type "1" and "2" coordination I_r 	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-breaker, Type "1" and "2" coordination	0.1 - 0.16	PKZM0-0,16	072730	PKZM0-0,16-SC	229828	PKZM0-0,16-C	229669
	0.16 - 0.25	PKZM0-0,25	072731	PKZM0-0,25-SC	229829	PKZM0-0,25-C	229670
	0.25 - 0.4	PKZM0-0,4	072732	PKZM0-0,4-SC	229830	PKZM0-0,4-C	229671
	0.4 - 0.63	PKZM0-0,63	072733	PKZM0-0,63-SC	229831	PKZM0-0,63-C	229672
	0.63 - 1	PKZM0-1	072734	PKZM0-1-SC	229832	PKZM0-1-C	229673
	1 - 1.6	PKZM0-1,6	072735	PKZM0-1,6-SC	229833	PKZM0-1,6-C	229674
	1.6 - 2.5	PKZM0-2,5	072736	PKZM0-2,5-SC	229834	PKZM0-2,5-C	229675
	2.5 - 4	PKZM0-4	072737	PKZM0-4-SC	229835	PKZM0-4-C	229676
	4 - 6.3	PKZM0-6,3	072738	PKZM0-6,3-SC	229836	PKZM0-6,3-C	229677
	6.3 - 10	PKZM0-10	072739	PKZM0-10-SC	229837	PKZM0-10-C	229678
	8 - 12	PKZM0-12	278486	PKZM0-12-SC	278487	PKZM0-12-C	278488
	10 - 16	PKZM0-16	046938	PKZM0-16-SC	229838	PKZM0-16-C	229679
	16 - 20	PKZM0-20	046988	-	-	-	-
	20 - 25	PKZM0-25	046989	-	-	-	-
	25 - 32	PKZM0-32	278489	-	-	-	-
 PKZM4 motor-protective circuit-breaker, 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	-	-	-	-
 Transformer-protective circuit-breaker	0.1 - 0.16	PKZM0-0,16-T	088907	-	-	-	-
	0.16 - 0.25	PKZM0-0,25-T	088908	-	-	-	-
	0.25 - 0.4	PKZM0-0,4-T	088909	-	-	-	-
	0.4 - 0.63	PKZM0-0,63-T	088910	-	-	-	-
	0.63 - 1	PKZM0-1-T	088911	-	-	-	-
	1 - 1.6	PKZM0-1,6-T	088912	-	-	-	-
	1.6 - 2.5	PKZM0-2,5-T	088913	-	-	-	-
	2.5 - 4	PKZM0-4-T	088914	-	-	-	-
	4 - 6.3	PKZM0-6,3-T	088915	-	-	-	-
	6.3 - 10	PKZM0-10-T	088916	-	-	-	-
	8 - 12	PKZM0-12-T	278492	-	-	-	-
	10 - 16	PKZM0-16-T	088917	-	-	-	-
	16 - 20	PKZM0-20-T	088918	-	-	-	-
	20 - 25	PKZM0-25-T	278493	-	-	-	-