
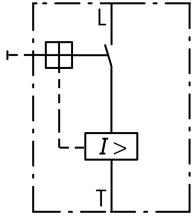




## Short-circuit protective breaker, 3p, im=280A

Part no. **PKM0-20**  
 Catalog No. **203594**  
 Eaton Catalog No. **XTPM020BNL**


### Delivery program

Product range				PKM0 motor protective circuit-breakers up to 32 A
Basic function				Short-circuit protective device only
				
Notes				Also suitable for motors with efficiency class IE3. IE3-ready devices are identified by the logo on their packaging.
Connection technique				Screw terminals
Contact sequence				

### Max. motor rating

AC-3				
220 V 230 V 240 V	P	kW		5.5
380 V 400 V 415 V	P	kW		9
440 V	P	kW		11
500 V	P	kW		12.5
660 V 690 V	P	kW		15
Rated uninterrupted current	$I_u$	A		20

### Setting range

short-circuit release				
				
max.	$I_{rm}$	A		310

**Notes**  
 When using the PKM0 as short-circuit protection for motors with heavy starting duty, the rated operational current  $I_e$  must be over-dimensioned during engineering with the following factors:

- CLASS 5 = 1.0
- CLASS 10 = 1.0
- CLASS 15 = 1.22
- CLASS 20 = 1.41
- CLASS 25 = 1.58
- CLASS 30 = 1.73
- CLASS 35 = 1.89
- CLASS 40 = 2.0

Can be snap-fitted to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height  
 Assignment of the short-circuit protective breakers and contactors in "Fuseless motor-starter combinations" section.  
 An appropriate overload relay must be fitted to protect motors against overload.

### Design verification as per IEC/EN 61439

Technical data for design verification				
Rated operational current for specified heat dissipation	$I_n$	A		20
Heat dissipation per pole, current-dependent	$P_{vid}$	W		0
Equipment heat dissipation, current-dependent	$P_{vid}$	W		5.82
Static heat dissipation, non-current-dependent	$P_{vs}$	W		0

Heat dissipation capacity	P <sub>diss</sub>	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	55
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			Meets the product standard's requirements.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage			Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material			Is the panel builder's responsibility.
10.10 Temperature rise			The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function			The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

## Technical data ETIM 6.0

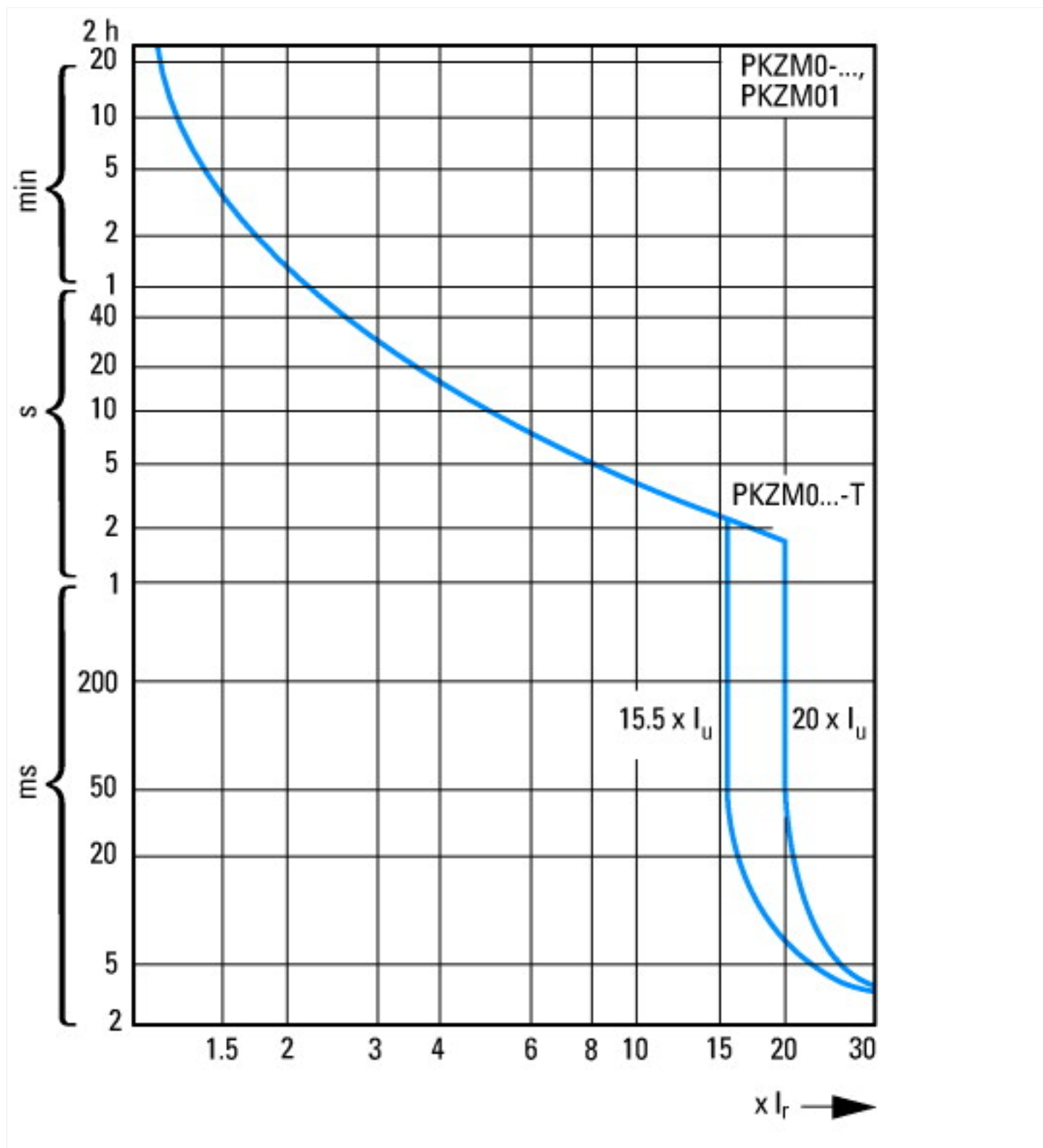
Low-voltage industrial components (EG000017) / Motor protection circuit-breaker (EC000074)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Motor protection circuit-breaker (ecl@ss8.1-27-37-04-01 [AGZ529013])			
Overload release current setting		A	0 - 0
Adjustment range undelayed short-circuit release		A	310 - 310
Thermal protection			No
Phase failure sensitive			No
Switch off technique			Magnetic
Rated operating voltage		V	690 - 690
Rated permanent current I <sub>u</sub>		A	20
Rated operation power at AC-3, 230 V		kW	5.5
Rated operation power at AC-3, 400 V		kW	9
Type of electrical connection of main circuit			Screw connection
Type of control element			Turn button
Device construction			Built-in device fixed built-in technique
With integrated auxiliary switch			No
With integrated under voltage release			No
Number of poles			3
Rated short-circuit breaking capacity I <sub>cu</sub> at 400 V, AC		kA	50
Degree of protection (IP)			IP20
Height		mm	93
Width		mm	45
Depth		mm	76

## Approvals

Specially designed for North America

No

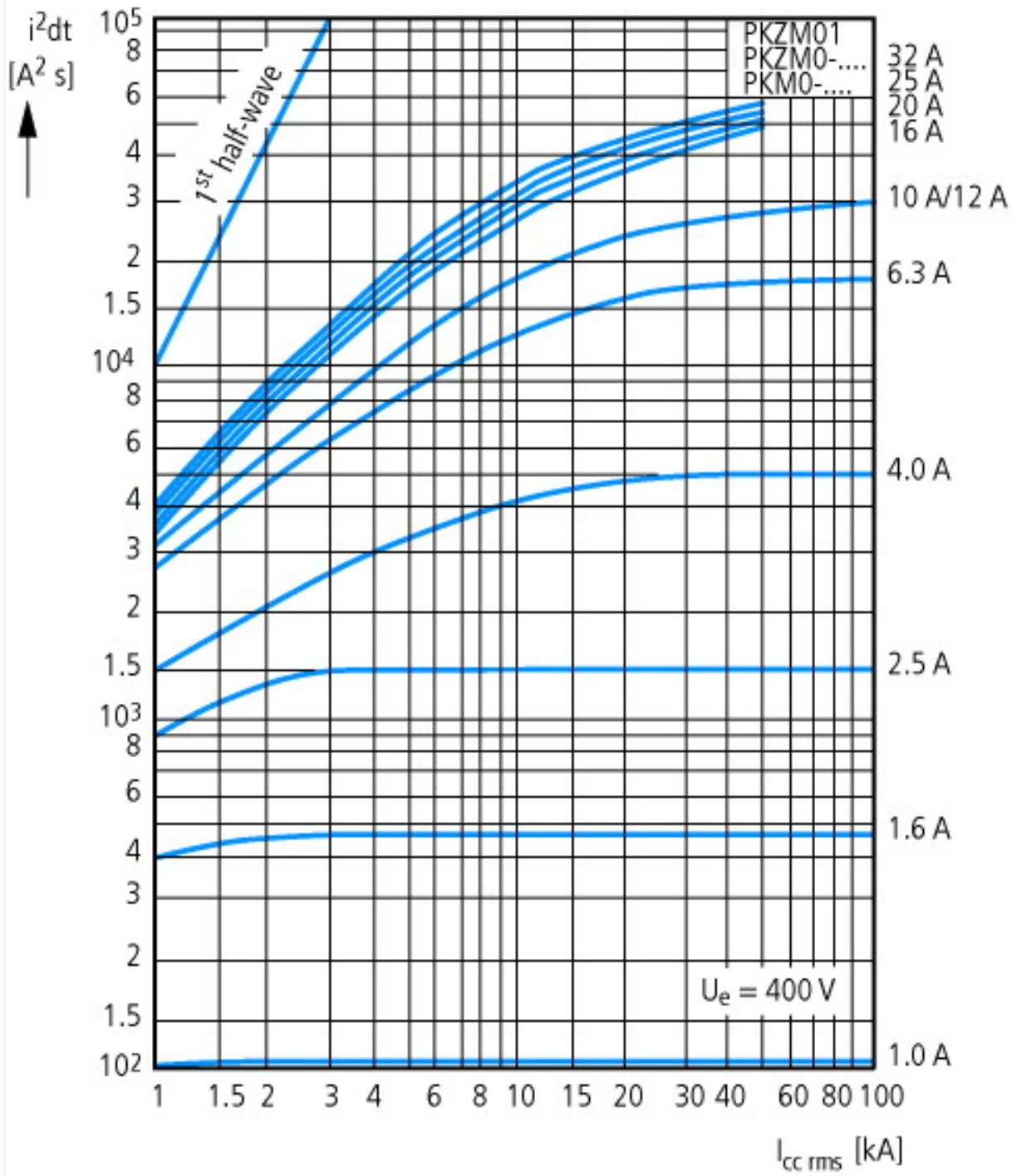
## Characteristics



Motor-protective circuit-breaker tripping characteristic (high-capacity) compact starter, PKZM0...T (not for PKM0...), PKZM01

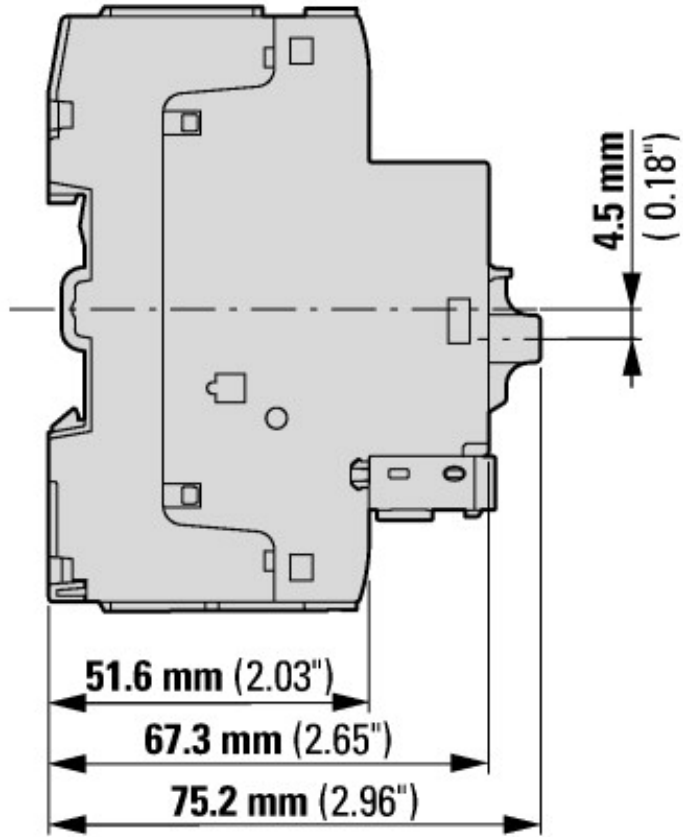


Let-through current

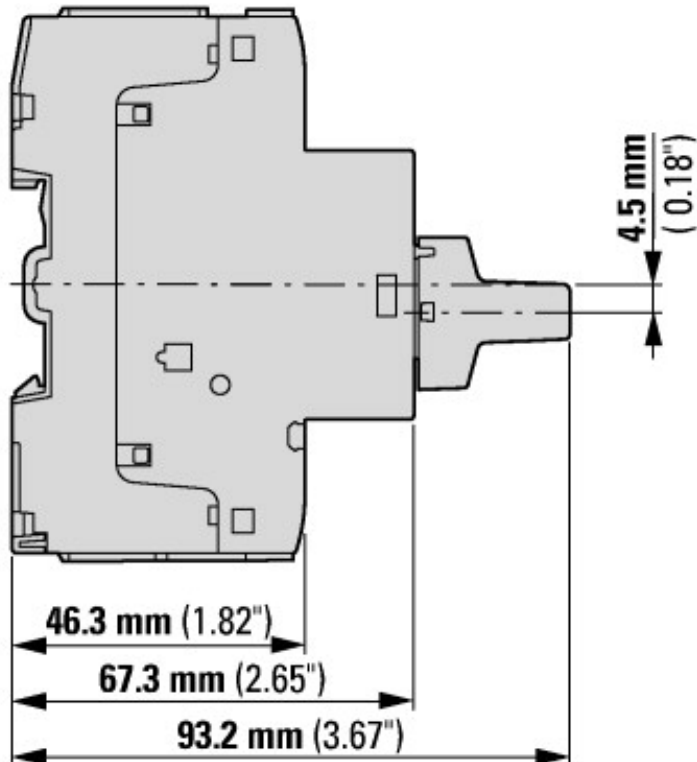
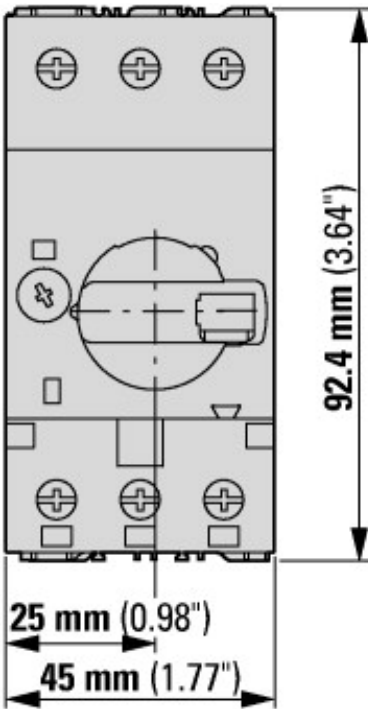


Let-through energy

## Dimensions



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



Motor-protective circuit-breakers with lockable rotary handles  
 PKZM0-...+AK-PKZ0



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

## Additional product information (links)

### IL03407010Z (AWA1210-2138) Motor-protective circuit-breaker

IL03407010Z (AWA1210-2138) Motor-protective circuit-breaker [ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL03407010Z2017\\_07.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407010Z2017_07.pdf)

### IL03407011Z (AWA1210-1925) Motor-protective circuit-breaker

IL03407011Z (AWA1210-1925) Motor-protective circuit-breaker [ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL03407011Z2017\\_07.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407011Z2017_07.pdf)

Motor starters and "Special Purpose Ratings" for the North American market [http://www.moeller.net/binary/ver\\_techpapers/ver953en.pdf](http://www.moeller.net/binary/ver_techpapers/ver953en.pdf)

Busbar Component Adapters for modern Industrial control panels [http://www.moeller.net/binary/ver\\_techpapers/ver960en.pdf](http://www.moeller.net/binary/ver_techpapers/ver960en.pdf)