



Motor-protective circuit-breaker, 3p, Ir=20-25A

Powering Business Worldwide™

Part no.	PKZM0-25-T
Catalog No.	278493
Alternate Catalog No.	XTPT025BC1NL
EL-Nummer (Norway)	4315198

Delivery program

Product range	PKZM0...T transformer-protective circuit-breakers up to 25 A		
Basic function	Transformer protection		
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			
Rated uninterrupted current	I_u	A	25
Setting range			
Overload releases	I_r	A	20 - 25
short-circuit release			
max.	I_{rm}	A	437
Phase-failure sensitivity	IEC/EN 60947-4-1, VDE 0660 Part 102		
Notes For the protection of transformers with a high inrush current. Can be snapped on to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height.			

Technical data

General					
Standards	IEC/EN 60947, VDE 0660				
Climatic proofing	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30				
Ambient temperature					
Storage	$^{\circ}\text{C}$	- 40 - 80			
Open	$^{\circ}\text{C}$	- 25 - +55			
Enclosed	$^{\circ}\text{C}$	- 25 - 40			
Mounting position					
Direction of incoming supply	as required				
Degree of protection					
Device	IP20				
Terminations	IP00				
Protection against direct contact when actuated from front (EN 50274)	Finger and back-of-hand proof				
Mechanical shock resistance half-sinusoidal shock 10 ms to IEC 60068-2-27	g	25			
Altitude	m	Max. 2000			
Terminal capacity main cable					

Screw terminals			
Solid		mm ²	1 x (1 - 6) 2 x (1 - 6)
Flexible with ferrule to DIN 46228		mm ²	1 x (1 - 6) 2 x (1 - 6)
Solid or stranded		AWG	18 - 10
Stripping length		mm	10
Specified tightening torque for terminal screws			
Main cable		Nm	1.7
Control circuit cables		Nm	1

Main conducting paths

Rated impulse withstand voltage	U _{imp}	V AC	6000
Overtoltage category/pollution degree			III/3
Rated operational voltage	U _e	V AC	690
Rated uninterrupted current = rated operational current	I _u = I _e	A	25
Rated frequency	f	Hz	40 - 60
Current heat loss (3 pole at operating temperature)		W	6.83
Lifespan, mechanical	Operations	x 10 ⁶	0.1
Lifespan, electrical (AC-3 at 400 V)			
Lifespan, electrical	Operations	x 10 ⁶	0.1
Max. operating frequency		Ops/h	40
Short-circuit rating			
DC			
Short-circuit rating		kA	40
Motor switching capacity			
AC-3 (up to 690V)		A	25
DC-5 (up to 250V)		A	25 (3 contacts in series)

Trip blocks

Temperature compensation			
to IEC/EN 60947, VDE 0660		°C	- 5 ... 40
Operating range		°C	- 25 ... 55
Temperature compensation residual error for T > 40 °C			≤ 0.25 %/K
Setting range of overload releases		x I _u	0.6 - 1
short-circuit release			Basic device, fixed: 20 x I _u
Short-circuit release tolerance			± 20%
Phase-failure sensitivity			IEC/EN 60947-4-1, VDE 0660 Part 102

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I _n	A	25
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	6.83
Static heat dissipation, non-current-dependent	P _{vs}	W	0
Heat dissipation capacity	P _{diss}	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 7.0

Low-voltage industrial components (EG000017) / Power circuit-breaker for trafo/generator/installation protection (EC000228)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (ecl@ss10.0.1-27-37-04-09 [AJZ716013])

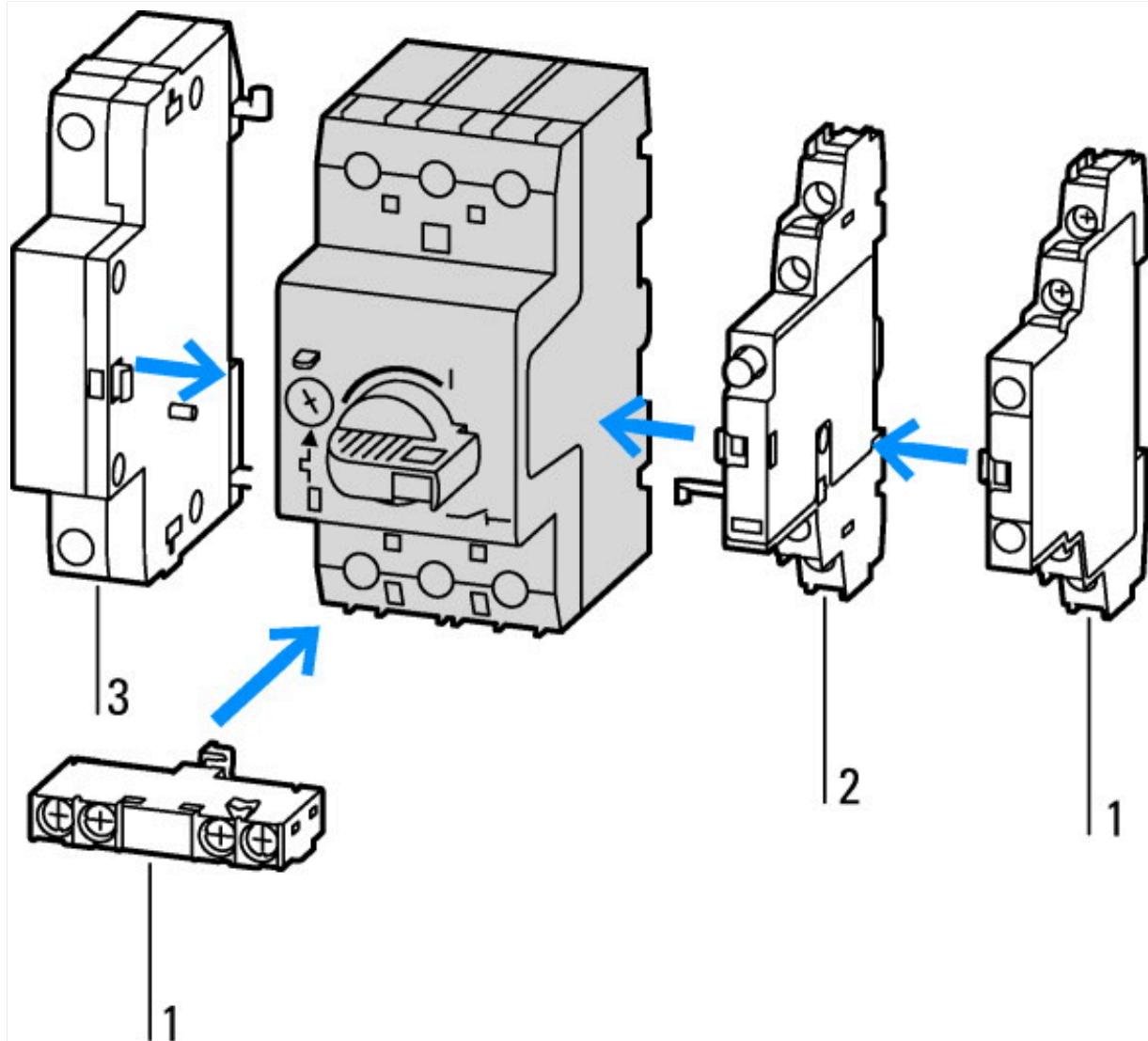
Rated permanent current I_p	A	25
Rated voltage	V	690 - 690
Rated short-circuit breaking capacity I_{cu} at 400 V, 50 Hz	kA	50
Overload release current setting	A	20 - 25
Adjustment range short-term delayed short-circuit release	A	0 - 0
Adjustment range undelayed short-circuit release	A	420 - 420
Integrated earth fault protection		No
Type of electrical connection of main circuit		Screw connection
Device construction		Other
Suitable for DIN rail (top hat rail) mounting		Yes
DIN rail (top hat rail) mounting optional		Yes
Number of auxiliary contacts as normally closed contact		0
Number of auxiliary contacts as normally open contact		0
Number of auxiliary contacts as change-over contact		0
With switched-off indicator		Yes
With under voltage release		No
Number of poles		3
Position of connection for main current circuit		Other
Type of control element		Turn button
Complete device with protection unit		Yes
Motor drive integrated		No
Motor drive optional		No
Degree of protection (IP)		IP20

Approvals

Specially designed for North America

No

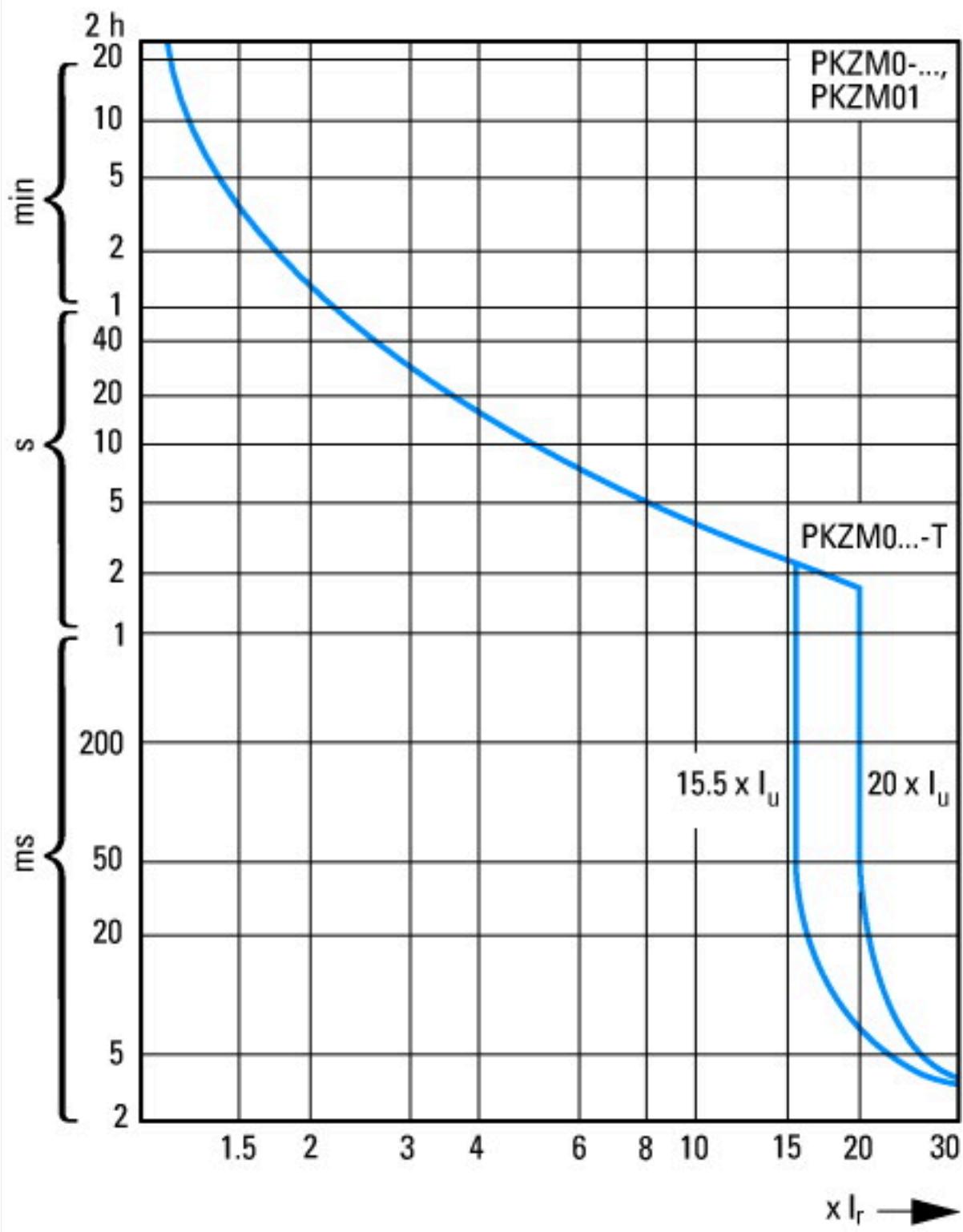
Characteristics



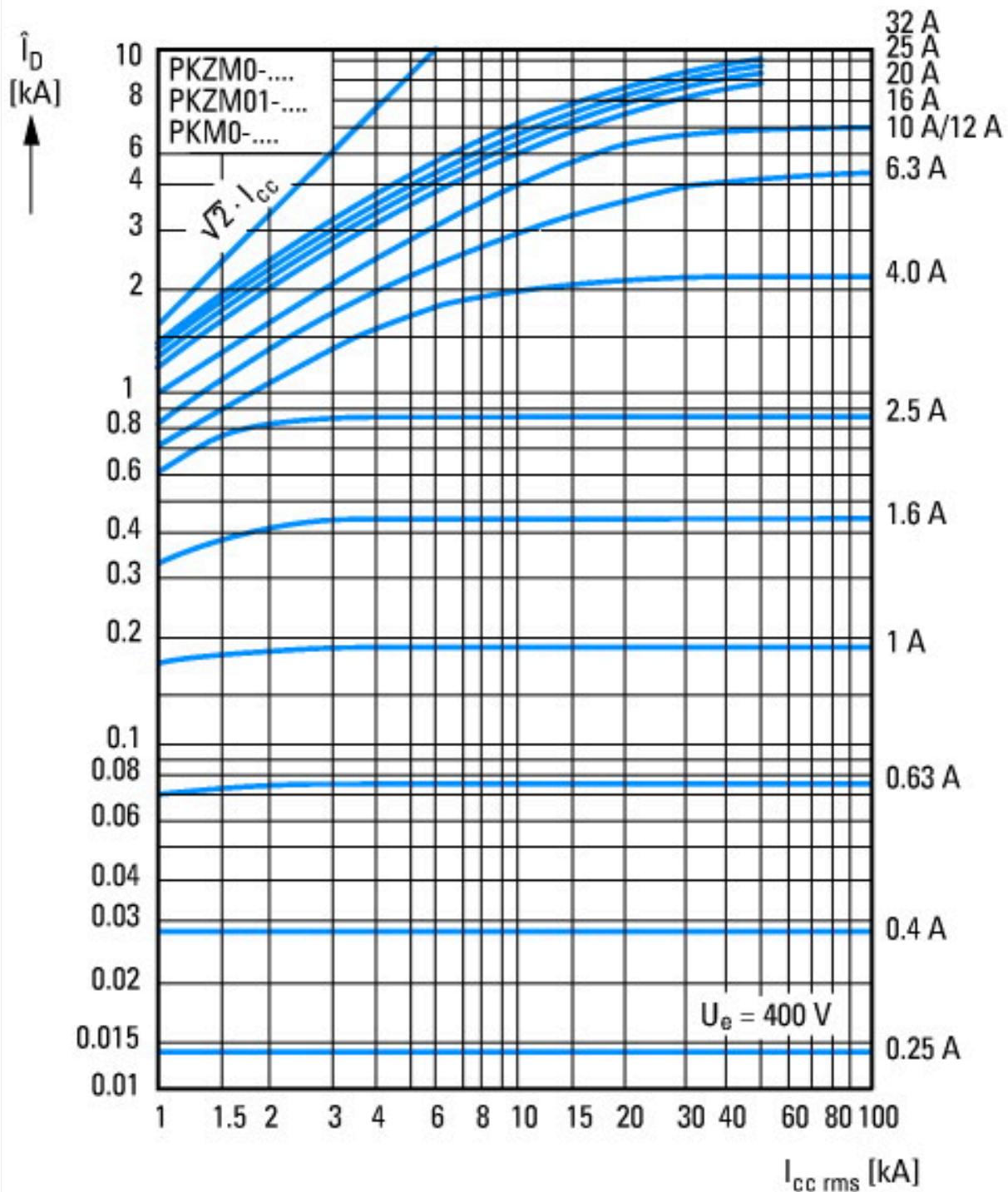
1: Standard auxiliary contact

2: Trip-indicating auxiliary contact

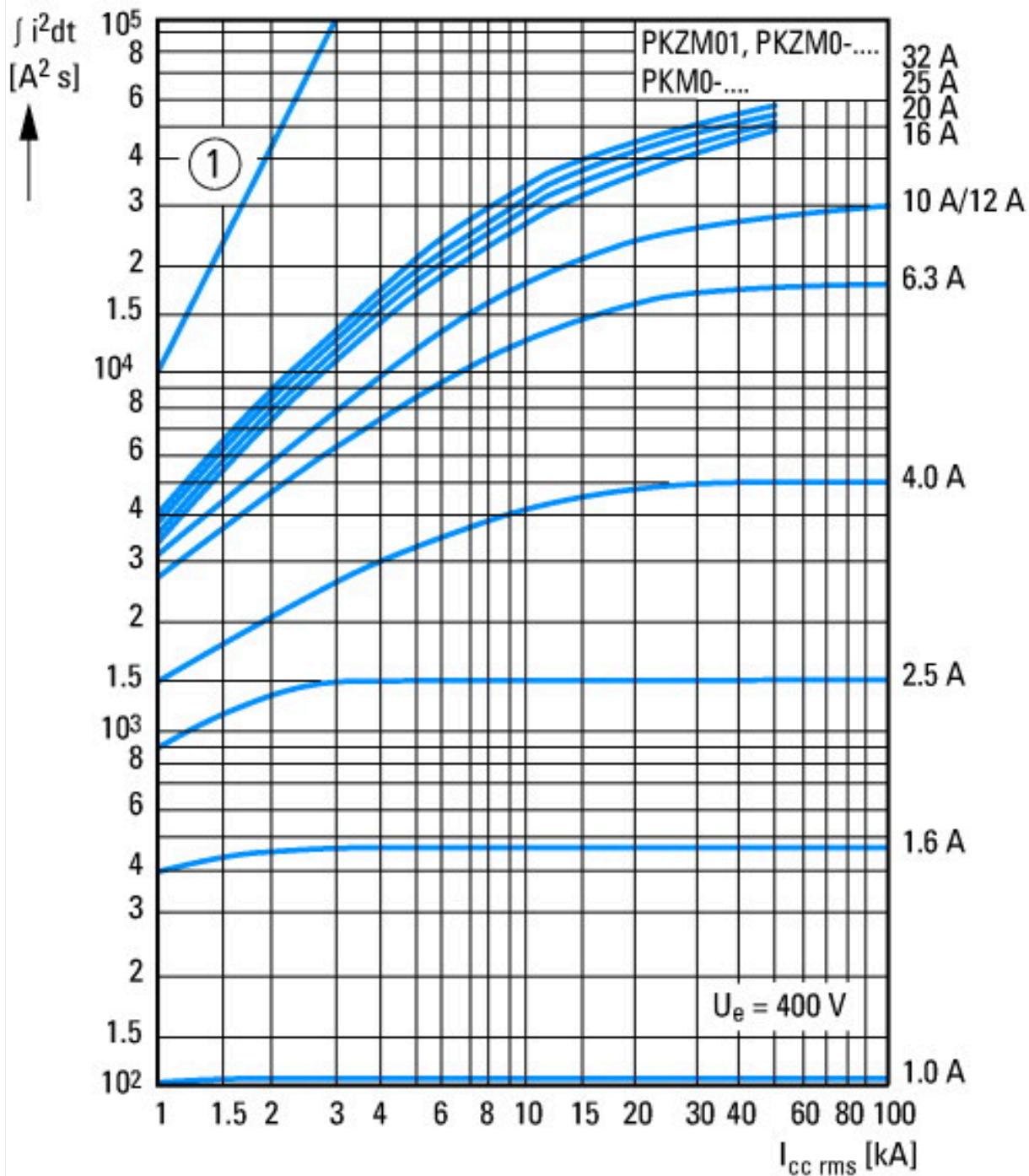
3: Shunt releases, undervoltage releases



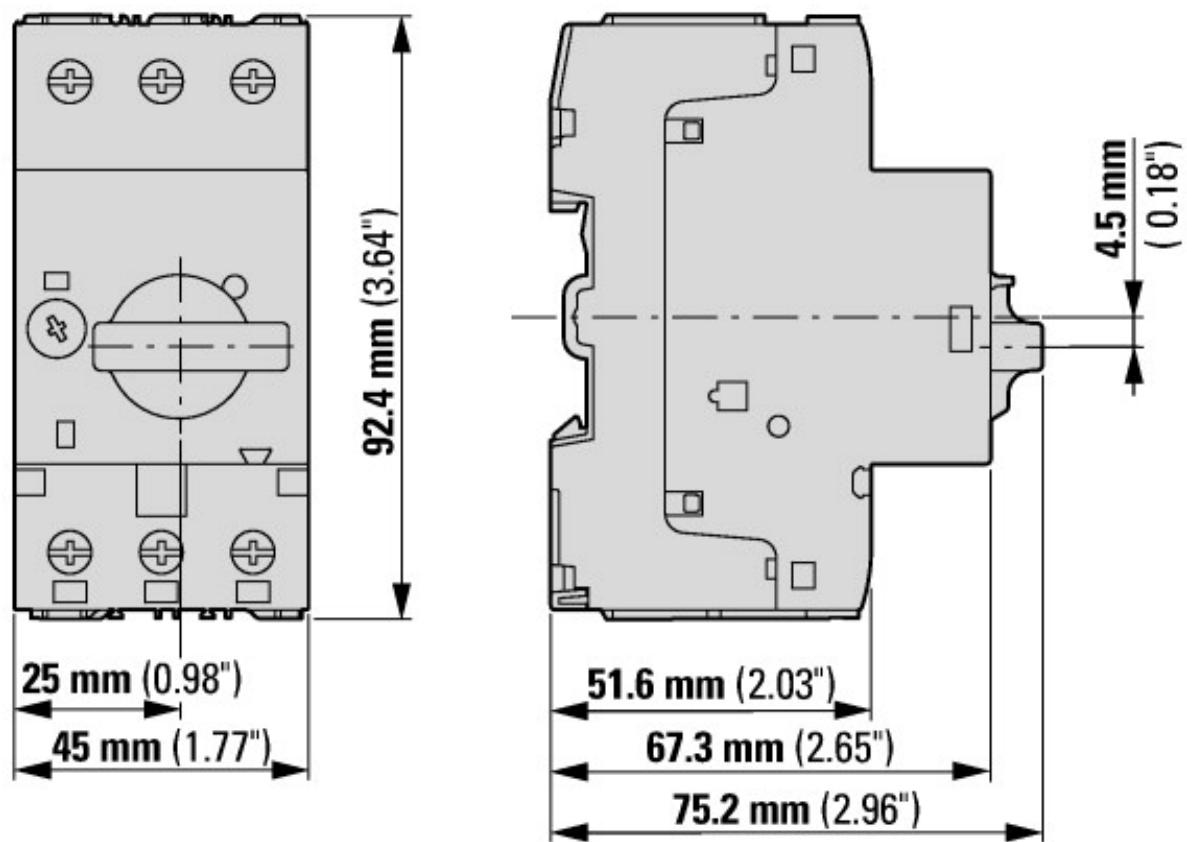
Tripping characteristics motor-protector circuit breaker PKZM0, PKZM0...-T (not for PKM0-...), PKZM01



Let-through current



Dimensions

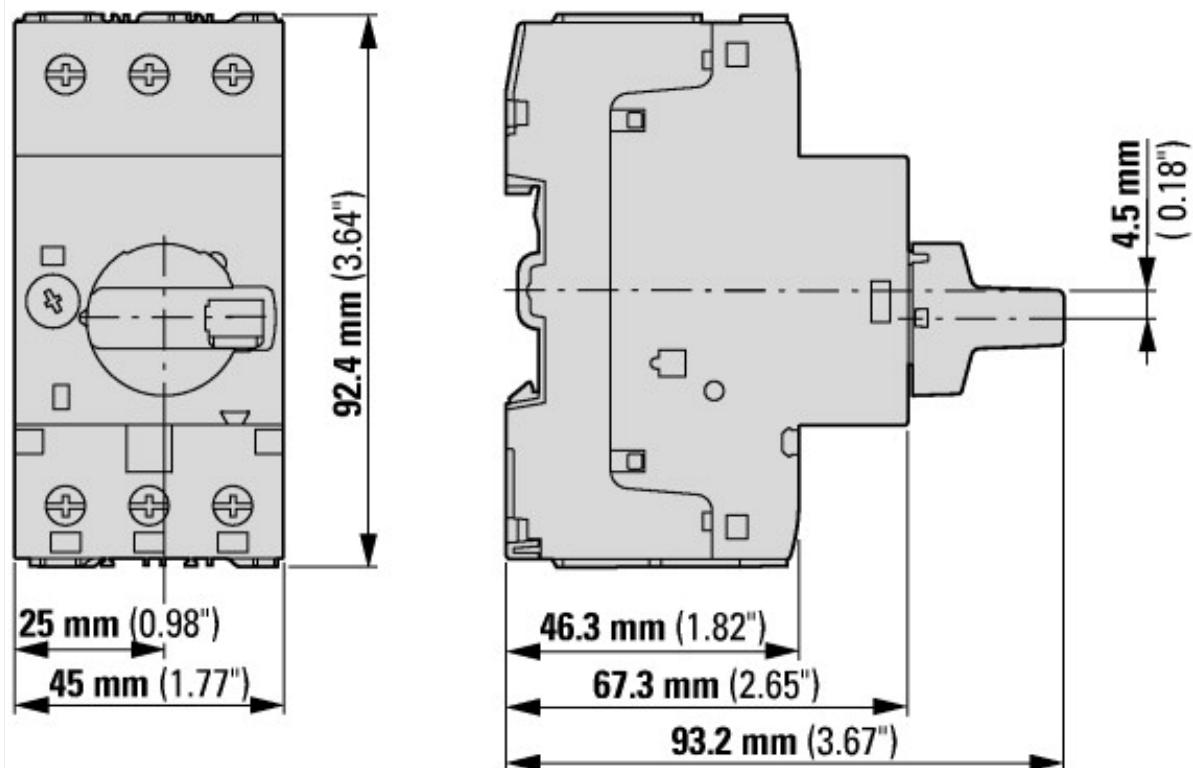


Motor-protective circuit-breaker with standard auxiliary contact

PKZM0-...(+NHI-E-...-PKZ0)

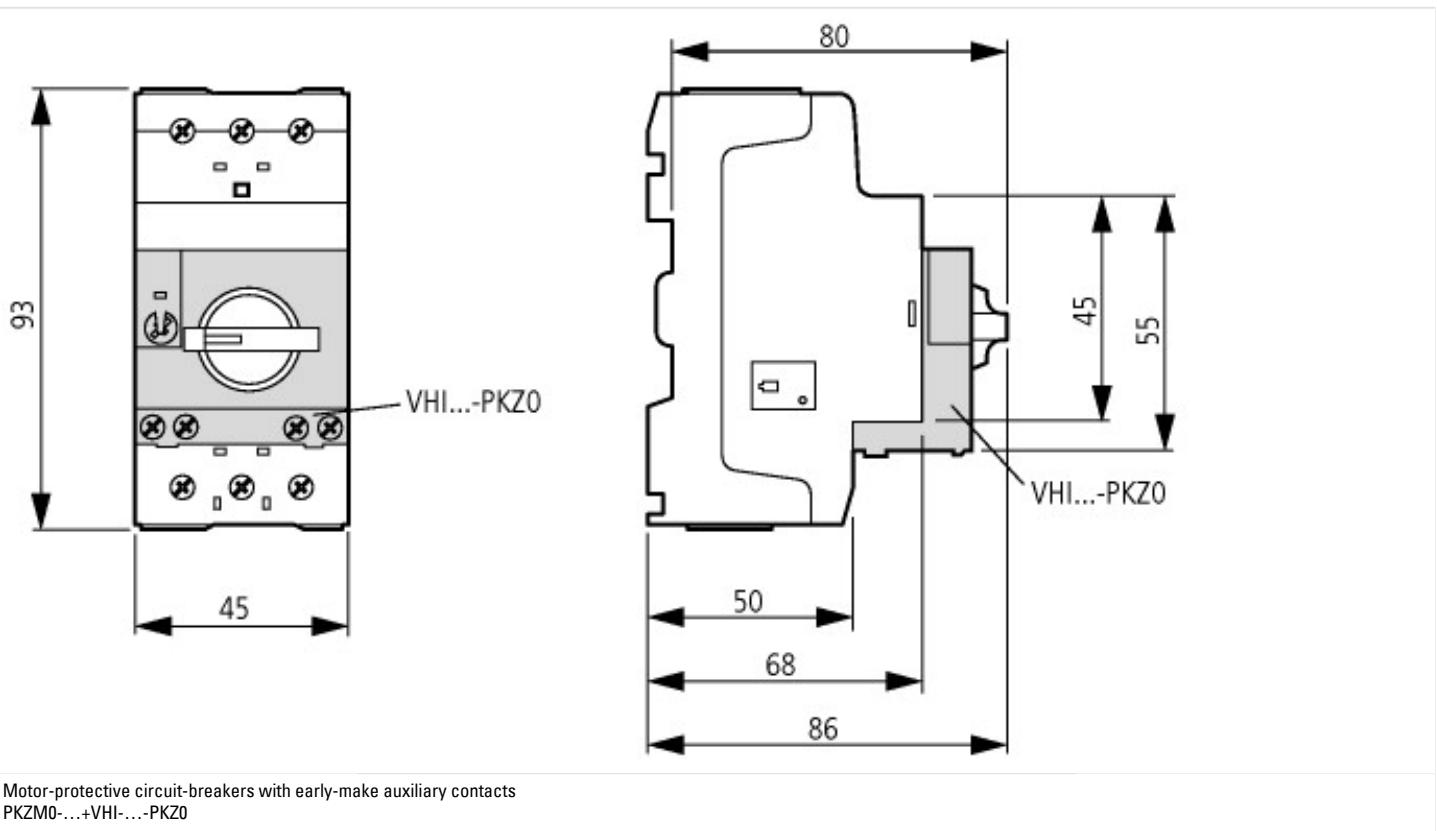
PKZM0-...-T(+NHI-E-...-PKZ0)

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

Assets (links)

Declaration of CE Conformity

00002894

Instruction Leaflets

hlr-system/

IL03407011Z2018_04