

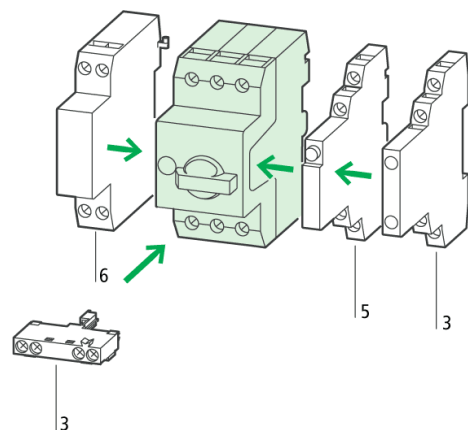
Type: **PKZM0-6,3**
 Article No.: **072738**



Ordering information

Connection technique			Screw terminals
Motor rating AC-3 220 V 230 V 240 V	<i>P</i>	kW	1.1
Motor rating AC-3 380 V 400 V 415 V	<i>P</i>	kW	2.2
Motor rating AC-3 440 V	<i>P</i>	kW	3
Motor rating AC-3 500 V	<i>P</i>	kW	3
Motor rating AC-3 690 V	<i>P</i>	kW	4
Rated uninterrupted current	I_u	A	6.3
Setting range			
Overload releases	I_r	A	4 – 6,3
Short-circuit releases	I_{rm}	A	88

Notes concerning the product group



Accessories

3 Standard auxiliary contact → 072896

5 Trip-indicating auxiliary contact → 072898

6 Shunt release, undervoltage release → 073187

Single-phasing sensitivity to IEC/EN 60947-4-1

Can be snap-fitted to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height



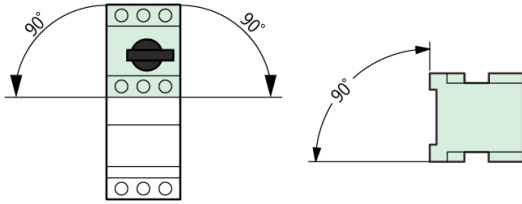
→ 266164

PTB 02 ATEX 3151, see manual

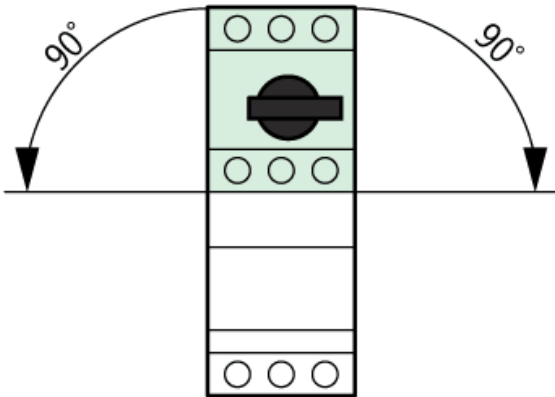
General			
Standards			IEC/EN 60947, VDE 0660, UL 508, CSA C 22.2 No. 14
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
Storage		°C	-25/+80
Open		°C	-25/55
Enclosed		°C	-25/40
Direction of incoming supply			As required
Degree of protection			
Device			IP 20
Terminations			IP00
Protection against direct contact			Finger and back-of-hand proof
Mechanical shock resistance half-sinusoidal shock 10 ms to IEC 60068-2-27		g	25
Altitude		m	2000
Terminal capacities			
Solid		mm ²	1 × (1 – 6) 2 × (1 – 6)
Flexible with ferrule to DIN 46228		mm ²	1 × (1 – 6) 2 × (1 – 6)
Solid or stranded		AWG	18 – 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	32 or current setting of the overcurrent release
Rated frequency		Hz	40 – 60
Current heat loss (3 pole at operating temperature)		W	6
Lifespan, mechanical	Operations	$\times 10^6$	> 0,05
Lifespan, electrical (AC-3 at 400 V)	Operations	$\times 10^6$	0,05
Maximum operating frequency			
Max. operating frequency		Ops/h	40
Short-circuit rating			
AC			
Short-circuit protection maximum fuse			Page 4/33
DC			
Short-circuit rating		kA	60
Short-circuit rating			60 (up to PKZM0-16) 40 (PKZM0-20 to PKZM0-32)
Motor switching capacity			
AC-3 up to 690 V		A	32
DC-5 (up to 250 V)		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		%/K	0.25
Setting range of overload releases		$\times I_u$	0,6 – 1
Short-circuit release fixed		$\times I_u$	14
Short-circuit release tolerance		%	± 20
Phase-failure sensitivity			IEC/EN 60947-4-1, VDE 0660 Part 102
Dimensions			
			PKZM0-...(+NHI-E-...-PKZ0)
Explanation			Motor-protective circuit-breaker tripping characteristic (high-capacity) compact starter,

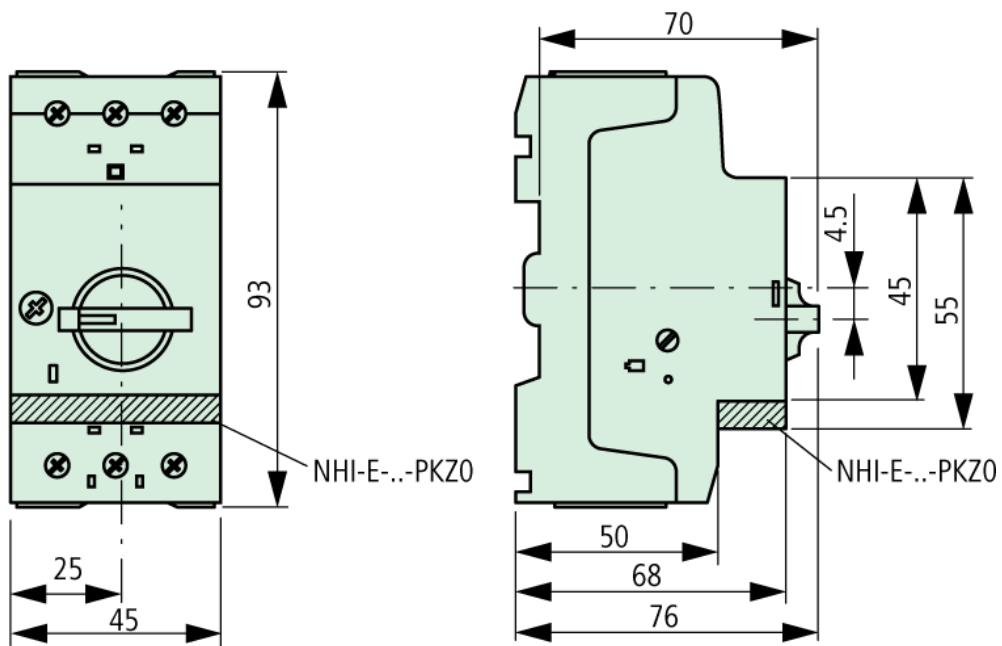
Mounting position



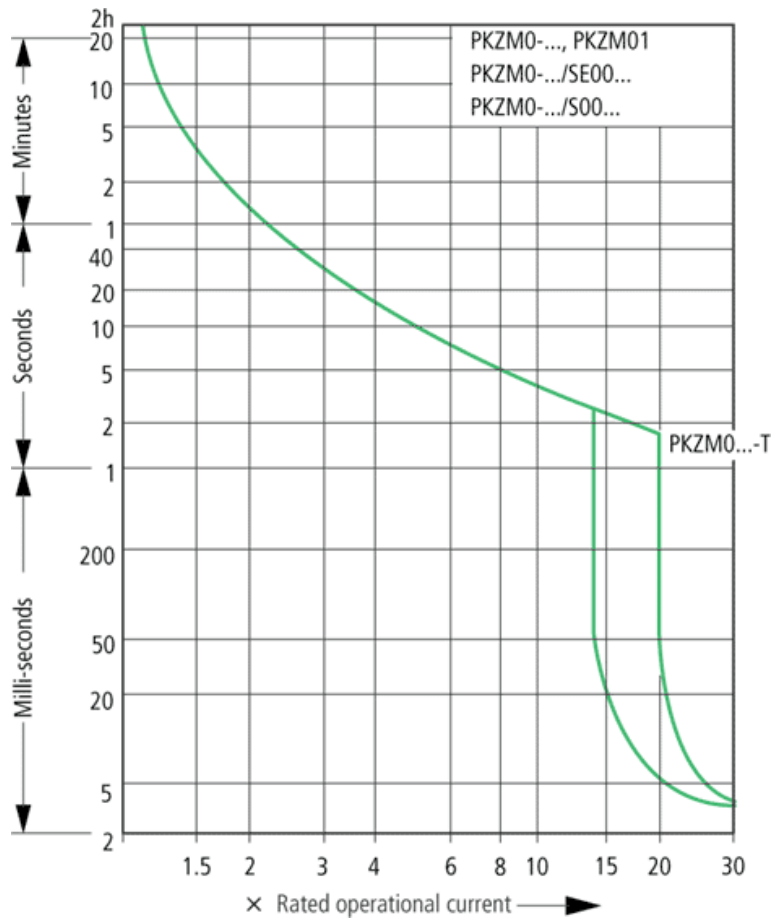
Mounting position



Dimensions



Characteristic curve



Moeller GmbH, Hein-Moeller-Str. 7-11, D-53115 Bonn
 E-Mail: catalog@moeller.net, Internet: www.moeller.net, <http://catalog.moeller.net>
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MOTOR PROTECTION, START.PKZM0

Part no. **PKZM0-6,3**

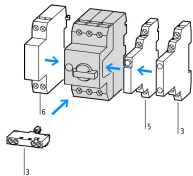
Article no. **072738**



Delivery programme

Connection technique			Screw terminals
220 – 240 V			
AC-3			
220 V 230 V 240 V	<i>P</i>	kW	1.1
380 V 400 V 415 V	<i>P</i>	kW	2.2
440 V	<i>P</i>	kW	3
500 V	<i>P</i>	kW	3
660 V 690 V	<i>P</i>	kW	4
Rated uninterrupted current	<i>I_u</i>	A	6.3
Setting range			
Overload releases	<i>I_r</i>	A	4 ... 6.3
Short-circuit releases	<i>I_{rm}</i>	A	

Notes



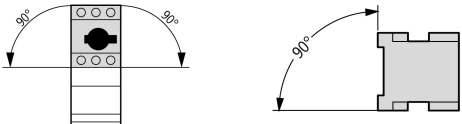
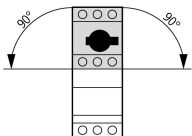
Accessories

- 3 Standard auxiliary contact # 072896
- 5 Trip-indicating auxiliary contact # 072898
- 6 Shunt release, undervoltage release # 073187
- Single-phasing sensitivity to IEC/EN 60947-4-1
- Can be snap-fitted to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height # 266164



PTB 02 ATEX 3151, see manual

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		°C	
Storage		°C	– 25 - 80
Open		°C	– 25 ... 55
Enclosed		°C	- 25 ... 40
Mounting position			
Mounting position			
Direction of incoming supply			As required
Degree of protection			
Device			IP 20
Terminations			IP00

Protection against direct contact			Finger and back-of-hand proof
Mechanical shock resistance half-sinusoidal shock 10 ms to IEC 60068-2-27		g	25
Altitude		m	2000
Terminal capacity screw terminals		mm ²	
Solid		mm ²	1 × (1 – 6) 2 × (1 – 6)
Flexible with ferrule to DIN 46228		mm ²	1 × (1 – 6) 2 × (1 – 6)
Solid or stranded		AWG	18 – 10
Terminal capacity springloaded terminals			
Solid		mm ²	1 × (1...2.5) 2 × (1...2.5)
Flexible with ferrule to DIN 46228		mm ²	1 × (1...2.5) 2 × (1...2.5)
Solid or stranded		AWG	18...14
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
Overvoltage category/pollution degree			III/3
Rated operational voltage	U_e	V AC	690
Rated uninterrupted current = rated operational current	$I_u = I_e$	A	32 or current setting of the overcurrent release
Rated frequency		Hz	40 – 60
Current heat loss (3 pole at operating temperature)		W	6
Lifespan, mechanical	Operations	$\times 10^6$	0.1
Lifespan, electrical (AC-3 at 400 V)	Operations	$\times 10^6$	0.1
Maximum operating frequency		Ops./h	
Max. operating frequency		Ops/h	40
Short-circuit rating			
AC			# Engineering
DC			
Short-circuit rating		kA	60
Short-circuit rating			60 (up to PKZM0-16) 40 (PKZM0-20 to PKZM0-32)
Motor switching capacity		kA _{rms}	
AC-3 (up to 690 V)		A	32
DC-5 (up to 250 V)		A	25 (3 contacts in series)

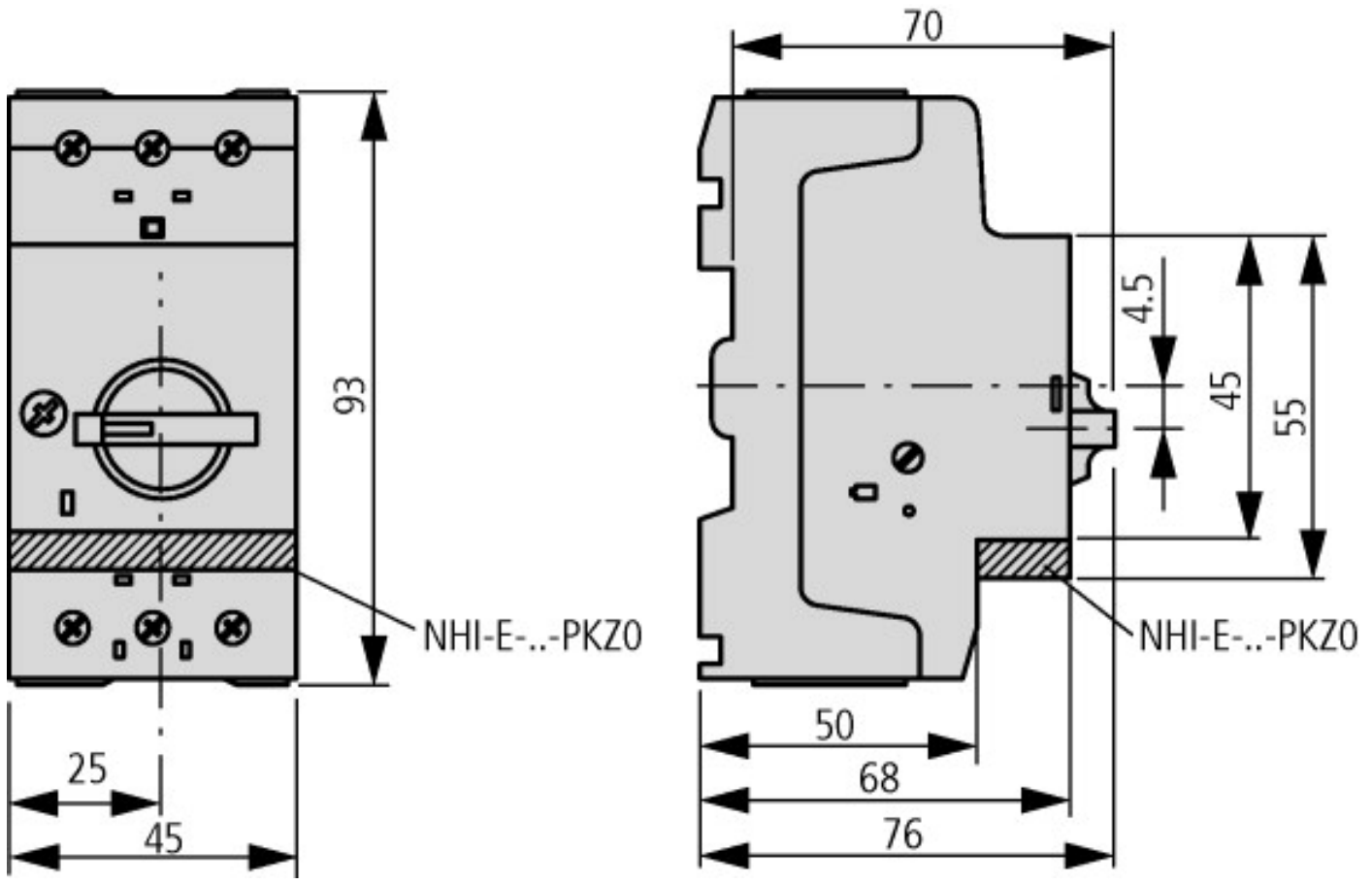
Trip blocks

Temperature compensation			
to IEC/EN 60947, VDE 0660		°C	– 5 ... 40
Operating range		°C	– 25 ... 55
Temperature compensation residual error for T > 40 °C		%/K	$\frac{\Delta I}{I}$ 0.25
Setting range of overload releases		$\times I_u$	0.6 – 1
Short-circuit release fixed		$\times I_u$	14
Short-circuit release tolerance		%	± 20
Phase-failure sensitivity			IEC/EN 60947-4-1, VDE 0660 Part 102

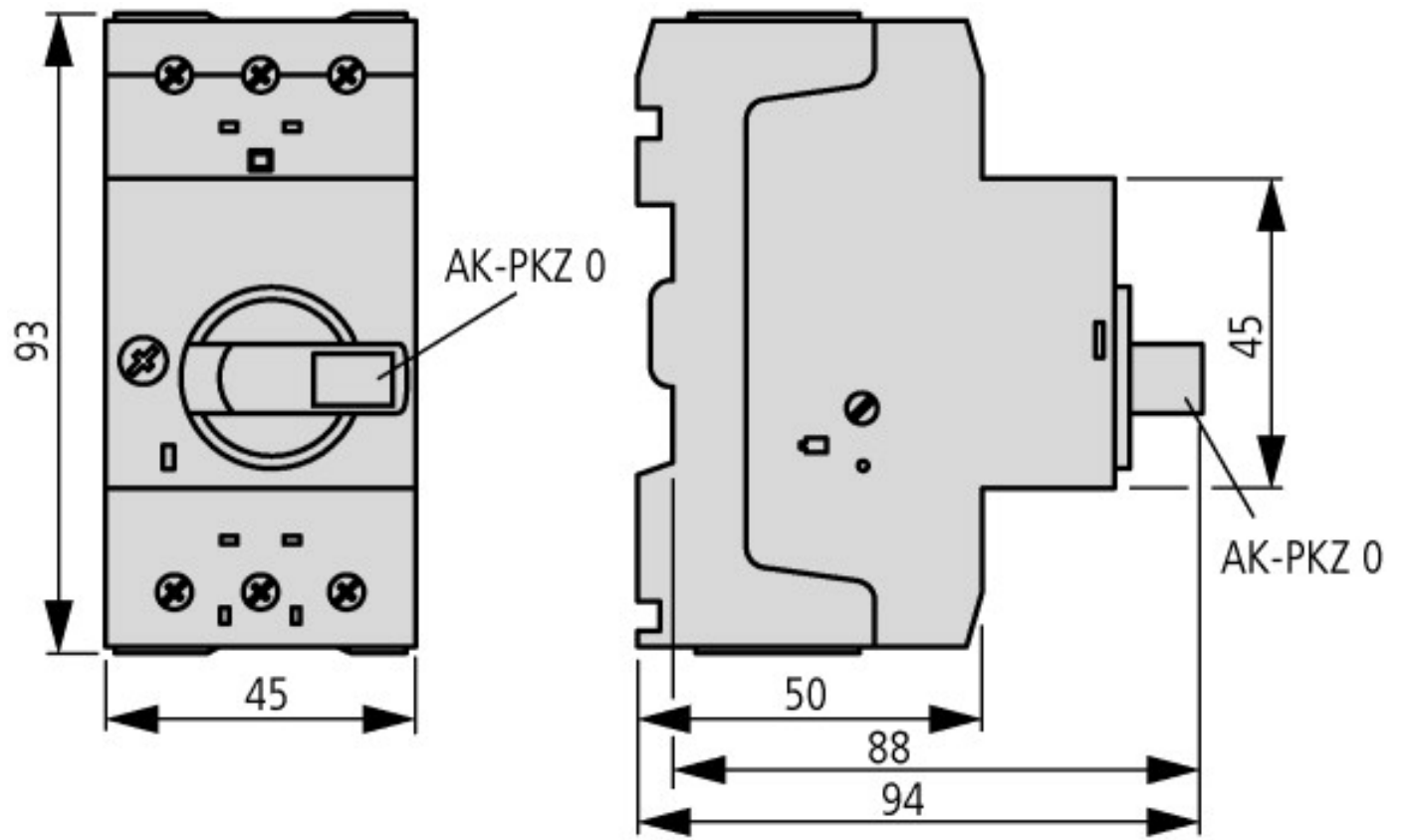


Motor-protective circuit-breaker tripping characteristic (high-capacity) compact starter, PKZM0-...T (not for PKM0-...), PKZM01

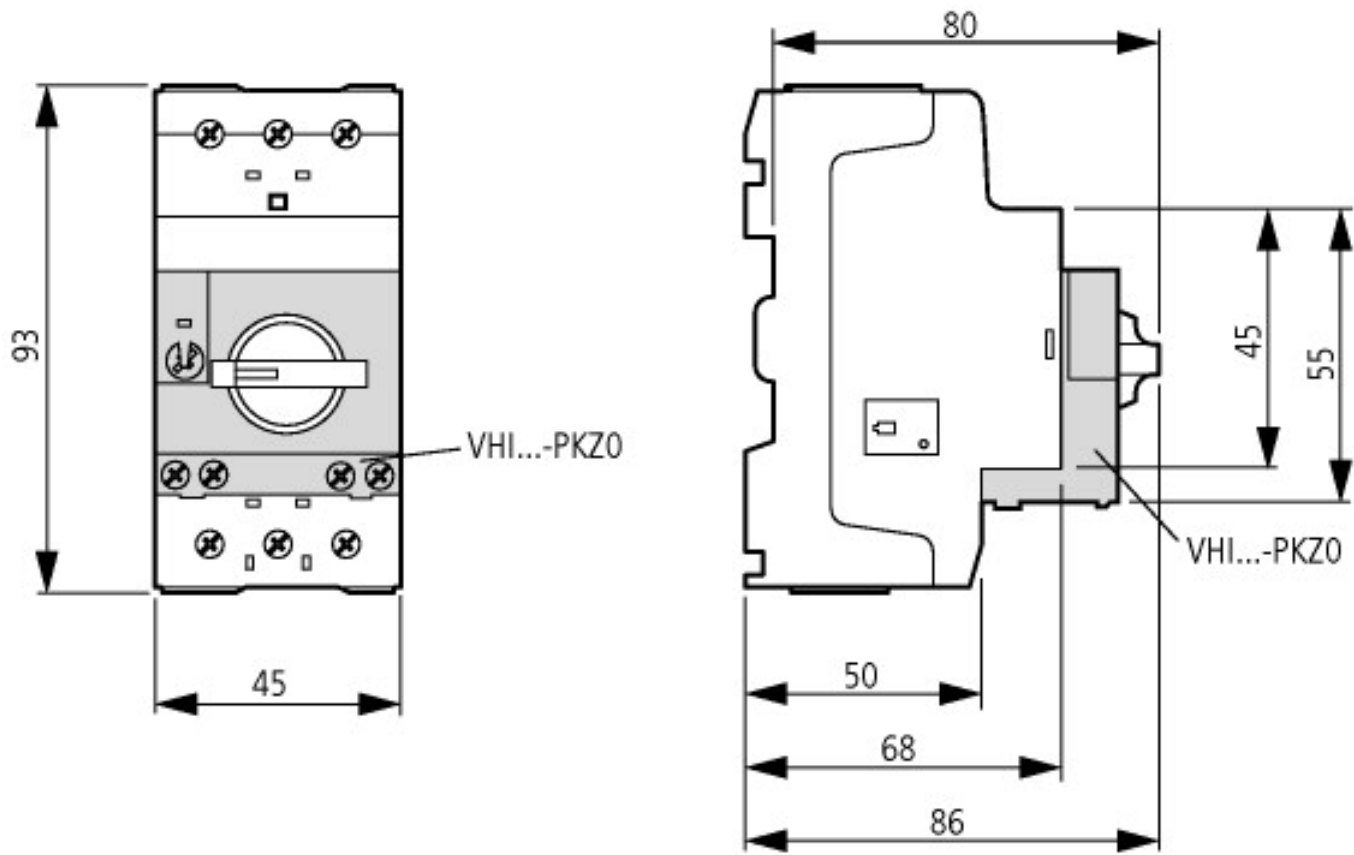
Dimensions



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-...-PKZO

- > Approved by UL 508/CSA C 22.2 No. 14 for use as a manual starter, tap conductor protector and type E self-protected combination motor controller
- > Suitable for use in group motor applications
- > Common accessories with PKZM01, PKZM0-T and PKZM4 series helps reduce inventories
- > Phase failure sensitive and ambient temperature compensated
- > Rotary handle operation



See Next Page for
UL/CSA Application
Ratings Guide

Rotary handle manual motor controller type PKZM0 (up to 32 Amps)

Rated Un-interrupted Current ① I_e [A]	Setting ①		Maximum Motor Rating								Catalog Number
	Overload Releases I_r [A]	Short-Circuit Releases I_{rm} [A]	Typical Single Phase [HP]			Typical Three Phase [HP]					
			115V	200V	240V	200V	240V	480V	600V		
0.16	0.1 – 0.16	2.2	<i>See note below</i>								PKZM0-0,16
0.25	0.16 – 0.25	3.5									PKZM0-0,25
0.4	0.25 – 0.4	5.6									PKZM0-0,4
0.63	0.4 – 0.63	8.8									PKZM0-0,63
1	0.63 – 1	14					1/2	1/2		PKZM0-1	
1.6	1 – 1.6	22			1/10		3/4	3/4		PKZM0-1,6	
2.5	1.6 – 2.5	35		1/8	1/8	1/2	1/2	1	1 1/2	PKZM0-2,5	
4	2.5 – 4	56	1/8	1/4	1/2	3/4	3/4	2	3	PKZM0-4	
6.3	4 – 6.3	88	1/4	1/2	1/2	1	1 1/2	3	5	PKZM0-6,3	
10	6.3 – 10	140	1/2	1	1 1/2	3	3	7 1/2	10	PKZM0-10	
12	8 – 12	168	1/2	1 1/2	2	3	3	7 1/2	10	PKZM0-12	
16	10 – 16	224	1	2	2	3	5	10	10	PKZM0-16	
20	16 – 20	280	1 1/2	3	3	5	5	10	15	PKZM0-20	
25	20 – 25	350	1 1/2	3	3	5	7 1/2	15	20	PKZM0-25	
32	25 – 32	448	2	3	5	7 1/2	10	20	25	PKZM0-32	

Horsepower ratings shown in the table are for reference only.

The final selection of the manual starter depends on the actual motor full load current and service factor on the motor nameplate. Overload should be set at motor FLA full load current and is calibrated to 1.15 S.F. Specified values to NEC table 430-150.

See page C12 for
larger manual
motor controllers

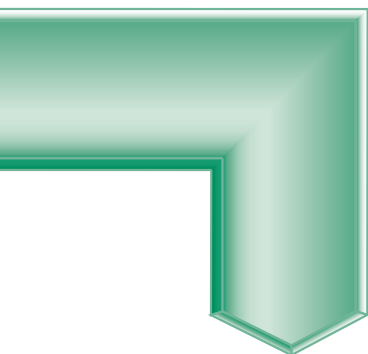


Ordering Instructions



- 1 Determine the motor FLA and Service Factor.
- 2 Use the application rating guide on next page.
- 3 Locate the desired manual motor controller.
- 4 See pages C14 – C27 for auxiliaries and accessories.

① All types have adjustable dial for setting motor full load current. Trip current is 125% of set value. For motors with a service factor (SF) of 1.0, set dial to 90% of motor full load current.



UL/CSA Application Ratings Guide for PKZM0

Maximum short circuit current RMS symmetrical [kA] when used as . . .

Catalog Number	Manual Motor Starter		Max. Fuse [A]	Max. Circuit Breaker [A]	Manual Controller in Group Installation ^①			Max. Fuse [A]	Max. Circuit Breaker [A]	Suitable for Tap Conductor Protection		Self-Protected Type E Manual Controller ^{②③}	
	480V	600V			480V	600V	600V +CL ^④			480Y/277V	600Y/347V	480Y/277V	600Y/347V
	PKZM0-0,16	5			5	1	15			50	50	–	600
PKZM0-0,25	5	5	1	15	50	50	–	600	600	42	65	42	65
PKZM0-0,4	5	5	1	15	50	50	–	600	600	42	65	42	65
PKZM0-0,63	5	5	1	15	50	50	–	600	600	42	65	42	65
PKZM0-1	5	5	3	15	50	50	–	600	600	42	65	42	65
PKZM0-1,6	5	5	6	15	50	50	–	600	600	42	65	42	65
PKZM0-2,5	5	5	10	15	50	50	–	600	600	42	65	42	65
PKZM0-4	5	5	15	15	50	50	–	600	600	42	65	42	65
PKZM0-6,3	5	5	25	25	50	50	–	600	600	42	65	42	65
PKZM0-10	5	5	40	40	50	22	50	150	125	42	65	42	65
PKZM0-12	5	5	4 x FLA	60	50	22	50	150	125	42	–	42	–
PKZM0-16	5	5	60	60	50	22	50	150	125	42	–	42	–
PKZM0-20	5	5	80	80	50	10	18	150	125	18	–	18	–
PKZM0-25	5	5	100	100	50	10	18	150	125	18	–	18	–
PKZM0-32	5	5	4 x FLA	100	50	10	18	150	125	18	–	18	–

^① CSA 22.2 No. 14 / UL 508 for group installation with short circuit protection.

^② In USA and Canada: Type E requires a line side connector feeder terminal (BK25/3-PKZ0-E see page C15). This terminal is not a requirement for tap conductor protection.

In Canada only: Type E also requires the handle to be padlockable (AK-PKZ0, SVB-PKZ0, or PKZ0-X(R)H see pages C15, C26).

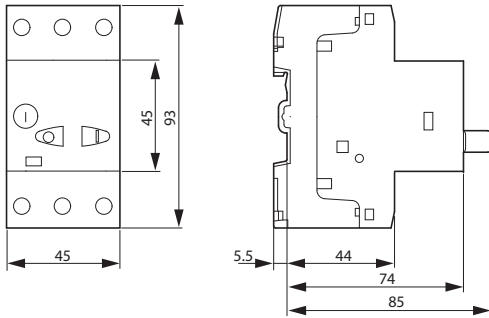
^③ According to UL 508, Part IV.

^④ CL = Current Limiter (CL-PKZ0 - see page C16) ratings apply to manual controller configuration only; cannot be combined with contactor.

Manual Motor Controller

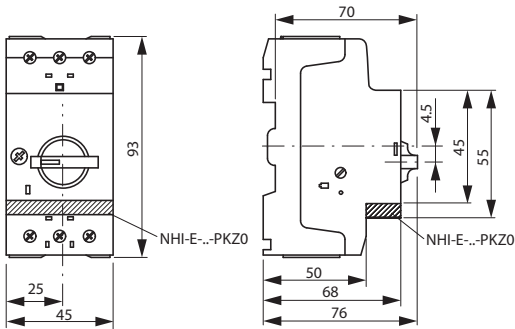
PKZM01...

Dimensions are in millimeters.
Not intended for manufacturing purposes.



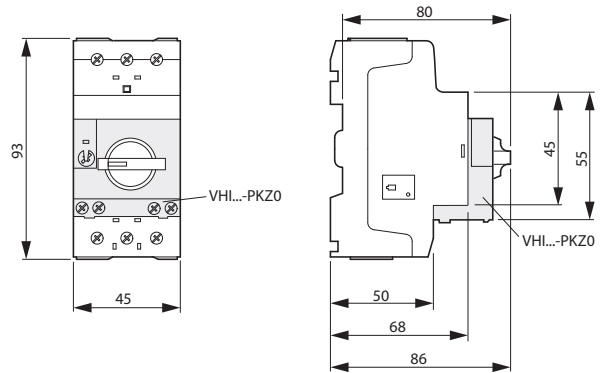
Manual Motor Controller

PKZM0...(-T) with Standard Auxiliary Contact NHI-E...-PKZ0



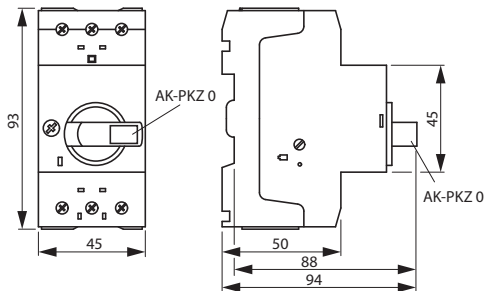
Manual Motor Controller

PKZM0...(-T) with Early-make Auxiliary Contact VHI...-PKZ0



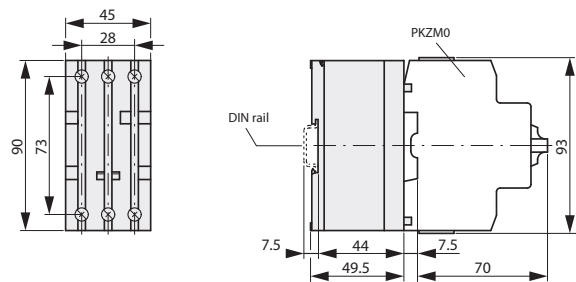
Manual Motor Controller

PKZM0...(-T) with Lockable Rotary Handle AK-PKZ0



Current Limiter

CL-PKZ0



Manual Motor Controllers