MOTOR PROTECTION,START.PKZM0

Part no. PKZM0-20

Article no. 046988

Powering Business Worldwide™

Delivery programme

Product range			PKZM0 motor protective circuit-breakers up to 32 A
Basic function			Motor protection
Connection technique			Screw terminals
Max. motor rating			
AC-3			
220 V 230 V 240 V			
220 V 230 V	P	kW	5.5
380 V 400 V 415 V			
380 V 400 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			
Overload releases	I_r	A	16 - 20
Short-circuit releases			
max.	I_{rm}	A	280

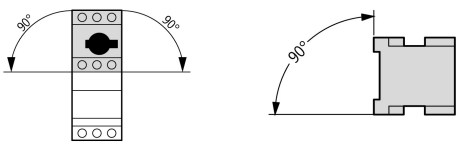
Notes
Phase failure sensitivity to IEC/EN 60947-4-1, VDE 0660 part 102.
Can be snap-fit to IEC/EN 60715 top-hat rail with 7.5 or 15 mm height

PTB 10 ATEX 3013, see manual

Approvals

Product Standards	UL 508; CSA-C22.2 No. 14; IEC60947-4-1; CE marking
UL File No.	E36332
UL CCN	NLRV
CSA File No.	12528
CSA Class No.	3211-05
NA Certification	UL listed, CSA certified
Specially designed for NA	No
Suitable for	Branch circuit: Manual type E if used with terminal, or suitable for group installations

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		°C	
Storage		°C	-40 - +80
Open		°C	- 25 - 55
Enclosed		°C	- 25 - 40
Mounting position			
Direction of incoming supply			as required
Degree of protection			

Device			IP20
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 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
Terminal capacity springloaded terminals			
Solid		mm^2	1 x (1…2.5) 2 x (1…2.5)
Flexible with ferrule to DIN 46228		mm^2	1 x (1…2.5) 2 x (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	f	Hz	40 - 60
Rated frequency		Hz	40 - 60
Current heat loss (3 pole at operating temperature)		W	6
Lifespan, mechanical	Operations	x 10^6	0.1
Lifespan, electrical (AC-3 at 400 V)	Operations	x 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	40
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)

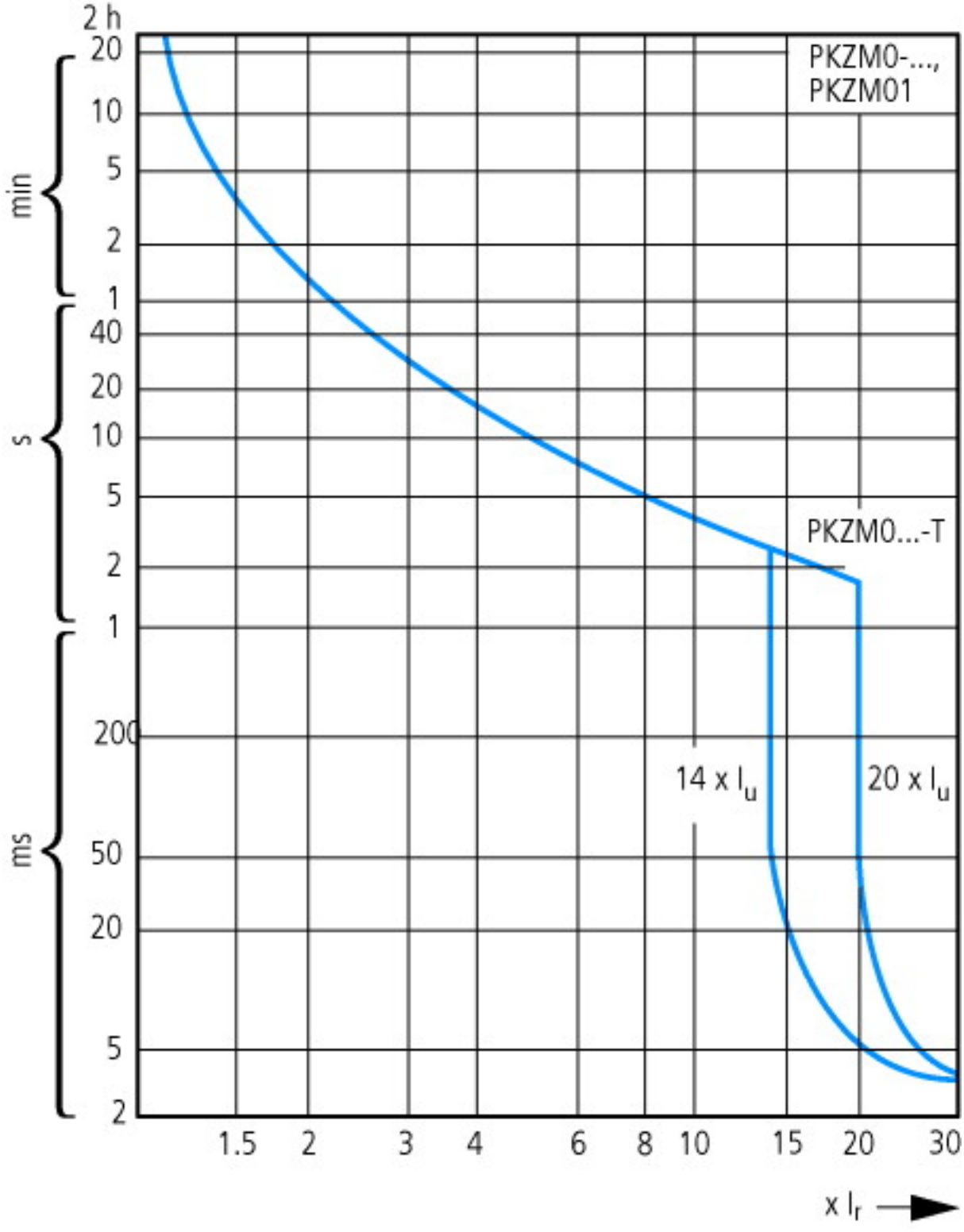
Trip blocks

Temperature compensation			
to IEC/EN 60947, VDE 0660		°C	- 5 … 40
Operating range		°C	- 25 … 55
Temperature compensation residual error for T > 40 °C			0.25%/K
Setting range of overload releases		x I_u	0.6 - 1
Short-circuit release fixed		x I_u	14
Fixed short-circuit release			Basic device 14 x I_u
Short-circuit release tolerance			± 20%
Phase-failure sensitivity			IEC/EN 60947-1-1, VDE 0660 Part 102

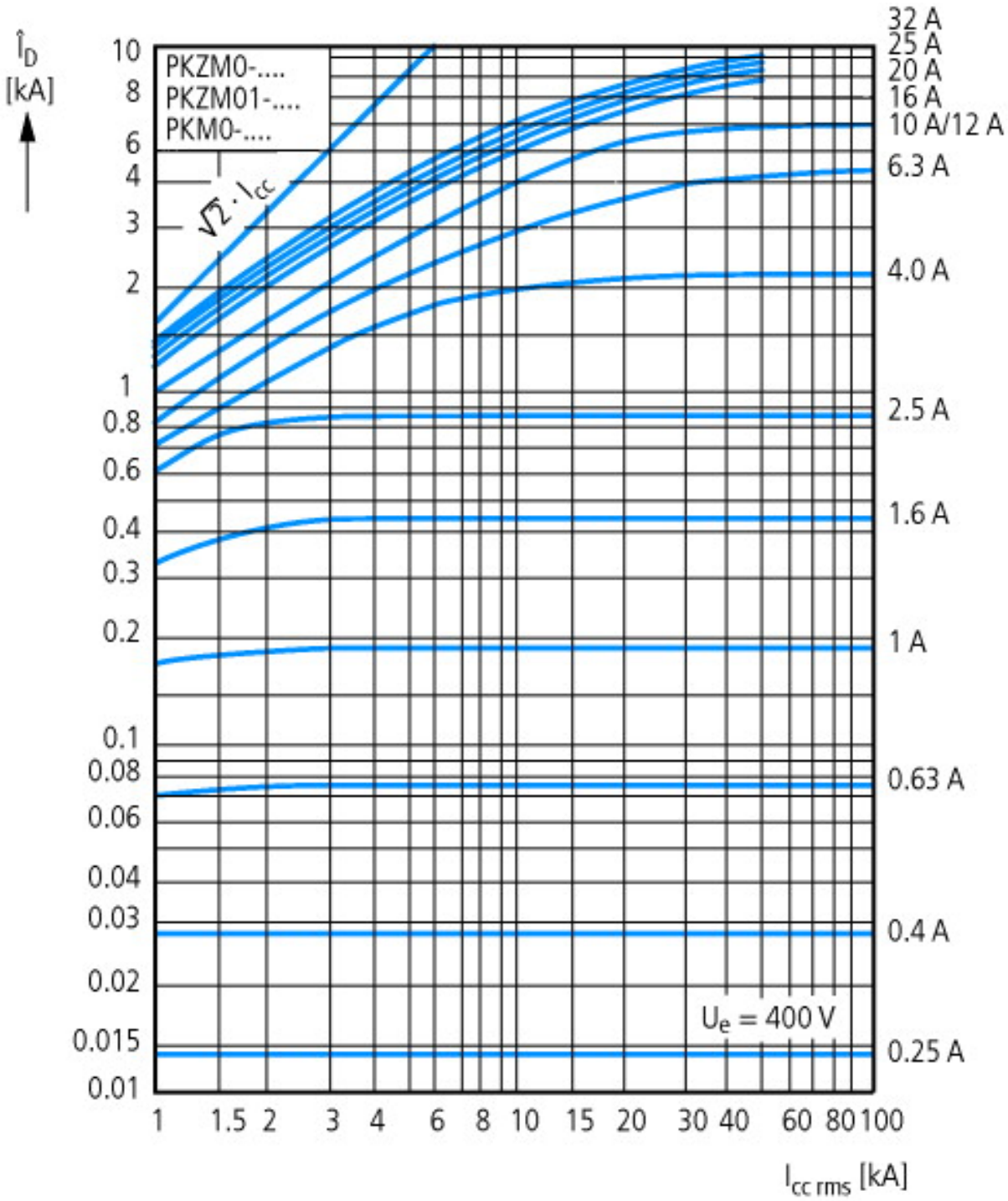
Technical data ETIM 4.0

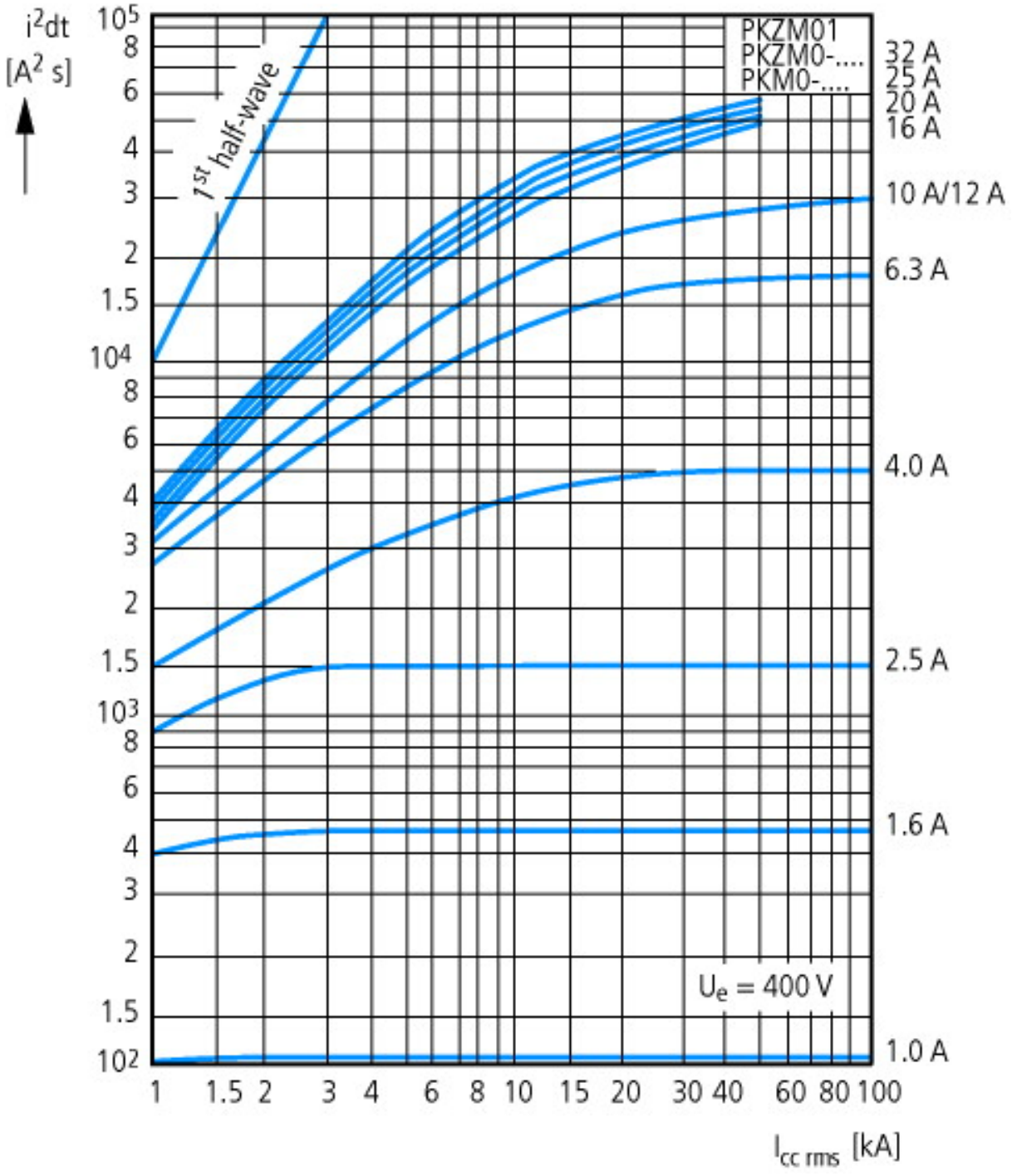
Rated operation power at AC-3, 400 V		kWh	9
With integrated auxiliary switch			No
Rated permanent current Iu		A	20
With integrated under voltage release			No
Number of poles			3
Degree of protection (IP)			IP20
Connection type main current circuit			Screw connection

Characteristics



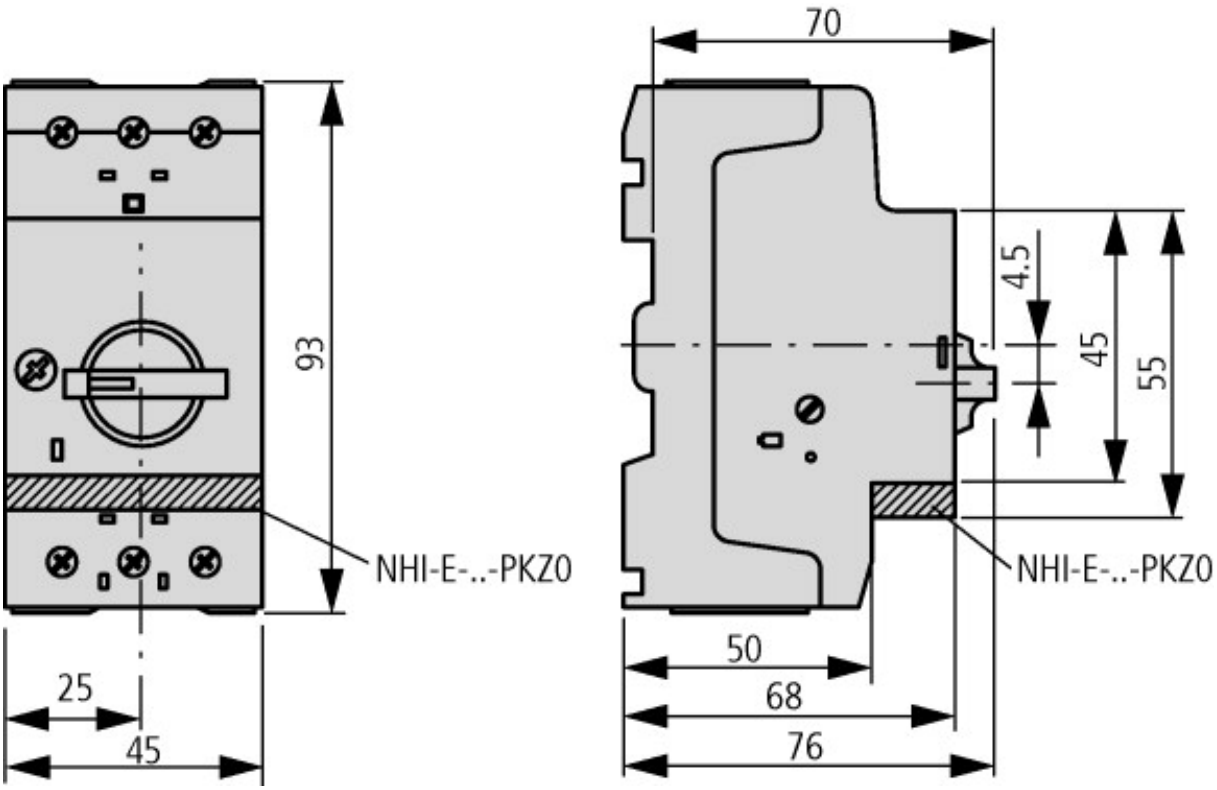
Motor-protective circuit-breaker tripping characteristic (high-capacity) compact starter, PKZM0-…T (not for PKM0-…), PKZM01


$\hat{I}_D$ [kA]
PKZM0-....
PKZM01-....
PKM0-....
$\sqrt{2} \cdot I_{cc}$
32 A
25 A
20 A
16 A
10 A/12 A
6.3 A
4.0 A
2.5 A
1.6 A
1 A
0.63 A
0.4 A
0.25 A
U_e = 400 V
10
8
6
4
3
2
1
0.8
0.6
0.4
0.3
0.2
0.1
0.08
0.06
0.04
0.03
0.02
0.015
0.01
1 1.5 2 3 4 6 8 10 15 20 30 40 60 80 100
$I_{cc\ rms}$ [kA]

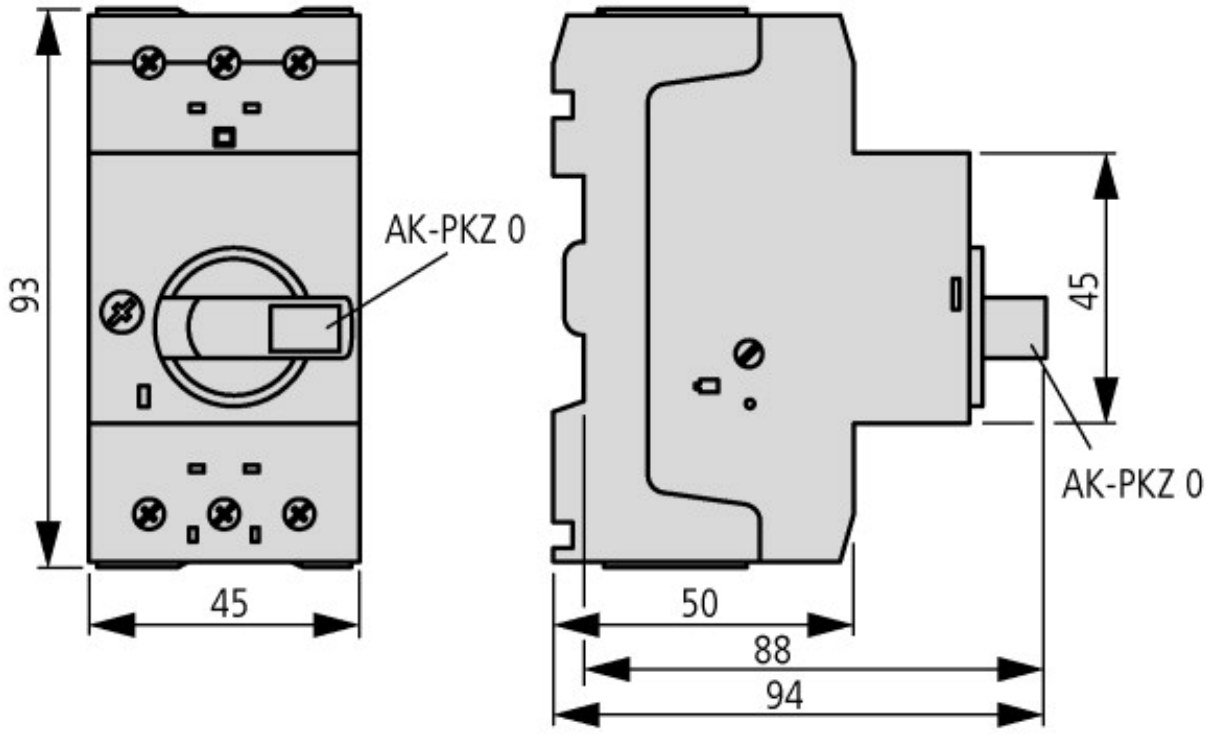


Let-through characteristics

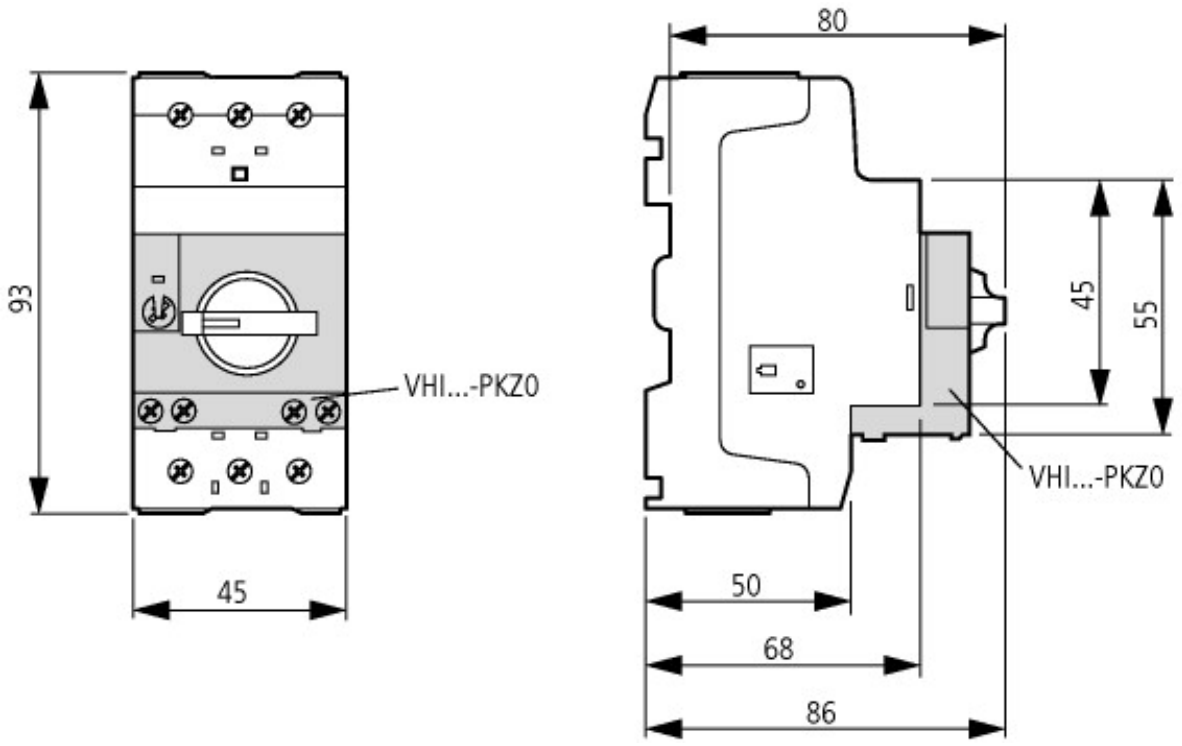
Dimensions



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/IL03407010Z2010_08.pdf
IL03407011Z (AWA1210-1925) Motor-protective circuit-breaker	
IL03407011Z (AWA1210-1925) Motor-protective circuit-breaker	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407011Z2010_08.pdf
MN03402003Z-DE/EN (AWB1210-1458) motor-protective circuit-breakers PKZM0, overload monitoring of Ex e motors	
MN03402003Z-DE/EN (AWB1210-1458) motor-protective circuit-breakers PKZM0, overload monitoring of Ex e motors - Deutsch / English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN03402003Z_DE_EN.pdf
Motor starters and "Special Purpose Ratings" for the North American market	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