DATASHEET - PKE-XTU-12



Trip block, 3-12A, standard, motor protection

Part no.	**PKE-XTU-12**
Catalog No.	**121725**
Alternate Catalog No.	**XTPEXT012B**
EL-Nummer (Norway)	**0004355184**

Powering Business Worldwide™

Delivery program

Product range			Accessories
Accessories			Trip blocks
Basic function			Motor protection Motor protection for heavy starting duty
			IE3
Notes			Also suitable for motors with efficiency class IE3. IE3-ready devices are identified by the logo on their packaging.
Setting range			
Overload releases			
Setting range of overload releases	I_r	A	3 - 12
Overload release, min.	I_r	A	3
Overload release, max.	I_r	A	12
Function			With overload release
Rated uninterrupted current = rated operational current	$I_u = I_e$	A	12
Motor rating			
AC-3			
220 V 230 V	P	kW	3
380 V 400 V	P	kW	5.5
440 V	P	kW	5.5
500 V	P	kW	5.5
660 V 690 V	P	kW	7.5
For use with			PKE12 basic device PKE32 basic device
Connection to SmartWire-DT			no

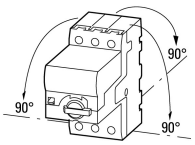
Motor output/rated motor current

Motor rating AC-3	Rated motor current 220 V 230 V 240 V	380 V 400 V 415 V	440 V	500 V	660 V 690 V
P	I	I	I	I	I
kW	A	A	A	A	A
0.75	3.2	-	-	-	-
1.1	4.6	-	-	-	-
1.5	6.3	3.6	3.3	-	-
2.2	8.7	5	4.6	4	-
3	11.5	6.6	6	5.3	3.8
4	-	8.5	7.7	6.8	4.9
5.5	-	11.3	10.2	9	6.5
7.5	-	-	-	-	8.8

Technical data

General

Standards			IEC/EN 60947, VDE 0660,UL, CSA
Climatic proofing			Damp heat, constant, to IEC 60068-2-78

			Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
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 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

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	12
Rated frequency	f	Hz	40 - 60
Max. operating frequency		Ops/h	60
Motor switching capacity			
AC-3 (up to 690V)		A	12
AC-4 cycle operation			
Minimum current flow times		ms	500 (Class 5) 700 (Class 10) 900 (Class 15) 1000 (Class 20)
Minimum cut-out periods		ms	500
Note		ms	In AC-4 cycle operation, going below the minimum current flow time can cause overheating of the load (motor). For all combinations with an SWD activation, you need not adhere to the minimum current flow times and minimum cut-out periods.

Trip blocks

Temperature compensation			
to IEC/EN 60947, VDE 0660		°C	- 5 … 40
Operating range		°C	- 25 … 55
Setting range of overload releases		x I_u	0.25 - 1
short-circuit release			Trip block, fixed: 15.5 x I_r delayed approx. 60 ms
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	12
Heat dissipation per pole, current-dependent	P_{vid}	W	0.3
Equipment heat dissipation, current-dependent	P_{vid}	W	0.9
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.

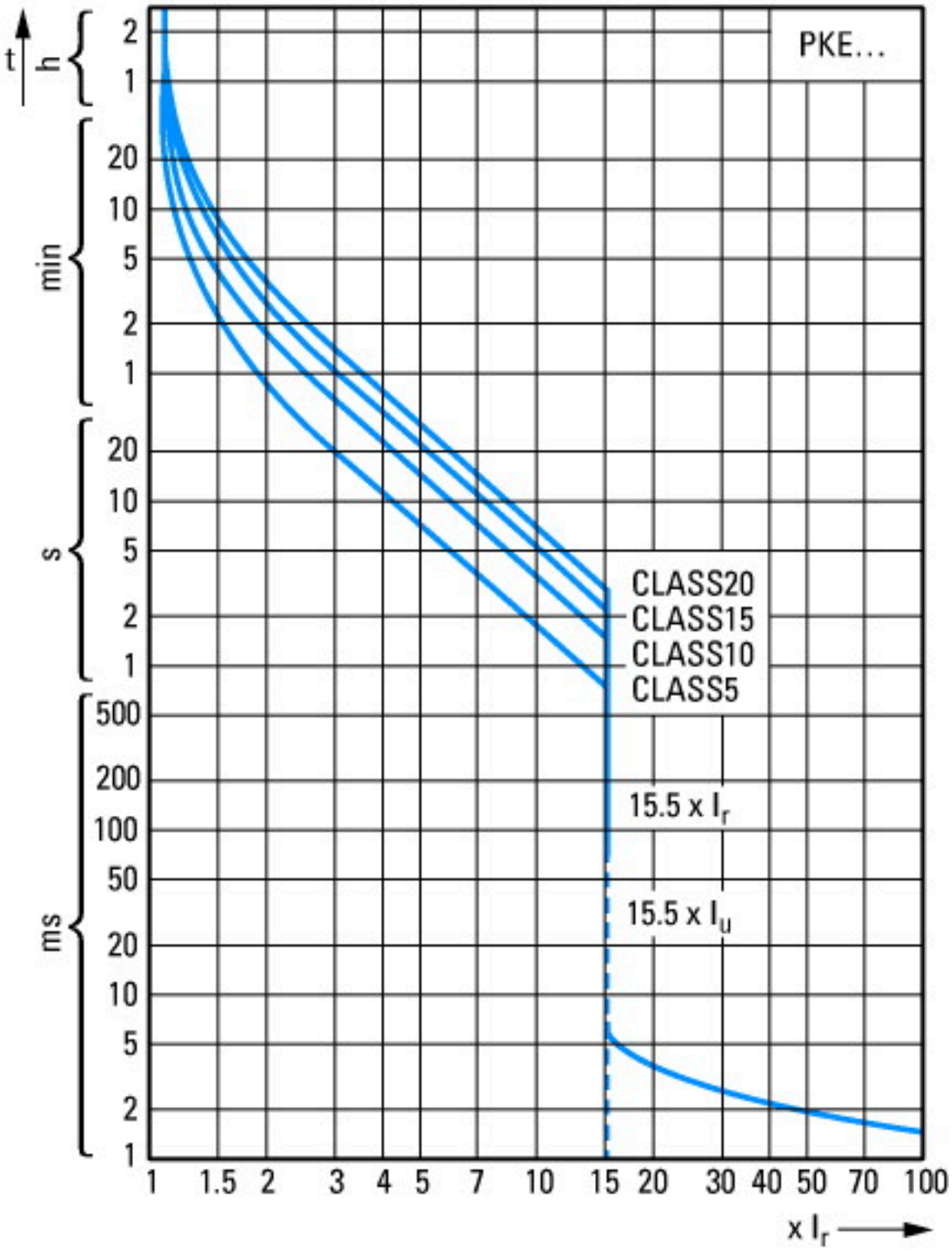
Technical data ETIM 7.0

Low-voltage industrial components (EG000017) / Tripping bloc for power circuit-breaker (EC000617)		
Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Releasing block for circuit breakers (ecl@ss10.0.1-27-37-04-10 [AKF008013])		
Overload release current setting	A	3 - 12
Initial value of the undelayed short-circuit release - setting range	A	46.5
End value adjustment range undelayed short-circuit release	A	186
Rated permanent current Iu	A	12
Voltage type for actuating		Self powered
Rated control supply voltage Us at AC 50HZ	V	0 - 0
Rated control supply voltage Us at AC 60HZ	V	0 - 0
Rated control supply voltage Us at DC	V	0 - 0
Number of poles		3
Short-circuit release function		Delayed
With ground fault protection function		No
Type of motor protection		Electronic release

Approvals

Product Standards		UL 508; CSA-C22.2 No. 14-10; IEC60947-4-1; CE marking
UL File No.		E36332
UL Category Control No.		NLRV
CSA File No.		165628
CSA Class No.		3211-05
North America Certification		UL listed, CSA certified
Specially designed for North America		No

Characteristics



Tripping characteristics

Assets (links)

Declaration of CE Conformity

00002851

Instruction Leaflets

IL034011ZU2018_03

Manuals

MN03402004Z_DE_EN (German)
MN03402004Z_DE_EN (English)

Additional product information (links)

IL034011ZU Trip block for solid-state motor-protective circuit-breaker PKE12, PKE32	
IL034011ZU Trip block for solid-state motor-protective circuit-breaker PKE12, PKE32	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL034011ZU2018_03.pdf

MN03402004Z PKE12, PKE32 and PKE65 motor-protective circuit-breakers; overload monitoring of Ex e motors	
MN03402004Z PKE12, PKE32 and PKE65 motor-protective circuit-breakers; overload monitoring of Ex e motors - Deutsch / English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN03402004Z_DE_EN.pdf
Motor starters and "Special Purpose Ratings" for the North American market	http://www.eaton.eu/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_3258146.pdf
Busbar Component Adapters for modern Industrial control panels	http://www.moeller.net/binary/ver_techpapers/ver960en.pdf

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