DATASHEET - PKE-XTU-1,2



Trip block, 0.3 - 1.2 A, Motor protection, Connection to SmartWire-DT: no, For use with: PKE12 basic device



Part no. PKE-XTU-1,2 Catalog No. 121723 Alternate Catalog XTPEXT1P2B

No.

EL-Nummer 0004315135

(Norway)

Delivery program

Delivery p	rogram							
Product range					Accessories			
Accessories					Trip blocks			
Basic function					Motor protection Motor protection for heavy s	starting duty		
						IE3 🗸		
Notes						Also suitable for motors with IE3-ready devices are identi		ir packaging.
Setting range)							
Overload rele	ases							
中								
Setting ra	nge of overload r	eleases		I _r	Α	0.3 - 1.2		
早								
Overload	release, min.			I _r	Α	0.3		
Overload release, max.			I _r	Α	1.2			
Function						With overload release		
Rated uninterrup	ted current = rate	ed operational current		$I_u = I_e$	Α	1.2		
Motor rating								
AC-3								
220 V 230	V			P	kW	0.18		
380 V 400	V			P	kW	0.37		
440 V				P	kW	0.37		
500 V				P	kW	0.37		
660 V 690	V			P	kW	0.75		
For use with						PKE12 basic device		
Connection to Sn						no		
Motor output/rat Motor rating		Rated motor current						
	AC-3	220 V	380 V		44	10 V	500 V	660 V
		230 V	400 V					690 V
		240 V	415 V					
P kW		I A	I A		I A		I A	I A
0.06		0.37	-		-		-	-
0.09		0.54	0.31		-	07	-	-
0.12 0.18		0.72 1.04	0.41 0.6		0.0 0.1	3 <i>1</i> 54	0.33 0.48	- 0.35
0.25		-	0.8		0.7	76	0.7	0.5
0.37		-	1.1		1.0	02	0.9	0.7
0.55 0.75		-	-		-		-	0.9 1.1
0.73			-		-		-	1.1

Technical data

General

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

Startange				
Startange				Damp heat, cyclic, to IEC 60068-2-30
	Ambient temperature			
Enclosed Mounting position Direction of incoming supply Degree of principles Degree	Storage		°C	- 40 - 80
Mounting position Deriction of incoming supply Degree of protection Device Terminations Protection against direct contact when actuated from front [EN 50274) Mochanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-277 Mochanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-278 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-279 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-279 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-279 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-279 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-279 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-279 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-279 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-279 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-279 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-279 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-279 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-279 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-279 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-270 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-270 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-270 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-270 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-270 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-270 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-270 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-270 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 60088-270 We chanced shock resistance half-sinusoidal shock 10 ms to IEC 6008-2008-200 We chanced shock resistance	Open		°C	-25 - +55
Direction of incoming supply Degree of protection Device Device Provection against direct contact when actuated from front [EN 50274) Mechanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Mechanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-77 Methanical shock resistance half	Enclosed		°C	- 25 - 40
Degree of protection Device Termination Termination Mechanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-27 Altitude Mechanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-27 Altitude Mechanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2-27 Altitude Wain coducting paths Rated impulses withstand voltage Worvoltage category/pollution degree Rated operational voltage Worvoltage category/pollution degree Rated operational voltage Rated operational voltage Rated forequency Molar carrier rated operational current Rated frequency Rated particles generated and retail with a fact of the f	Mounting position			
P20	Direction of incoming supply			as required
Protection against direct contact when actuated from front (EN 50274) Mechanical shock resistance half-sinusoidal shock 10 ms to IEC 60088-2 277 Altitude m Max. 2000 m Max. 2000 Max.	Degree of protection			
Protection against direct contact when actuated from front (EN 50274) Mechanical shock resistance half-sinusoidal shock 10 ms to IEC 80088-2-277 Medican Conducting paths Rated impulse withstand voltage Overvoltage category/pollution degree Rated operational voltage Act operating frequency Max. operating frequency Act operation going below the minimum current flow time can cause over the entire frequency Act operating frequency Act ope	Device			IP20
Mechanical shock resistance half-sinusoidal shock 10 ms to IEC 60068-2-27 Altitude Main conducting paths Rated impulse withstand voltage Novervoltage category/pollution degree Rated uninterrupted current = rated operational current Lu=10 A 12 Rated frequency Most. operating frequency AC-3 (up to 580V) AC-3 (up to 580V) AC-4 (vcle operation Minimum current flow times Minimum current flow times Minimum current flow times Minimum current flow times Note In Discrepancy Minimum current flow times In Discrepancy 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 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 current flow time can cause the flow of	Terminations			IP00
Abitude m Max. 2000 Main conducting paths VAC 6000 Rated inpulse withstand voltage VImp VAC 6000 Overvoltage category/pollution degree III/3 III/3 Rated operational voltage Ve VAC 6900 Rated operational voltage Je VAC 6900 Rated operational voltage Je VAC 6900 Rated operation for upon control of proper train proper tra	Protection against direct contact when actuated from front (EN 50274)			Finger and back-of-hand proof
Main conducting paths Vac 6000 Bated impulse withstand voltage Uimp VAC 6000 Divervoltage category/pollution degree III/3 III/3 Bated or perational voltage Ue VAC 690 Bated defrequency f Hz 40 - 60 Max. operating frequency f Hz 40 - 60 Motor switching capacity - - - AC-3 (up to 690V) A 1 2 AC-4 cycle operation ms 500 (Class 10) Minimum current flow times ms 500 (Class 10) Minimum cut-out periods ms 500 (Class 10) Note ms 500 (Class 10) Minimum current flow time carcause overheating of the load (motor). For all combinations with an SVVD activation, you need not adhere to the minimum current flow times and minimum current flow	Mechanical shock resistance half-sinusoidal shock 10 ms to IEC 60068-2-27		g	25
Rated impulse withstand voltage Overvoltage category/pollution degree Rated operational voltage Rated operational voltage Rated uninterrupted current = rated operational current I u = I e Rated frequency I u = I e Rated frequency I e I e I e I e I e I e I e I e I e I e	Altitude		m	Max. 2000
Overvoltage category/pollution degree III/3 Rated operational voltage Ue V AC 690 Rated uninterrupted current = rated operational current Iu = Ie A 1.2 Rated frequency f Hz 40 - 60 Mox. operating frequency Ops/h 60 Motor switching capacity T A 1.2 AC-3 (up to 690V) A 1.2 AC-4 cycle operation F A 1.2 Minimum current flow times S 500 (Class 5) 700 (Class 10) 900 (Class 10) 900 (Class 20) Minimum cut-out periods ms 500 (Class 20) Note ms 500 (Class 20) In AC-4 cycle operation, going below the minimum current flow time can cause overheating of the load (motor). For all commands in the minimum current flow times and minimum cut-out periods. Temperature compensation to IEC/EN 60947, VDE 0660 "C" 5 40 Operating range "C" 25 55 Setting range of overload releases Trip block, fixed: 15.5 x I _t delayed approx. 60 ms	Main conducting paths			
Rated operational voltage	Rated impulse withstand voltage	U_{imp}	V AC	6000
Rated uninterrupted current = rated operational current I	Overvoltage category/pollution degree			III/3
Rated frequency Max. operating frequency Motor switching capacity AC-3 (up to 690V) AC-4 cycle operation Minimum current flow times Minimum current flow times Minimum cut-out periods Note ms So0 (Class 5) 700 (Class 10) 900 (Class 15) 100 (Class 20) Minimum cut-out periods ms So0 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. Temperature compensation to IEC/EN 60947, VDE 0660 Operating range Setting range of overload releases Setting range of overload releases Setting range of overload releases A l 2 c - 25 55 Setting range of overload releases A l Trip block, fixed: 15.5 x l delayed approx. 60 ms	Rated operational voltage	U _e	V AC	690
Max. operating frequency Motor switching capacity AC-3 (up to 890V) AC-4 cycle operation Minimum current flow times Minimum current flow times Minimum cut-out periods Minimum cut-out periods Motor	Rated uninterrupted current = rated operational current	$I_u = I_e$	Α	1.2
Motor switching capacity AC-3 (up to 690V) AC-4 cycle operation Minimum current flow times Minimum current flow times Minimum cut-out periods Minimum cut-out periods Note Mose Note Trip blocks Temperature compensation to IEC/EN 60947, VDE 0660 Operating range Setting range of overload releases short-circuit release Minimum current flow times A	Rated frequency	f	Hz	40 - 60
AC-3 (up to 690V) AC-4 cycle operation Minimum current flow times Minimum current flow times Minimum cut-out periods Minimum cut-out periods Mote Ms 500 (Class 15) 1000 (Class 10) 900 (Class 15) 1000 (Class 20) Ms 500 Ms 500 Ms 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 -5 40 Setting range of overload releases Setting range of overload releases Setting range of overload releases Trip block, fixed: 15.5 x I _r delayed approx. 60 ms	Max. operating frequency		Ops/h	60
AC-4 cycle operation Minimum current flow times Minimum current flow times Minimum cut-out periods Minimum cut-out periods Mote Minimum cut-out periods Minimum cut-	Motor switching capacity			
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 500 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. Frip 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	AC-3 (up to 690V)		Α	1.2
Minimum cut-out periods Mote	AC-4 cycle operation			
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. 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 Trip block, fixed: 15.5 x I _r delayed approx. 60 ms	Minimum current flow times		ms	700 (Class 10) 900 (Class 15)
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. 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 Trip block, fixed: 15.5 x I _r delayed approx. 60 ms	Minimum cut-out periods		ms	500
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 Trip block, fixed: 15.5 x I _r delayed approx. 60 ms	Note		ms	overheating of the load (motor). For all combinations with an SWD activation, you need not adhere to the minimum
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 Trip block, fixed: 15.5 x I _r delayed approx. 60 ms	Trip blocks			
Operating range °C - 25 55 Setting range of overload releases x I _u 0.25 - 1 Trip block, fixed: 15.5 x I _r delayed approx. 60 ms	Temperature compensation			
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	to IEC/EN 60947, VDE 0660		°C	- 5 40
short-circuit release Trip block, fixed: 15.5 x I _r delayed approx. 60 ms	Operating range		°C	- 25 55
delayed approx. 60 ms	Setting range of overload releases		x I _u	0.25 - 1
Short-circuit release tolerance ± 20%	short-circuit release			· · · · · · · · · · · · · · · · · · ·
	Short-circuit release tolerance			± 20%

Design verification as per IEC/EN 61439

Phase-failure sensitivity

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	1.2
Heat dissipation per pole, current-dependent	P_{vid}	W	0.1
Equipment heat dissipation, current-dependent	P_{vid}	W	0.3
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.

IEC/EN 60947-4-1, VDE 0660 Part 102

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)

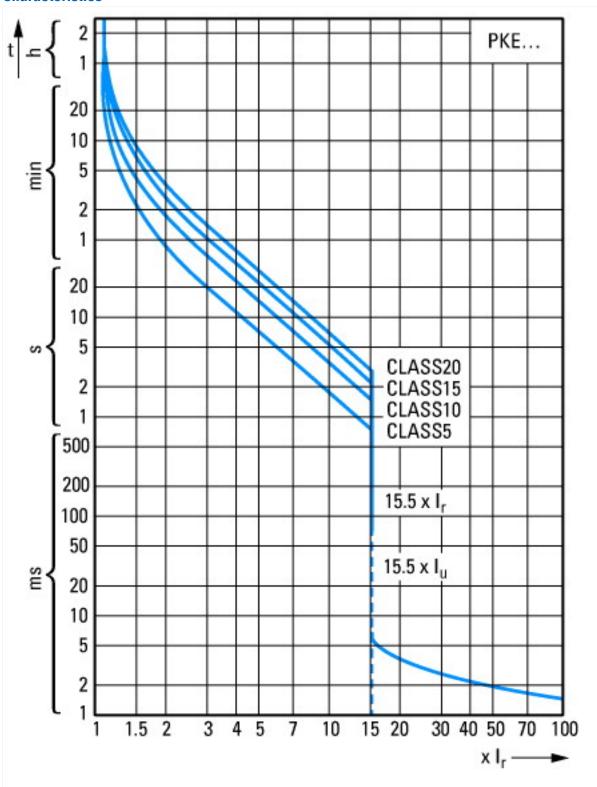
Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Releasing block for circuit breakers (ecl@ss10.0.1-27-37-04-10 [AKF008013])

Overload release current setting	А	١	0.3 - 1.2
Initial value of the undelayed short-circuit release - setting range	А	١	4.65
End value adjustment range undelayed short-circuit release	А	١	18.6
Rated permanent current lu	А	١.	1.2
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

Additional product information (links)

IL034011ZU Trip block for solid-state motor-protective circuit-breaker PKE12, PKE32

IL034011ZU Trip block for solid-state motorprotective 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

 $http://www.moeller.net/binary/ver_techpapers/ver960en.pdf\\$