



Motor-protective circuit-breaker, 660 V 690 V: 4 kW, I_r= 4 - 6.3 A, IP20



Part no. PKZM01-6,3-G
Catalog No. 286086
Alternate Catalog No. XTPB6P3BC1ENC565

Delivery program

Product range				PKZM01 motor protective circuit-breakers up to 25 A with pushbutton actuation
Basic function				Motor protection with operating membrane
Notes				Also suitable for motors with efficiency class IE3.
Connection technique				Screw terminals
Contact sequence				
Max. motor rating				
AC-3				
220 V 230 V 240 V	P	kW		1.1
380 V 400 V 415 V	P	kW		2.2
440 V	P	kW		3
500 V	P	kW		3
660 V 690 V	P	kW		4
Rated uninterrupted current	I _u	A		6.3
Setting range				
Overload releases	I _r	A		4 - 6.3
short-circuit release				
max.	I _{rm}	A		97.7
Phase-failure sensitivity				IEC/EN 60947-4-1, VDE 0660 Part 102
Notes Overload trigger: tripping class 10 A 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
Ambient temperature				
Storage		°C		- 40 - 80
Enclosed		°C		- 25 - 40
Direction of incoming supply				as required
Degree of protection				
Device				IP20
Enclosures				IP65
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

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	6.3
Rated frequency	f	Hz	40 - 60
Current heat loss (3 pole at operating temperature)		W	5.68
Impedance per pole		mΩ	46
Lifespan, mechanical	Operations	x 10 ⁶	0.05
Lifespan, electrical (AC-3 at 400 V)			
Lifespan, electrical	Operations	x 10 ⁶	0.05
Max. operating frequency		Ops/h	25
Short-circuit rating			
DC			
Short-circuit rating		kA	60
Notes			up to 250 V
Motor switching capacity			
AC-3 (up to 690V)		A	6.3
DC-5 (up to 250V)		A	6.3 (3 contacts in series)

Trip blocks

Setting range of overload releases		x I _u	0.6 - 1
short-circuit release			Basic device, fixed: 15.5 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	6.3
Heat dissipation per pole, current-dependent	P _{vid}	W	1.89
Equipment heat dissipation, current-dependent	P _{vid}	W	5.68
Static heat dissipation, non-current-dependent	P _{vs}	W	0
Heat dissipation capacity	P _{diss}	W	0
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.

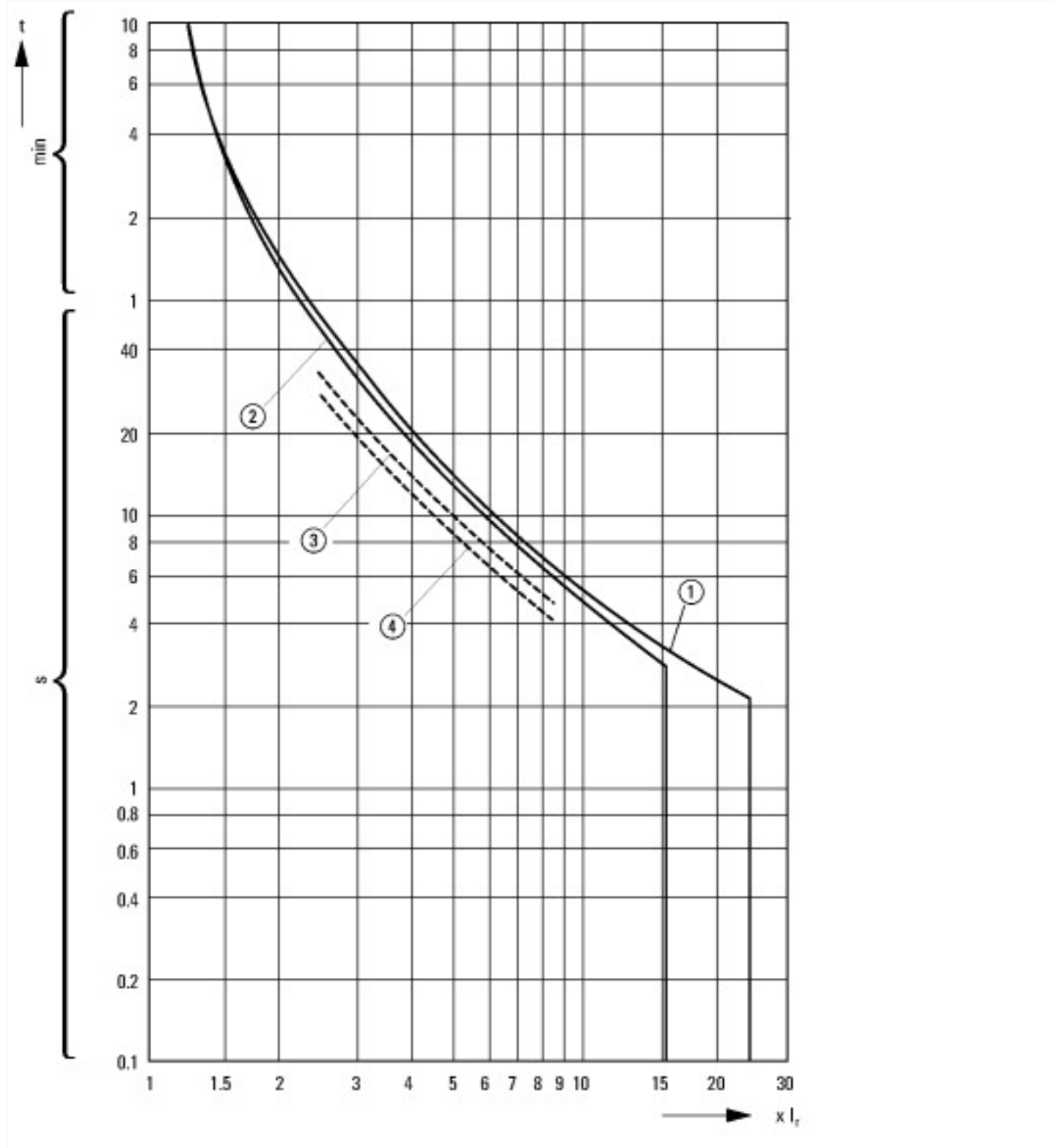
Technical data ETIM 7.0

Low-voltage industrial components (EG000017) / Motor protection circuit-breaker (EC000074)		
Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Motor protection circuit-breaker (ecl@ss10.0.1-27-37-04-01 [AGZ529016])		
Overload release current setting	A	4 - 6.3
Adjustment range undelayed short-circuit release	A	98 - 98
With thermal protection		Yes
Phase failure sensitive		Yes
Switch off technique		Thermomagnetic
Rated operating voltage	V	690 - 690
Rated permanent current I _u	A	6.3
Rated operation power at AC-3, 230 V	kW	1.1
Rated operation power at AC-3, 400 V	kW	2.2
Type of electrical connection of main circuit		Screw connection
Type of control element		Push button
Device construction		Complete device in housing
With integrated auxiliary switch		No
With integrated under voltage release		No
Number of poles		3
Rated short-circuit breaking capacity I _{cu} at 400 V, AC	kA	50
Degree of protection (IP)		IP65
Height	mm	158
Width	mm	80
Depth	mm	117

Approvals

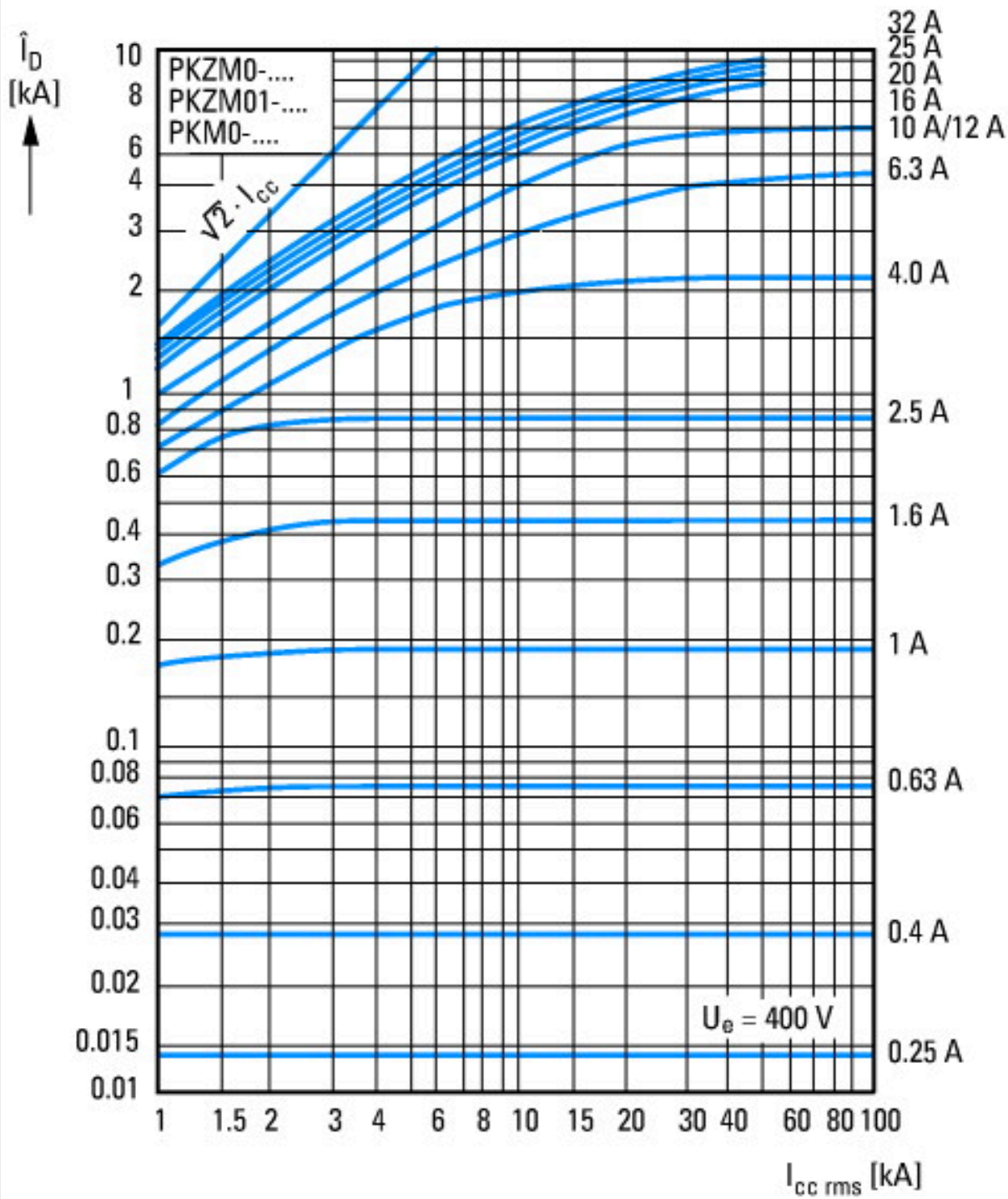
Specially designed for North America		No
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Characteristics

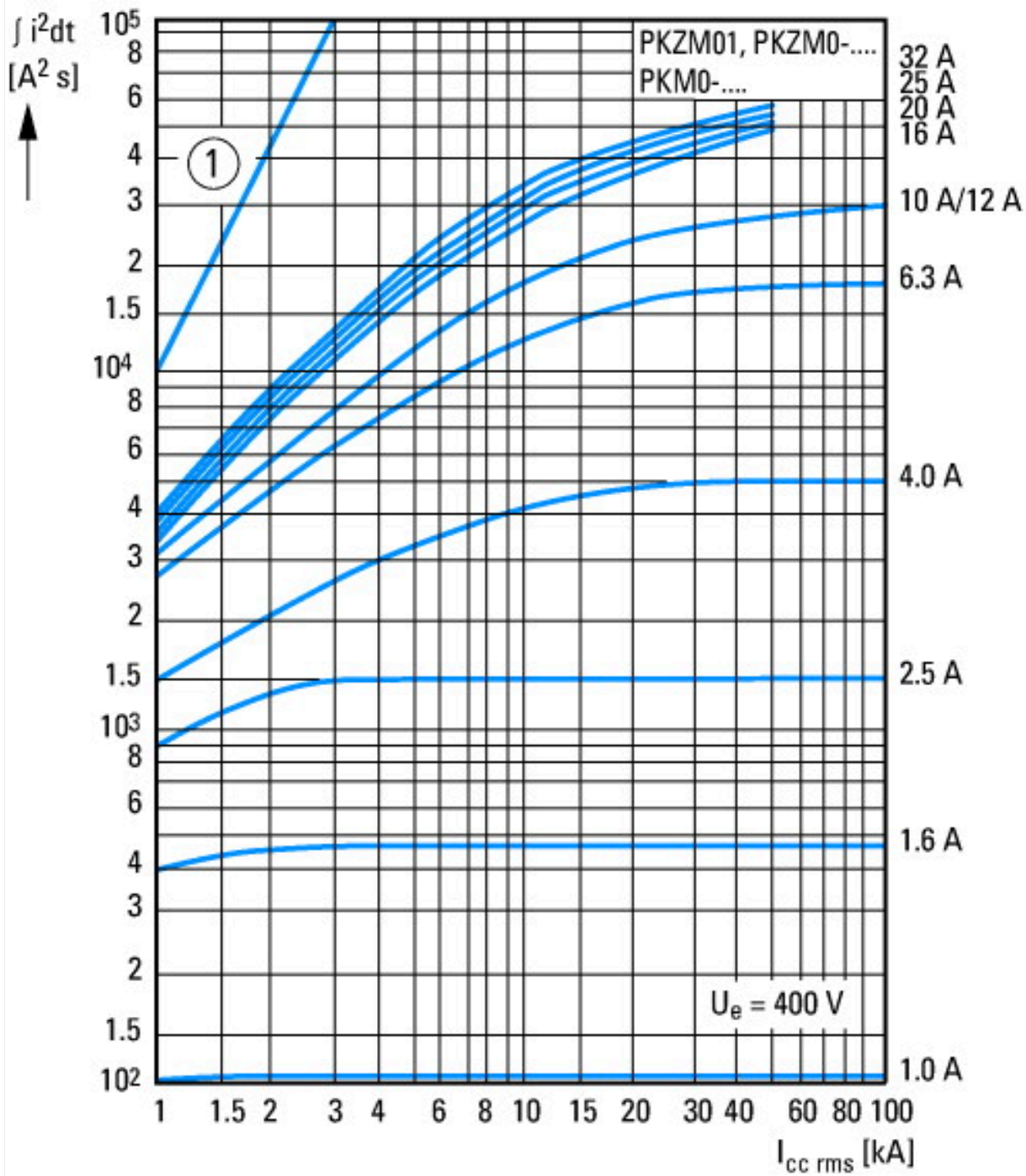


Tripping characteristics motor circuit breaker PKZM0-..., PKZM01

- 1: Minimum level, 3-phase
- 2: Maximum level, 3-phase
- 3: Minimum marker, 2-phase
- 4: Highest marker, 2-phase

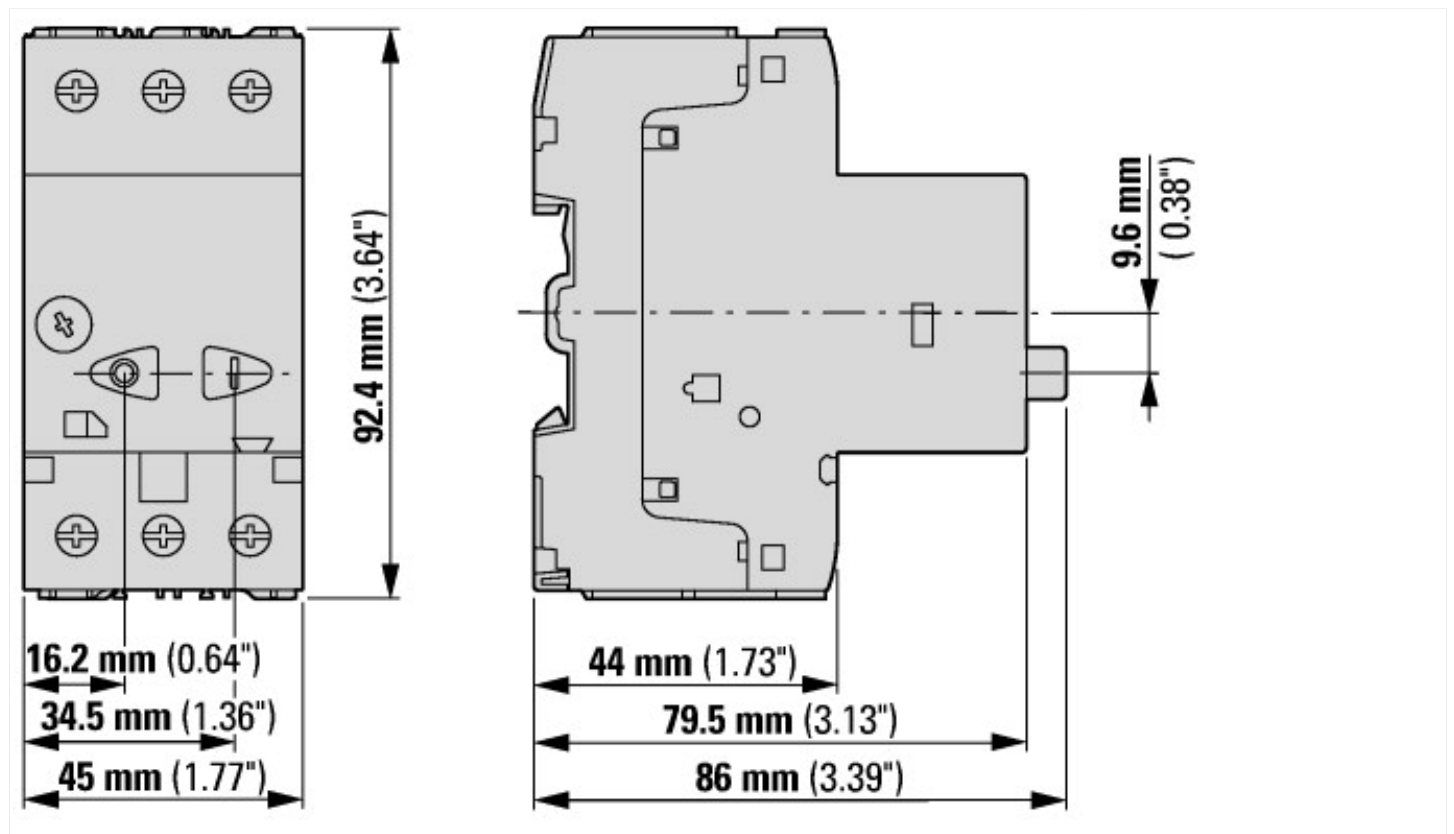


Let-through current



① 1 half-cycle
Let-through energy

Dimensions



Additional product information (links)

Schaltvermögen	https://de.ecat.eaton.com/flip-cat/?edition=MOTCONT1_DE#page_3/45
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