





## Motor-protective circuit-breaker, 3p, +control option 8-65A

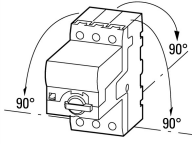
**Part no.** PKE65/XTU-65  
**Article no.** 138516  
**Catalog No.** XTPE065DCSNL

### Delivery program

Product range			PKE motor-protective circuit-breaker with electronic wide-range overload protection up to 65 A		
Basic function			Motor protection Motor protection for heavy starting duty		
Single unit/Complete unit			Complete device with standard knob		
					
Notes			Also suitable for motors with efficiency class IE3. IE3-ready devices are identified by the logo on their packaging.		
Setting range of overload releases	$I_r$	A	16 - 65		
					
Function			With overload release		
Rated uninterrupted current = rated operational current	$I_u = I_e$	A	65		
<b>Motor rating</b>					
AC-3					
220 V 230 V 240 V	P	kW	18.5		
380 V 400 V 415 V	P	kW	30		
440 V	P	kW	37		
500 V	P	kW	45		
660 V 690 V	P	kW	55		
Connection to SmartWire-DT			No		
Motor output/rated motor current					
Motor rating	Rated motor current				
	AC-3				
	220 V	380 V	440 V	500 V	660 V
	230 V	400 V			690 V
	240 V	415 V			
P	I	I	I	I	I
kW	A	A	A	A	A
5.5	19.6	-	-	-	-
7.5	26.4	-	-	-	-
11	38	21.7	19.7	17.4	-
15	51	29.3	26.6	23.4	17
18.5	63	36	32.9	28.9	20.9
22	-	41	37.4	33	23.8
30	-	55	50.3	44	32
37	-	-	61.4	54	39
45	-	-	-	65	47
55	-	-	-	-	58

### Technical data

<b>General</b>					
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					
Storage	θ	°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
Busbar tag shroud to EN 50274			Finger- and back-of-hand proof
Mechanical shock resistance half-sinusoidal shock 10 ms to IEC 60068-2-27		g	15
Altitude		m	Max. 2000
Terminal capacity screw terminals		mm <sup>2</sup>	
Solid		mm <sup>2</sup>	1 x (0.75 - 16) 2 x (0.75 - 16)
Flexible with ferrule to DIN 46228		mm <sup>2</sup>	1 x (0.75 - 35) 2 x (0.75 - 25)
Solid or stranded		AWG	14 - 2
Specified tightening torque for terminal screws			
Main cable		Nm	3.3
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	65
Rated frequency	f	Hz	40 - 60
Current heat loss (3 pole at operating temperature)		W	22 (with PKE65-XTU(A)-65)
Lifespan, mechanical	Operations	$\times 10^6$	0.05
Lifespan, electrical (AC-3 at 400 V)			
Lifespan, electrical	Operations	$\times 10^6$	0.05
Maximum operating frequency		Ops/h	
Max. operating frequency		Ops/h	60
Other technical data (sheet catalogue)			Switching capacity
Motor switching capacity		kA <sub>rms</sub>	
AC-3 (up to 690 V)		A	65

### Trip blocks

Temperature compensation		°C	-5 - +40 (to IEC/EN 60947, VDE 0660) -25 - +55 (operating range)
Temperature compensation residual error for T > 40 °C			±55 (Arbeitsbereich)
Setting range of overload releases			0.25 - 1 x $I_u$
short-circuit release			Basic device, fixed: 15.5 x $I_u$ Trip block, fixed: 15.5 x $I_r$ delayed approx. 60 ms
Short-circuit release tolerance			± 20%
Phase-failure sensitivity			yes

### Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	$I_n$	A	65
Heat dissipation per pole, current-dependent	$P_{vid}$	W	7.2
Equipment heat dissipation, current-dependent	$P_{vid}$	W	21.6
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.

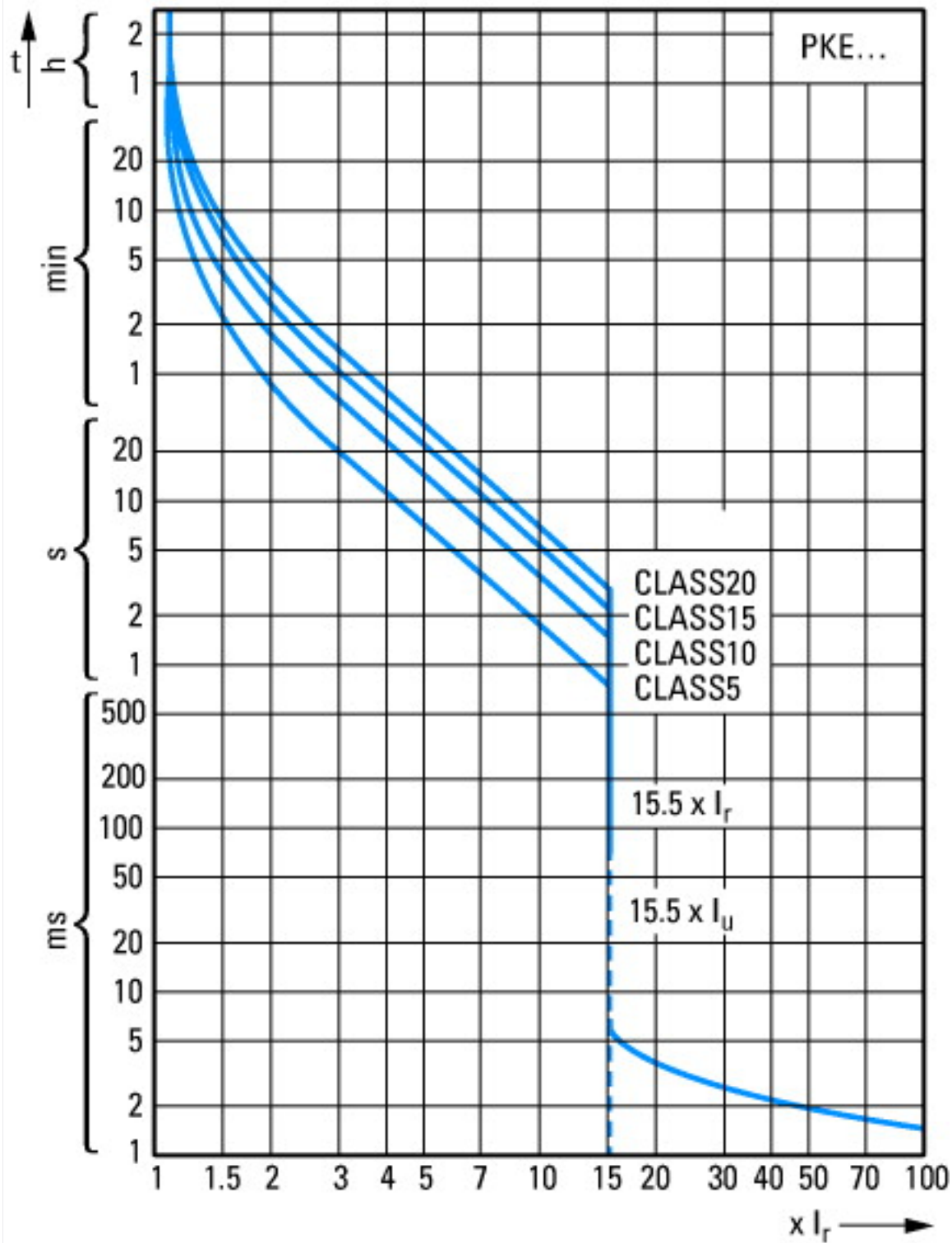
## Technical data ETIM 6.0

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@ss8.1-27-37-04-01 [AGZ529013])			
Overload release current setting	A		16 - 65
Adjustment range undelayed short-circuit release	A		1008 - 1008
Thermal protection			No
Phase failure sensitive			No
Switch off technique			Electronic
Rated operating voltage	V		690 - 690
Rated permanent current I <sub>u</sub>	A		65
Rated operation power at AC-3, 230 V	kW		18.5
Rated operation power at AC-3, 400 V	kW		30
Type of electrical connection of main circuit			Screw connection
Type of control element			Turn button
Device construction			Built-in device fixed built-in technique
With integrated auxiliary switch			No
With integrated under voltage release			No
Number of poles			3
Rated short-circuit breaking capacity I <sub>cu</sub> at 400 V, AC	kA		0
Degree of protection (IP)			IP20
Height	mm		162
Width	mm		55
Depth	mm		187

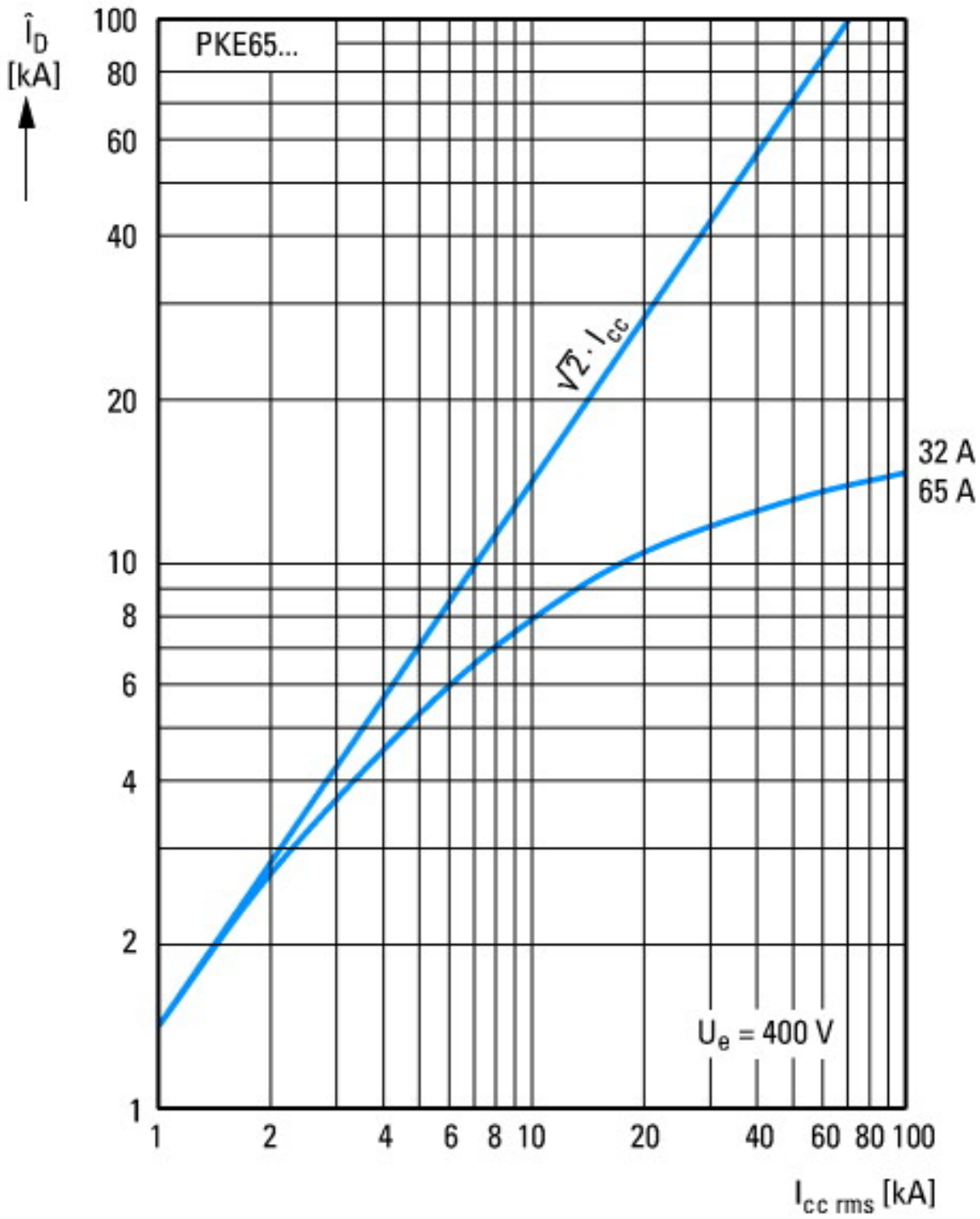
## Approvals

Product Standards			UL508; CSA-C22.2 No.14-10; IEC60947-4-1; CE marking
UL File No.			E36332
UL Category Control No.			NLRV

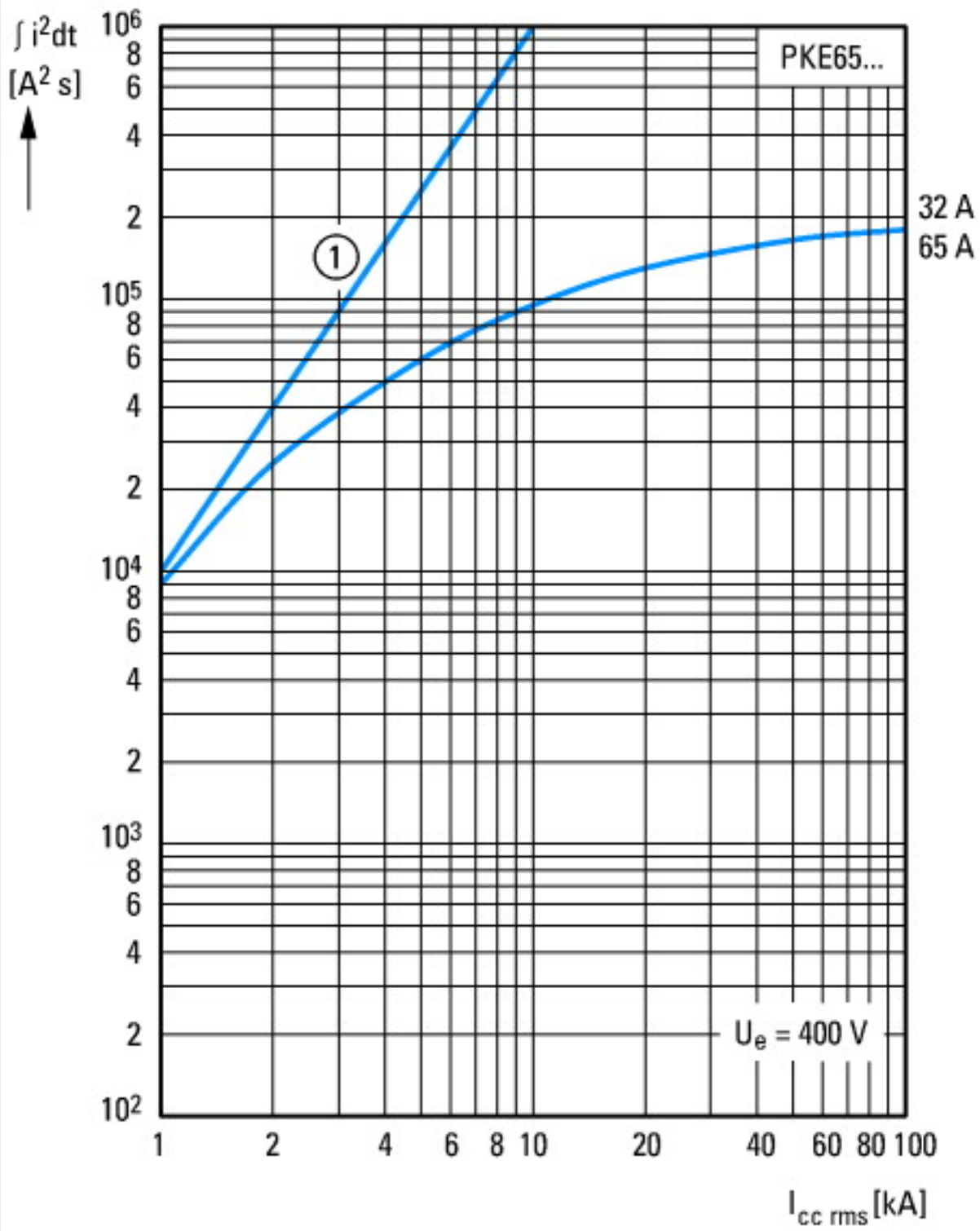
### Characteristics



Tripping characteristics

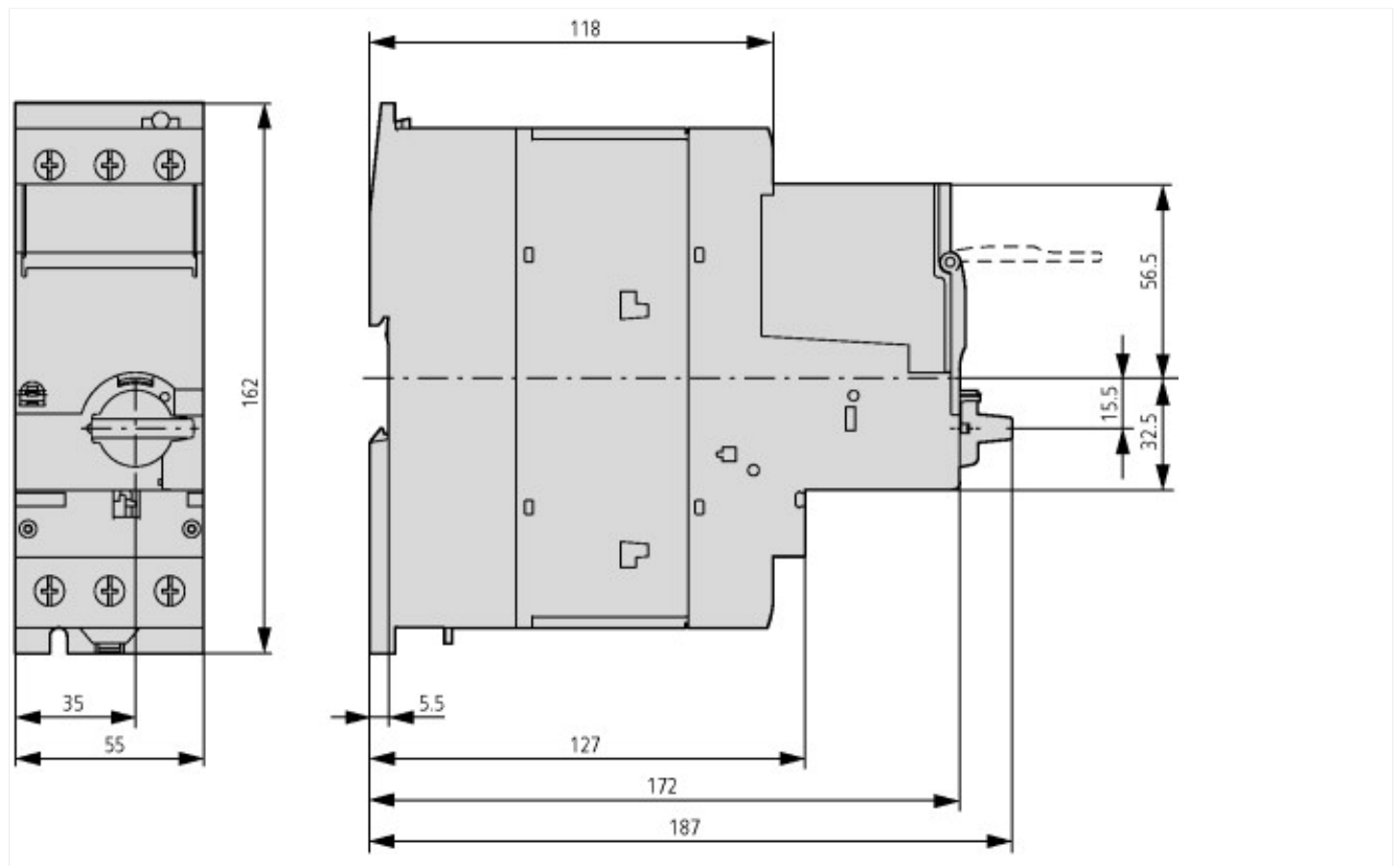


Let-through current



① 1 half-cycle  
Let-through energy

## Dimensions



## Additional product information (links)

### IL03402019Z (AWA1210-2490) PKE motor-protective circuit-breaker with wide-range overload protection

IL03402019Z (AWA1210-2490) PKE motor-protective circuit-breaker with wide-range overload protection

[ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL03402019Z2013\\_11.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03402019Z2013_11.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](ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN03402004Z_DE_EN.pdf)

Switching capacity

<http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=7.32>

Motor starters and "Special Purpose Ratings" for the North American market

[http://www.moeller.net/binary/ver\\_techpapers/ver953en.pdf](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](http://www.moeller.net/binary/ver_techpapers/ver960en.pdf)