

Safety switch, P1, 25 A, 3 pole, Emergency switching off function, With red rotary handle and yellow locking ring, Lockable in position 0 with cover interlock, with warning label „safety switch“



Part no. P1-25/I2-SI 207308

General specifications		
Product name		Eaton Moeller® series P1 Safety switch
Part no.		P1-25/I2-SI
EAN		4015082073084
Product Length/Depth		125 millimetre
Product height		180 millimetre
Product width		100 millimetre
Product weight		0.454 kilogram
Compliances		VDE
Certifications		IEC 60947 EN 60947 EN 60204 VDE IEC/EN 60204 IEC/EN 60947 IEC/EN 60947-3 VDE 0660
Product Tradename		P1
Product Type		Safety switch
Product Sub Type		None
Catalog Notes		Rated Short-time Withstand Current (Icw) for a time of 1 second
Features & Functions		
Features		Version as safety switch Version as emergency stop installation
Fitted with:		Red rotary handle and yellow locking ring Warning label "Safety switch"
Functions		Emergency switching off function Interlockable
Locking facility		Lockable in the 0 (Off) position (cover interlock)
Number of poles		Three-pole
General information		
Accessories		Auxiliary contact or neutral conductor fitted by user.
Degree of protection		NEMA 12
Degree of protection (front side)		IP65
Lifespan, mechanical		300,000 Operations
Mounting method		Surface mounting
Mounting position		As required
Operating frequency		1200 Operations/h
Overvoltage category		III
Pollution degree		3
Rated impulse withstand voltage (Uimp)		6000 V AC
Safe isolation		440 V AC, Between the contacts, According to EN 61140
Safety parameter (EN ISO 13849-1)		B10d values as per EN ISO 13849-1, table C.1
Shock resistance		15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms
Suitable for		Ground mounting
Climatic environmental conditions		
Ambient operating temperature - min		-25 °C
Ambient operating temperature - max		40 °C
Ambient operating temperature (enclosed) - min		-25 °C
Ambient operating temperature (enclosed) - max		40 °C
Climatic proofing		Damp heat, cyclic, to IEC 60068-2-30

			Damp heat, constant, to IEC 60068-2-78
<b>Terminal capacities</b>			
Terminal capacity			1 x (1.5 - 6) mm <sup>2</sup> , solid or stranded 2 x (1 - 4) mm <sup>2</sup> , flexible with ferrules to DIN 46228 2 x (1.5 - 6) mm <sup>2</sup> , solid or stranded 1 x (1 - 4) mm <sup>2</sup> , flexible with ferrules to DIN 46228
Screw size			M4, Terminal screw
Tightening torque			1.6 Nm, Screw terminals 14.1 lb-in, Screw terminals
<b>Electrical rating</b>			
Rated breaking capacity at 220/230 V (cos phi to IEC 60947-3)			190 A
Rated breaking capacity at 400/415 V (cos phi to IEC 60947-3)			150 A
Rated breaking capacity at 500 V (cos phi to IEC 60947-3)			170 A
Rated breaking capacity at 660/690 V (cos phi to IEC 60947-3)			150 A
Rated operational current (Ie) at AC-3, 220 V, 230 V, 240 V			19.6 A
Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V			15.2 A
Rated operational current (Ie) at AC-3, 500 V			12.1 A
Rated operational current (Ie) at AC-3, 660 V, 690 V			8.8 A
Rated operational current (Ie) at AC-21, 440 V			25 A
Rated operational current (Ie) at AC-23A, 230 V			25 A
Rated operational current (Ie) at AC-23A, 400 V, 415 V			25 A
Rated operational current (Ie) at AC-23A, 500 V			17.4 A
Rated operational current (Ie) at AC-23A, 690 V			12.6 A
Rated operational current (Ie) at DC-1, load-break switches I/r = 1 ms			25 A
Rated operational current (Ie) at DC-23A, 24 V			25 A
Rated operational current (Ie) at DC-23A, 48 V			25 A
Rated operational current (Ie) at DC-23A, 60 V			25 A
Rated operational current (Ie) at DC-23A, 120 V			12 A
Rated operational power at AC-3, 380/400 V, 50 Hz			7.5 kW
Rated operational power at AC-3, 415 V, 50 Hz			7.5 kW
Rated operational power at AC-3, 500 V, 50 Hz			7.5 kW
Rated operational power at AC-3, 690 V, 50 Hz			7.5 kW
Rated operational power at AC-23A, 220/230 V, 50 Hz			5.5 kW
Rated operational power at AC-23A, 400 V, 50 Hz			13 kW
Rated operational power at AC-23A, 500 V, 50 Hz			11 kW
Rated operational power at AC-23A, 690 V, 50 Hz			11 kW
Rated operational voltage (Ue) at AC - max			690 V
Rated uninterrupted current (Iu)			25 A
Uninterrupted current			Rated uninterrupted current Iu is specified for max. cross-section.
<b>Short-circuit rating</b>			
Rated conditional short-circuit current (Iq)			80 kA
Rated short-time withstand current (Icw)			640 A, Contacts, 1 second 0.64 kA
Short-circuit protection rating			25 A gG/gL, Fuse, Contacts
<b>Switching capacity</b>			
Load rating			2 x I# (with intermittent operation class 12, 25 % duty factor) 1.3 x I# (with intermittent operation class 12, 60 % duty factor) 1.6 x I# (with intermittent operation class 12, 40 % duty factor)
Number of contacts in series at DC-23A, 24 V			1
Number of contacts in series at DC-23A, 48 V			2
Number of contacts in series at DC-23A, 60 V			2
Number of contacts in series at DC-23A, 120 V			3
Rated making capacity up to 690 V (cos phi to IEC/EN 60947-3)			240 A
Voltage per contact pair in series			60 V
<b>Contacts</b>			
Control circuit reliability			1 failure per 100,000 switching operations statistically determined, at 24 V DC, 10 mA)
Number of auxiliary contacts (change-over contacts)			0

Number of auxiliary contacts (normally closed contacts)		0
Number of auxiliary contacts (normally open contacts)		0
<b>Actuator</b>		
Actuator color		Red
Actuator type		Short thumb-grip
<b>Design verification</b>		
Equipment heat dissipation, current-dependent P <sub>vid</sub>		1.1 W
Heat dissipation capacity P <sub>diss</sub>		0 W
Heat dissipation per pole, current-dependent P <sub>vid</sub>		1.1 W
Rated operational current for specified heat dissipation (I <sub>n</sub> )		25 A
Static heat dissipation, non-current-dependent P <sub>vs</sub>		0 W
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 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects		Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation		UV resistance only in connection with protective shield.
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.
10.9.2 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 9.0

Low-voltage industrial components (EG000017) / Switch disconnecter (low voltage) (EC000216)			
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnecter (ecI@ss13-27-37-14-03 [AKF060018])			
Version as main switch			No
Version as maintenance-/service switch			No
Version as safety switch			Yes
Version as emergency stop installation			Yes
Version as reversing switch			No
Number of switches			1
Max. rated operation voltage U <sub>e</sub> AC		V	690
Rated operating voltage		V	690 - 690
Rated permanent current I <sub>u</sub>		A	25
Rated permanent current at AC-23, 400 V		A	25
Rated permanent current at AC-21, 400 V		A	25
Rated operation power at AC-3, 400 V		kW	7.5
Rated short-time withstand current I <sub>cw</sub>		kA	0.64
Rated operation power at AC-23, 400 V		kW	13
Switching power at 400 V		kW	13
Conditioned rated short-circuit current I <sub>q</sub>		kA	80

Number of poles			3
Number of auxiliary contacts as normally closed contact			0
Number of auxiliary contacts as normally open contact			0
Number of auxiliary contacts as change-over contact			0
Motor drive optional			No
Motor drive integrated			No
Voltage release optional			No
Device construction			Complete device in housing
Suitable for floor mounting			Yes
Suitable for front mounting 4-hole			No
Suitable for front mounting centre			No
Suitable for distribution board installation			No
Suitable for intermediate mounting			No
Colour control element			Red
Type of control element			Short thumb-grip
Interlockable			Yes
Type of electrical connection of main circuit			Screw connection
With pre-assembled cabling			No
Degree of protection (IP), front side			IP65
Degree of protection (NEMA)			12
Width		mm	100
Height		mm	180
Depth		mm	125
Width in number of modular spacings			