

Main switch, P1, 25 A, surface mounting, 3 pole + N, Emergency switching off function, With red rotary handle and yellow locking ring, Lockable in the 0 (Off) position, hard knockout version

**Part no. P1-25/I2H/SVB/N
227860**

General specifications		
Product name		Eaton Moeller® series P1 Main switch
Part no.		P1-25/I2H/SVB/N
EAN		4015082278601
Product Length/Depth		115 millimetre
Product height		180 millimetre
Product width		100 millimetre
Product weight		0.558 kilogram
Certifications		UL Category Control No.: NLRV CSA File No.: 012528 UL File No.: E36332 UL CSA CSA-C22.2 No. 94 CSA Class No.: 3211-05 CSA-C22.2 No. 60947-4-1-14 IEC/EN 60947-3 CE IEC/EN 60947 VDE 0660 IEC/EN 60204 UL 60947-4-1 CSA UL
Product Tradename		P1
Product Type		Main switch
Product Sub Type		None
Catalog Notes		hard knockout version Rated Short-time Withstand Current (I _{cw}) for a time of 1 second
Features & Functions		
Features		Version as maintenance-/service switch Version as emergency stop installation Version as main switch
Fitted with:		Red rotary handle and yellow locking ring
Functions		Interlockable Emergency switching off function
Locking facility		Lockable in the 0 (Off) position
Number of poles		4
General information		
Accessories		Auxiliary contact 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 (U _{imp})		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 Branch circuits, suitable as motor disconnect, (UL/CSA)
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, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Terminal capacities		
Terminal capacity		2 x (1.5 - 6) mm ² , solid or stranded 2 x (1 - 4) mm ² , flexible with ferrules to DIN 46228 1 x (1.5 - 6) mm ² , solid or stranded 14 - 8 AWG, solid or flexible with ferrule 1 x (1 - 4) mm ² , flexible with ferrules to DIN 46228
Screw size		M4, Terminal screw
Tightening torque		1.6 Nm, Screw terminals 14.1 lb-in, Screw terminals
Electrical rating		
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.
Short-circuit rating		
Rated conditional short-circuit current (Iq)		80 kA
Rated short-time withstand current (Icw)		640 A, Contacts, 1 second 0.64 kA
Short-circuit current rating (basic rating)		5 kA, SCCR (UL/CSA) 110A, max. Fuse, SCCR (UL/CSA)
Short-circuit current rating (high fault)		50 A, Class J, max. Fuse, SCCR (UL/CSA) 10 kA, SCCR (UL/CSA)
Short-circuit protection rating		25 A gG/gL, Fuse, Contacts
Switching capacity		
Load rating		1.3 x I# (with intermittent operation class 12, 60 % duty factor) 2 x I# (with intermittent operation class 12, 25 % 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
Switching capacity (main contacts, general use)		20 A, Rated uninterrupted current max. (UL/CSA)
Switching capacity (auxiliary contacts, general use)		10A, IU, (UL/CSA)
Switching capacity (auxiliary contacts, pilot duty)		P600 (UL/CSA) A600 (UL/CSA)
Rated making capacity up to 690 V (cos phi to IEC/EN 60947-3)		240 A
Voltage per contact pair in series		60 V
Motor rating		
Assigned motor power at 115/120 V, 60 Hz, 1-phase		1 HP
Assigned motor power at 200/208 V, 60 Hz, 1-phase		2 HP
Assigned motor power at 200/208 V, 60 Hz, 3-phase		3 HP
Assigned motor power at 230/240 V, 60 Hz, 1-phase		3 HP
Assigned motor power at 230/240 V, 60 Hz, 3-phase		5 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase		10 HP
Assigned motor power at 575/600 V, 60 Hz, 3-phase		15 HP
Contacts		
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
Actuator		
Actuator color		Red
Actuator type		Door coupling rotary drive
Design verification		
Equipment heat dissipation, current-dependent Pvid		1.1 W
Heat dissipation capacity Pdis		0 W
Heat dissipation per pole, current-dependent Pvid		1.1 W
Rated operational current for specified heat dissipation (In)		25 A
Static heat dissipation, non-current-dependent Pvs		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 (ec@ss13-27-37-14-03 [AKF060018])			
Version as main switch			Yes
Version as maintenance-/service switch			Yes
Version as safety switch			No
Version as emergency stop installation			Yes
Version as reversing switch			No
Number of switches			1
Max. rated operation voltage Ue AC		V	690
Rated operating voltage		V	690 - 690
Rated permanent current Iu		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 Icw		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 Iq		kA	80
Number of poles			4
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			Door coupling rotary drive
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	115
Width in number of modular spacings			