



Main switch, P1, 25 A, rear mounting, 3 pole

Part no. P1-25/XM
172834

General specifications		
Product name		Eaton Moeller® series P1 Main switch
Part no.		P1-25/XM
EAN		4015081694174
Product Length/Depth		75 millimetre
Product height		70 millimetre
Product width		49 millimetre
Product weight		0.13 kilogram
Certifications		CSA Class No.: 3211-05 CSA-C22.2 No. 60947-4-1-14 IEC/EN 60204 UL UL File No.: E36332 CSA-C22.2 No. 94 CE UL Category Control No.: NLRV IEC/EN 60947 CSA UL 60947-4-1 VDE 0660 CSA File No.: 012528 IEC/EN 60947-3
Product Tradename		P1
Product Type		Main switch
Product Sub Type		None
Catalog Notes		Rated Short-time Withstand Current (Icw) for a time of 1 second
Features & Functions		
Features		Version as main switch Version as maintenance-/service switch
Number of poles		3
General information		
Accessories		Auxiliary contact or neutral conductor fitted by user.
Degree of protection		NEMA 1
Degree of protection (front side)		IP65
Lifespan, mechanical		300,000 Operations
Mounting method		Rear 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 Intermediate mounting Branch circuits, suitable as motor disconnect, (UL/CSA)
Climatic environmental conditions		
Ambient operating temperature - min		-25 °C
Ambient operating temperature - max		50 °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
Terminal capacities		

Terminal capacity		2 x (1 - 4) mm ² , flexible with ferrules to DIN 46228 1 x (1 - 4) mm ² , flexible with ferrules to DIN 46228 14 - 8 AWG, solid or flexible with ferrule 2 x (1.5 - 6) mm ² , solid or stranded 1 x (1.5 - 6) mm ² , solid or stranded
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		2 x I# (with intermittent operation class 12, 25 % duty factor) 1.6 x I# (with intermittent operation class 12, 40 % duty factor) 1.3 x I# (with intermittent operation class 12, 60 % 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)		A600 (UL/CSA) P600 (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			Other
Actuator type			Other
Design verification			
Equipment heat dissipation, current-dependent Pvid			0 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 disconnector (ecl@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		No
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		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		Built-in device fixed built-in technique
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		Yes
Colour control element		Other
Type of control element		Other
Interlockable		No
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)		1
Width	mm	49
Height	mm	70
Depth	mm	75
Width in number of modular spacings		