

Main switch, P5, 250 A, rear mounting, 3 pole + N, Emergency switching off function, With red rotary handle and yellow locking ring, Lockable in the 0 (Off) position

Part no. P5-250/V/SVB/N
280944
EL Number 1417186
(Norway)

General specifications	
Product name	Eaton Moeller® series P5 Main switch
Part no.	P5-250/V/SVB/N
EAN	4015082809447
Product Length/Depth	200 millimetre
Product height	150 millimetre
Product width	130 millimetre
Product weight	2.674 kilogram
Compliances	CE Marked
Certifications	CSA Std. C22.2 No. 14-05 EN 60947-3 IEC 60947 UL 508 VDE UL Category Control No.: NLRV, NLRV7 VDE 0660 CSA File No.: 223805 CSA Class No.: 3211-05 UL File No.: E36332 CE CSA-C22.2 No. 14-05 UL IEC/EN 60947-3 IEC/EN 60947 CSA-C22.2 No. 94 CSA IEC/EN 60204 UL CSA
Product Tradename	P5
Product Type	Main switch
Product Sub Type	None
Catalog Notes	Rated Short-time Withstand Current (I _{cw}) for a time of 1 second
Features & Functions	
Features	Version as emergency stop installation Version as main switch Version as maintenance-/service switch
Fitted with:	Red rotary handle and yellow locking ring
Functions	Emergency switching off function Interlockable
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	80,000 Operations
Mounting method	Rear mounting
Mounting position	As required
Operating frequency	50 Operations/h
Overvoltage category	III
Pollution degree	3
Rated impulse withstand voltage (U _{imp})	8000 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

Suitable for		Branch circuits, suitable as motor disconnect, (UL/CSA) Intermediate mounting
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, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Terminal capacities		
Terminal capacity		350 MCM (AWG), solid or flexible conductor with ferrule 2 x 50 mm ² , flexible with ferrules to DIN 46228 2 x 70 mm ² , solid or stranded 1 x 185 mm ² , solid or stranded 2 x 20 x 3 mm Number of segments x width x thickness, copper strip 1 x 120 mm ² , flexible with ferrules to DIN 46228 1 x 20 x 5 mm Number of segments x width x thickness, copper strip 300 MCM (AWG), flexible
Screw size		6 mm AF, Hexagon socket-head spanner, Terminal screw
Tightening torque		16 Nm, Screw terminals 140 lb-in, Screw terminals
Electrical rating		
Rated breaking capacity at 220/230 V (cos phi to IEC 60947-3)		1600 A
Rated breaking capacity at 400/415 V (cos phi to IEC 60947-3)		1380 A
Rated breaking capacity at 500 V (cos phi to IEC 60947-3)		1250 A
Rated breaking capacity at 660/690 V (cos phi to IEC 60947-3)		400 A
Rated operational current (Ie) at AC-3, 220 V, 230 V, 240 V		126 A
Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V		105 A
Rated operational current (Ie) at AC-3, 500 V		118 A
Rated operational current (Ie) at AC-3, 660 V, 690 V		45 A
Rated operational current (Ie) at AC-21, 440 V		250 A
Rated operational current (Ie) at AC-23A, 230 V		126 A
Rated operational current (Ie) at AC-23A, 400 V, 415 V		170 A
Rated operational current (Ie) at AC-23A, 500 V		156 A
Rated operational current (Ie) at AC-23A, 690 V		50 A
Rated operational current (Ie) at DC-1, load-break switches l/r = 1 ms		250 A
Rated operational current (Ie) at DC-23A, 24 V		250 A
Rated operational current (Ie) at DC-23A, 48 V		250 A
Rated operational current (Ie) at DC-23A, 60 V		250 A
Rated operational current (Ie) at DC-23A, 120 V		80 A
Rated operational power at AC-3, 380/400 V, 50 Hz		55 kW
Rated operational power at AC-3, 415 V, 50 Hz		55 kW
Rated operational power at AC-3, 500 V, 50 Hz		75 kW
Rated operational power at AC-3, 690 V, 50 Hz		40 kW
Rated operational power at AC-23A, 220/230 V, 50 Hz		37 kW
Rated operational power at AC-23A, 400 V, 50 Hz		90 kW
Rated operational power at AC-23A, 500 V, 50 Hz		110 kW
Rated operational power at AC-23A, 690 V, 50 Hz		45 kW
Rated operational voltage (Ue) at AC - max		690 V
Rated uninterrupted current (Iu)		250 A
Uninterrupted current		Rated uninterrupted current Iu is specified for max. cross-section.
Short-circuit rating		
Rated conditional short-circuit current (Iq)		30 kA
Rated short-time withstand current (Icw)		4.6 kA 4,6 kA, Contacts, 1 second
Short-circuit current rating (basic rating)		10 kA, SCCR (UL/CSA) 600A Class RK1, max. Fuse, SCCR (UL/CSA)
Short-circuit current rating (high fault)		400 A, Class J, max. Fuse, SCCR (UL/CSA) 65 kA, SCCR (UL/CSA)
Short-circuit protection rating		250 A gG/gL, Fuse, Contacts

Switching capacity		
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		3
Number of contacts in series at DC-23A, 48 V		3
Number of contacts in series at DC-23A, 60 V		3
Number of contacts in series at DC-23A, 120 V		3
Switching capacity (main contacts, general use)		250 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)
Rated making capacity up to 690 V (cos phi to IEC/EN 60947-3)		1700 A
Voltage per contact pair in series		42 V
Motor rating		
Assigned motor power at 115/120 V, 60 Hz, 1-phase		15 HP
Assigned motor power at 115/120 V, 60 Hz, 3-phase		30 HP
Assigned motor power at 230/240 V, 60 Hz, 1-phase		30 HP
Assigned motor power at 230/240 V, 60 Hz, 3-phase		60 HP
Assigned motor power at 277 V, 60 Hz, 1-phase		30 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase		75 HP
Assigned motor power at 575/600 V, 60 Hz, 3-phase		75 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		8 W
Heat dissipation capacity Pdis		0 W
Heat dissipation per pole, current-dependent Pvid		8 W
Rated operational current for specified heat dissipation (In)		250 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 (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		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	250
Rated permanent current at AC-23, 400 V	A	250
Rated permanent current at AC-21, 400 V	A	250
Rated operation power at AC-3, 400 V	kW	55
Rated short-time withstand current Icw	kA	4.6
Rated operation power at AC-23, 400 V	kW	90
Switching power at 400 V	kW	90
Conditioned rated short-circuit current Iq	kA	30
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		Built-in device fixed built-in technique
Suitable for floor mounting		No
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		Red
Type of control element		Door coupling rotary drive
Interlockable		Yes
Type of electrical connection of main circuit		Frame clamp
With pre-assembled cabling		No
Degree of protection (IP), front side		IP65
Degree of protection (NEMA)		12
Width	mm	130
Height	mm	150
Depth	mm	200
Width in number of modular spacings		