

**Main switch, P5, 160 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. P5-160/V/SVB/N**  
**280930**

**EL Number**  
**1417182**  
**(Norway)**

<b>General specifications</b>		
Product name		Eaton Moeller® series P5 Main switch
Part no.		P5-160/V/SVB/N
EAN		4015082809300
Product Length/Depth		150 millimetre
Product height		150 millimetre
Product width		130 millimetre
Product weight		1.637 kilogram
Compliances		CE Marked
Certifications		UL 508 EN 60947-3 CSA Std. C22.2 No. 14-05 IEC 60947 VDE CSA-C22.2 No. 14-05 CE UL File No.: E36332 IEC/EN 60947 IEC/EN 60947-3 IEC/EN 60204 CSA CSA File No.: 223805 UL Category Control No.: NLRV, NLRV7 VDE 0660 CSA-C22.2 No. 94 CSA Class No.: 3211-05 UL UL CSA
Product Tradename		P5
Product Type		Main switch
Product Sub Type		None
Catalog Notes		Rated Short-time Withstand Current (Icw) for a time of 1 second
<b>Features &amp; Functions</b>		
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		Interlockable Emergency switching off function
Locking facility		Lockable in the 0 (Off) position
Number of poles		4
<b>General information</b>		
Accessories		Auxiliary contact fitted by user.
Degree of protection		NEMA 12
Degree of protection (front side)		IP65
Lifespan, mechanical		100,000 Operations
Mounting method		Rear mounting
Mounting position		As required
Operating frequency		50 Operations/h
Overvoltage category		III
Pollution degree		3
Rated impulse withstand voltage (Uimp)		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
<b>Climatic environmental conditions</b>		
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
<b>Terminal capacities</b>		
Terminal capacity		3/0 AWG, solid or flexible conductor with ferrule 1 x 13 x 3 mm Number of segments x width x thickness, copper strip 1 x 95 mm <sup>2</sup> , solid or stranded 1 x 70 mm <sup>2</sup> , flexible with ferrules to DIN 46228 2 x 13 x 1.5 mm Number of segments x width x thickness, copper strip 2 x 25 mm <sup>2</sup> , flexible with ferrules to DIN 46228 2/0 AWG, flexible 2 x 35 mm <sup>2</sup> , solid or stranded
Screw size		5 mm AF, Hexagon socket-head spanner, Terminal screw
Tightening torque		125 lb-in, Screw terminals 14 Nm, Screw terminals
<b>Electrical rating</b>		
Rated breaking capacity at 220/230 V (cos phi to IEC 60947-3)		900 A
Rated breaking capacity at 400/415 V (cos phi to IEC 60947-3)		850 A
Rated breaking capacity at 500 V (cos phi to IEC 60947-3)		850 A
Rated breaking capacity at 660/690 V (cos phi to IEC 60947-3)		340 A
Rated operational current (Ie) at AC-3, 220 V, 230 V, 240 V		103 A
Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V		85 A
Rated operational current (Ie) at AC-3, 500 V		80 A
Rated operational current (Ie) at AC-3, 660 V, 690 V		42 A
Rated operational current (Ie) at AC-21, 440 V		160 A
Rated operational current (Ie) at AC-23A, 230 V		103 A
Rated operational current (Ie) at AC-23A, 400 V, 415 V		105 A
Rated operational current (Ie) at AC-23A, 500 V		106 A
Rated operational current (Ie) at AC-23A, 690 V		42 A
Rated operational current (Ie) at DC-1, load-break switches I/r = 1 ms		160 A
Rated operational current (Ie) at DC-23A, 24 V		160 A
Rated operational current (Ie) at DC-23A, 48 V		160 A
Rated operational current (Ie) at DC-23A, 60 V		160 A
Rated operational current (Ie) at DC-23A, 120 V		50 A
Rated operational power at AC-3, 380/400 V, 50 Hz		45 kW
Rated operational power at AC-3, 415 V, 50 Hz		45 kW
Rated operational power at AC-3, 500 V, 50 Hz		55 kW
Rated operational power at AC-3, 690 V, 50 Hz		37 kW
Rated operational power at AC-23A, 220/230 V, 50 Hz		30 kW
Rated operational power at AC-23A, 400 V, 50 Hz		55 kW
Rated operational power at AC-23A, 500 V, 50 Hz		75 kW
Rated operational power at AC-23A, 690 V, 50 Hz		37 kW
Rated operational voltage (Ue) at AC - max		690 V
Rated uninterrupted current (Iu)		160 A
Uninterrupted current		Rated uninterrupted current Iu is specified for max. cross-section.
<b>Short-circuit rating</b>		
Rated conditional short-circuit current (Iq)		30 kA
Rated short-time withstand current (Icw)		3 kA 3 kA, Contacts, 1 second
Short-circuit current rating (basic rating)		10 kA, SCCR (UL/CSA) 400A Class RK1, max. Fuse, SCCR (UL/CSA)
Short-circuit current rating (high fault)		300 A, Class J, max. Fuse, SCCR (UL/CSA) 65 kA, SCCR (UL/CSA)
Short-circuit protection rating		160 A gG/gL, Fuse, Contacts

<b>Switching capacity</b>	
Load rating	1.3 x I# (with intermittent operation class 12, 60 % duty factor) 1.6 x I# (with intermittent operation class 12, 40 % duty factor) 2 x I# (with intermittent operation class 12, 25 % 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)	200 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)	1050 A
Voltage per contact pair in series	42 V
<b>Motor rating</b>	
Assigned motor power at 115/120 V, 60 Hz, 1-phase	10 HP
Assigned motor power at 115/120 V, 60 Hz, 3-phase	20 HP
Assigned motor power at 230/240 V, 60 Hz, 1-phase	25 HP
Assigned motor power at 230/240 V, 60 Hz, 3-phase	40 HP
Assigned motor power at 277 V, 60 Hz, 1-phase	25 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase	60 HP
Assigned motor power at 575/600 V, 60 Hz, 3-phase	60 HP
<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	Door coupling rotary drive
<b>Design verification</b>	
Equipment heat dissipation, current-dependent Pvid	5 W
Heat dissipation capacity Pdis	0 W
Heat dissipation per pole, current-dependent Pvid	5 W
Rated operational current for specified heat dissipation (In)	160 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	160
Rated permanent current at AC-23, 400 V	A	160
Rated permanent current at AC-21, 400 V	A	160
Rated operation power at AC-3, 400 V	kW	45
Rated short-time withstand current Icw	kA	3
Rated operation power at AC-23, 400 V	kW	55
Switching power at 400 V	kW	55
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	150
Width in number of modular spacings		