



P3 Main switch, 80 A, Surface mounting, 4 pole, Form I5/SVB, Red, Door coupling rotary drive

Part no. P3-80/I5/SVB/N  
EP-400985  
EL Number 1417169  
(Norway)

General specifications		
Product name		Eaton Moeller® series P3 Main switch
Part no.		P3-80/I5/SVB/N
EAN		4015082963552
Product Length/Depth		169 millimetre
Product height		180 millimetre
Product width		200 millimetre
Product weight		1.53 kilogram
Certifications		UL Category Control No.: NLRV UL 60947-4-1 CSA Class No.: 3211-05 VDE 0660 CSA-C22.2 No. 60947-4-1-14 UL IEC/EN 60204 IEC/EN 60947 CSA File No.: 012528 CE IEC/EN 60947-3 CSA CSA-C22.2 No. 94 UL File No.: E36332
Product Tradename		P3
Product Type		Main switch
Product Sub Type		None
Features & Functions		
Features		Version as safety switch Version as main switch Version as emergency stop installation 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		Four-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		100,000 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 Branch circuits, suitable as motor disconnect, (UL/CSA)
Switching angle		90 °
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 (2.5 - 35) mm <sup>2</sup> , solid or stranded 14 - 2 AWG, solid or flexible with ferrule 2 x (2.5 - 10) mm <sup>2</sup> , solid or stranded 2 x (1.5 - 6) mm <sup>2</sup> , flexible with ferrules to DIN 46228 1 x (1.5 - 25) mm <sup>2</sup> , flexible with ferrules to DIN 46228
Screw size		M5, Terminal screw
Tightening torque		26.5 lb-in, Screw terminals 3 Nm, Screw terminals
<b>Electrical rating</b>		
Rated breaking capacity at 220/230 V (cos phi to IEC 60947-3)		760 A
Rated breaking capacity at 400/415 V (cos phi to IEC 60947-3)		740 A
Rated breaking capacity at 500 V (cos phi to IEC 60947-3)		880 A
Rated breaking capacity at 660/690 V (cos phi to IEC 60947-3)		520 A
Rated operational current (Ie) at AC-3, 220 V, 230 V, 240 V		71 A
Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V		71 A
Rated operational current (Ie) at AC-3, 500 V		65 A
Rated operational current (Ie) at AC-3, 660 V, 690 V		23.8 A
Rated operational current (Ie) at AC-21, 440 V		80 A
Rated operational current (Ie) at AC-23A, 230 V		80 A
Rated operational current (Ie) at AC-23A, 400 V, 415 V		80 A
Rated operational current (Ie) at AC-23A, 500 V		80 A
Rated operational current (Ie) at AC-23A, 690 V		68 A
Rated operational current (Ie) at DC-1, load-break switches I/r = 1 ms		80 A
Rated operational current (Ie) at DC-23A, 24 V		50 A
Rated operational current (Ie) at DC-23A, 48 V		50 A
Rated operational current (Ie) at DC-23A, 60 V		50 A
Rated operational current (Ie) at DC-23A, 120 V		25 A
Rated operational power at AC-3, 380/400 V, 50 Hz		30 kW
Rated operational power at AC-3, 500 V, 50 Hz		45 kW
Rated operational power at AC-23A, 400 V, 50 Hz		30 kW
Rated operational voltage (Ue) at AC - max		690 V
Rated uninterrupted current (Iu)		80 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 (Supply side) 4 kA (Load side)
Rated short-time withstand current (Icw)		2 kA
Short-circuit current rating (basic rating)		150A, max. Fuse, SCCR (UL/CSA) 10 kA, SCCR (UL/CSA)
Short-circuit protection rating		100 A gG/gL, Fuse, Contacts
<b>Switching capacity</b>		
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)		90 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)		950 A

Voltage per contact pair in series			60 V
<b>Motor rating</b>			
Assigned motor power at 115/120 V, 60 Hz, 1-phase			5 HP
Assigned motor power at 200/208 V, 60 Hz, 1-phase			10 HP
Assigned motor power at 200/208 V, 60 Hz, 3-phase			15 HP
Assigned motor power at 230/240 V, 60 Hz, 1-phase			15 HP
Assigned motor power at 230/240 V, 60 Hz, 3-phase			20 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase			50 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			7.5 W
Heat dissipation capacity Pdis			0 W
Heat dissipation per pole, current-dependent Pvid			7.5 W
Rated operational current for specified heat dissipation (In)			80 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			Yes

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	80
Rated permanent current at AC-23, 400 V	A	80
Rated permanent current at AC-21, 400 V	A	80
Rated operation power at AC-3, 400 V	kW	30
Rated short-time withstand current Icw	kA	2
Rated operation power at AC-23, 400 V	kW	30
Switching power at 400 V	kW	55
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	200
Height	mm	180
Depth	mm	169
Width in number of modular spacings		