

P3 Main switch, 80 A,Rear mounting, 3 pole, Form X, Other, Short thumb-grip

Part no. P3-80/XZ
EP-400974

General specifications		
Product name		Eaton Moeller® series P3 Main switch
Part no.		P3-80/XZ
EAN		4015082963330
Product Length/Depth		150 millimetre
Product height		114 millimetre
Product width		90 millimetre
Product weight		0.275 kilogram
Certifications		VDE 0660 IEC/EN 60204 UL IEC/EN 60947-3 IEC/EN 60947 CSA
Product Tradename		P3
Product Type		Main switch
Product Sub Type		None
Features & Functions		
Number of poles		Three-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		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		Intermediate 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		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		
Screw size		M5, Terminal screw
Tightening torque		26.5 lb-in, Screw terminals 3 Nm, Screw terminals
Electrical rating		
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.
Short-circuit rating		
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
Switching capacity		
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 (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
Motor rating		
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
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		Short thumb-grip

Design verification		
Equipment heat dissipation, current-dependent P _{vid}		0 W
Heat dissipation capacity P _{diss}		0 W
Heat dissipation per pole, current-dependent P _{vid}		7.5 W
Rated operational current for specified heat dissipation (I _n)		80 A
Static heat dissipation, non-current-dependent P _{vs}		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		No
Version as maintenance-/service switch		No
Version as safety switch		No
Version as emergency stop installation		No
Version as reversing switch		No
Number of switches		1
Max. rated operation voltage U _e AC	V	690
Rated operating voltage	V	690 - 690
Rated permanent current I _u	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 I _{cw}	kA	2
Rated operation power at AC-23, 400 V	kW	30
Switching power at 400 V	kW	55
Conditioned rated short-circuit current I _q	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			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			Other
Type of control element			Short thumb-grip
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)			12
Width		mm	90
Height		mm	114
Depth		mm	150
Width in number of modular spacings			