



P3 Main switch, 80 A,Rear mounting, 4 pole, Form Z, Black, Door coupling rotary drive

Part no. P3-80/Z/N
EP-400978

General specifications

Product name	Eaton Moeller® series P3 Main switch
Part no.	P3-80/Z/N
EAN	4015082963378
Product Length/Depth	150 millimetre
Product height	114 millimetre
Product width	90 millimetre
Product weight	0.43 kilogram
Certifications	IEC/EN 60204 CSA File No.: 012528 UL File No.: E36332 UL 60947-4-1 CSA CE IEC/EN 60947-3 CSA-C22.2 No. 60947-4-1-14 VDE 0660 CSA-C22.2 No. 94 CSA Class No.: 3211-05 UL IEC/EN 60947 UL Category Control No.: NLRV
Product Tradename	P3
Product Type	Main switch
Product Sub Type	None

Features & Functions

Fitted with:	Black thumb grip and front plate
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	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, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78

Terminal capacities

Terminal capacity	2 x (1.5 - 6) mm ² , flexible with ferrules to DIN 46228
-------------------	---

			1 x (1.5 - 25) mm ² , flexible with ferrules to DIN 46228 14 - 2 AWG, solid or flexible with ferrule 2 x (2.5 - 10) mm ² , solid or stranded 1 x (2.5 - 35) mm ² , solid or stranded
Screw size			M5, Terminal screw
Tightening torque			3 Nm, Screw terminals 26.5 lb-in, 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 (Icq)			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			
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)			100 A, If used with neutral conductor IU = max. 90 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)			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			Black
Actuator type			Door coupling rotary drive
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 (ecI@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		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		Black
Type of control element		Door coupling rotary drive
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		