Main switch, P3, 100 A, rear mounting, 3 pole



Part no. P3-100/XM 172837

F. M. II. S
Eaton Moeller® series P3 Main switch
P3-100/XM
4015081694204
82 millimetre
84 millimetre
72 millimetre
0.29 kilogram
IEC/EN 60947 UL Category Control No.: NLRV CE CSA-C22.2 No. 60947-4-1-14 CSA Class No.: 3211-05 IEC/EN 60947-3 CSA File No.: 012528 UL 60947-4-1 UL File No.: E36332 UL IEC/EN 60204 CSA VDE 0660 CSA-C22.2 No. 94
P3
Main switch
None
Rated Short-time Withstand Current (Icw) for a time of 1 second
Version as main switch
3
Auxiliary contact or neutral conductor fitted by user.
NEMA 1
IP65
100,000 Operations
Rear mounting
As required
1200 Operations/h
III
3
6000 V AC
440 V AC, Between the contacts, According to EN 61140
B10d values as per EN ISO 13849-1, table C.1
15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms
Intermediate mounting Ground mounting Branch circuits, suitable as motor disconnect, (UL/CSA)
-25 °C
50 °C
-25 °C
40 °C
Damp heat, constant, to IEC 60068-2-78
Damp heat, constant, to IEC 60068-2-70

	2 x (1.5 - 6) mm², flexible with ferrules to DIN 46228 1 x (2.5 - 35) mm², solid or stranded 14 - 2 AWG, solid or flexible with ferrule
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	100 A
Rated operational current (Ie) at AC-23A, 230 V	100 A
Rated operational current (Ie) at AC-23A, 400 V, 415 V	100 A
Rated operational current (Ie) at AC-23A, 500 V	96 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	100 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	37 kW
Rated operational power at AC-3, 415 V, 50 Hz	37 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	55 kW
Rated operational power at AC-23A, 690 V, 50 Hz	55 kW
Rated operational voltage (Ue) at AC - max	690 V
Rated uninterrupted current (Iu)	100 A
Uninterrupted current	Rated uninterrupted current lu is specified for max. cross-section.
Short-circuit rating	
Rated conditional short-circuit current (Iq)	4 kA (Load side) 80 kA (Supply 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 Switching capacity	100 A gG/gL, Fuse, Contacts
Load rating	2 x l# (with intermittent operation class 12, 25 % duty factor) 1.3 x l# (with intermittent operation class 12, 60 % duty factor) 1.6 x l# (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 curren 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
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	20 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	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	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	Other
Actuator type	Other
Design verification	
Equipment heat dissipation, current-dependent Pvid	0 W
Heat dissipation capacity Pdiss	0 W
Heat dissipation per pole, current-dependent Pvid	7.5 W
Rated operational current for specified heat dissipation (In)	100 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 8.0

Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnector (ecl@ss10.0.1-27-37-14-03 [AKF060013])

p and occording	
Version as main switch	Yes
Version as maintenance-/service switch	No
Version as safety switch	No
Version as emergency stop installation	No
Version as reversing switch	No

Max. rated operating voltage V 690 - 890 Rated operating voltage V 690 - 890 Rated operating voltage A 100 Rated permanent current at AC-21,400 V A 100 Rated operation power at AC-31,400 V AW 37 Rated operation power at AC-32,400 V KW 37 Rated short-time withstand current lcw KW 55 Rated short-time withstand current lq KW 55 Rodd short-time withstand current lq KW 50 Number of ploses KW 30 Number of aluxiliary contacts as normally closed contact WW 50 Number of aluxiliary contacts as normally open contact WW 50 Number of aluxiliary contacts as change-over contact W 60 Number of aluxiliary contacts as change-over contact W 60 Number of plosal W 60 Note of the registed W 60 Note of auxiliary contacts as change-over contact W 60 Note of auxiliary contacts as change-over contact W 60			
Rated operating voltage V 690-890 Rated permanent current lu A 100 Rated permanent current at AC-23,400 V A 100 Rated permanent current at AC-23,400 V A 100 Rated permanent current at AC-21,400 V A 100 Rated operation power at AC-3,400 V W 3 Rated operation power at AC-23,400 V W 5 Rated operation power at AC-23,400 V W 5 Switching power at 400 V W 5 Switching power at 400 V W 5 Number of poles B 3 3 Number of poles B 3 3 Number of auxiliary contacts as normally closed contact B 9 3 Motor drive optional B 9 9 Subable for four mounting B 9 9 <td< td=""><td>Number of switches</td><td></td><td>1</td></td<>	Number of switches		1
Rated permanent current at AC-23, 400 V A 100 Rated permanent current at AC-23, 400 V A 100 Rated operation power at AC-3, 400 V AW 37 Rated operation power at AC-3, 400 V AW 55 Rated operation power at AC-33, 400 V AW 55 Switching power at 400 V AW 55 Conditioned rated short-circuit current Iq AW 80 Number of poles 3 3 Number of poles 0 0 Motor drive optional 0 0 Motor drive optional 0 0 Motor drive optional 0 0 Suitable for floor mounting 0	Max. rated operation voltage Ue AC	V	690
Rated permanent current at AC-23, 400 V A 100 Rated permanent current at AC-21, 400 V kW 37 Rated operation power at AC-3, 400 V kW 37 Rated operation power at AC-23, 400 V kW 55 Rated operation power at AC-23, 400 V kW 55 Switching power at 400 V kW 55 Conditioned rated short-circuit current Iq kA 80 Number of poles 3 3 Number of auxiliary contacts as normally closed contact 0 0 Number of auxiliary contacts as change-over contact 0 No Motor drive optional No No Suitable for floor mounting Yes No Suitable for floor mounting 4-hole No No Suitable for front mounting centre No No Suitable for fort mounting centre No No Suitable for fintermediate mounting Yes </td <td>Rated operating voltage</td> <td>V</td> <td>690 - 690</td>	Rated operating voltage	V	690 - 690
Rated permanent current at AC-21, 400 V A 100 Rated operation power at AC-3, 400 V kM 37 Rated short-time withstand current lcw kA 2 Rated operation power at AC-23, 400 V kW 55 Switching power at 400 V kW 55 Conditioned rated short-circuit current Iq kA 80 Number of poles 3 3 Number of poles 0 9 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 Yes Suitable for front mounting centre No Suitable for front mounting centre No Suitable for firstribution board installation No Suitable for firstribution board installation No Suitable for firstribution board installation Other Interlockable	Rated permanent current lu	Α	100
Rated operation power at AC-3, 400 V kW 37 Rated short-time withstand current lcw kA 2 Rated operation power at AC-23, 400 V kW 55 Switching power at 400 V kW 55 Conditioned rated short-circuit current Iq kA 80 Number of poles 3 3 Number of auxiliary contacts as normally open contact 0 0 Number of auxiliary contacts as change-over contact 0 0 Motor drive integrated No No Motor drive integrated No No Voltage release optional No No Device construction Built-in device fixed built-in technique Suitable for from mounting Yes Suitable for from mounting 4-hole No No Suitable for front mounting centre No No Suitable for front mounting centre Yes Yes Suitable for intermediate mounting Yes Yes Colour control element Yes Yes Type of control element Yes Yes	Rated permanent current at AC-23, 400 V	Α	100
Rated short-time withstand current low kA part of the protection of power at AC-23, 400 V kW possible for power at AC-23, 400 V kW possible for power at 400 V kW possible for power at 400 V kW possible for power at 400 V kW possible for a uxiliary contacts as normally closed contact power of auxiliary contacts as normally open contact power of auxiliary contacts as normally open contact power of auxiliary contacts as change-over contact power contact power of auxiliary contacts as change-over contact power contact power of auxiliary contacts as change-over contact power contact power of auxiliary contacts as contact power contact power power contact power power contact power power contact power powe	Rated permanent current at AC-21, 400 V	Α	100
Rated operation power at AC-23, 400 V Switching power at 400 V Conditioned rated short-circuit current Iq Number of poles Number of poles Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact Notor drive optional Motor drive integrated Notor drive integrated Notor drive integrated Notor gloss optional Device construction Suitable for floor mounting Suitable for front mounting 4-hole Suitable for front mounting 4-hole Suitable for firstribution board installation Suitable for intermediate mounting Colour control element Type of control element Type of control element Type of electrical connection of main circuit Degree of protection (IP), front side	Rated operation power at AC-3, 400 V	kW	37
Switching power at 400 V Conditioned rated short-circuit current Iq 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 Number of auxiliary contacts as change-over contact 0 Motor drive optional Motor drive integrated Voltage release optional Device construction Suitable for floor mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for distribution board installation Suitable for intermediate mounting Suitable for intermediate moun	Rated short-time withstand current lcw	kA	2
Conditioned rated short-circuit current Iq 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 Noter of rive optional Number of auxiliary contacts as change-over contact 0 Motor drive optional No No Motor drive integrated No Voltage release optional No Device construction Suitable for floor mounting 4-hole No Suitable for front mounting 4-hole No Suitable for front mounting centre No Suitable for distribution board installation No Suitable for intermediate mounting Poor installation No Suitable for intermediate mounting Object of control element No Type of control element No Type of control element No Type of electrical connection of main circuit No Degree of protection (IP), front side Poor No Serew connection Poor No Serew connect	Rated operation power at AC-23, 400 V	kW	55
Number of poles Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as normally open contact No No Suitable for distribution device fixed built-in technique Suitable for front mounting 4-hole Suitable for intermediate mounting centre Suitable for intermediate mounting Suitable for intermediate mounting Colour control element Vipe of control element Other Suitable for intermediate mounting Colour control element Other Surferlockable No Surferlockab	Switching power at 400 V	kW	55
Number of auxiliary contacts as normally closed contact Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact No Motor drive optional No Motor drive integrated No No No Device construction Suitable for floor mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for distribution board installation Suitable for intermediate mounting Suitable for intermediate mounting Colour control element Type of control element Type of electrical connection of main circuit Degree of protection (IP), front side O Degree of protection (IP), front side	Conditioned rated short-circuit current Iq	kA	80
Number of auxiliary contacts as normally open contact Number of auxiliary contacts as change-over contact Number of auxiliary contacts as change-over contact No Motor drive optional No No Voltage release optional No Device construction Suitable for floor mounting Suitable for front mounting 4-hole Suitable for front mounting entre Suitable for firent mounting onertre Suitable for distribution board installation Suitable for intermediate mounting Suitable for intermediate mounting Colour control element Type of control element Type of control element Other Othe	Number of poles		3
Number of auxiliary contacts as change-over contact Motor drive optional Motor drive integrated No No Voltage release optional Device construction Suitable for floor mounting Suitable for floor mounting 4-hole Suitable for front mounting 4-hole Suitable for front mounting centre No Suitable for firont mounting centre No Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Interlockable No Type of electrical connection of main circuit Degree of protection (IP), front side	Number of auxiliary contacts as normally closed contact		0
Motor drive optional Motor drive integrated Motor drive integrated Motor drive integrated No No No Device construction Suitable for floor mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of electrical connection of main circuit Degree of protection (IP), front side No No No Screw connection No Screw connection No Screw connection	Number of auxiliary contacts as normally open contact		0
Motor drive integrated No No Device construction Suitable for floor mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for firont mounting centre Suitable for intermediate mounting Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side No No No No No Screw connection No Screw connection INFO I	Number of auxiliary contacts as change-over contact		0
Voltage release optional Device construction Suitable for floor mounting Suitable for front mounting 4-hole Suitable for front mounting centre Suitable for front mounting centre Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Interlockable Interlockable Degree of protection (IP), front side No Built-in device fixed built-in technique Built-in device fixed built-in technique Suitable fixed No No No Other Other Other Screw connection IP65	Motor drive optional		No
Device construction Built-in device fixed built-in technique Yes Suitable for front mounting 4-hole No Suitable for front mounting centre No Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Interlockable Other Interlockable Other Suitable for intermediate mounting Type of pelectrical connection of main circuit Degree of protection (IP), front side Built-in device fixed built-in technique Yes No Suitable for front mounting 4-hole No Suitable for front mounting centre No Strew connection IP65	Motor drive integrated		No
Suitable for floor mounting Suitable for front mounting 4-hole Suitable for front mounting centre No Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Other Interlockable Ougree of protection (IP), front side Yes Yes No No IP65	Voltage release optional		No
Suitable for front mounting 4-hole Suitable for front mounting centre No Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side No No No No Interlockable No IP65	Device construction		Built-in device fixed built-in technique
Suitable for front mounting centre Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side No No No No IP65	Suitable for floor mounting		Yes
Suitable for distribution board installation Suitable for intermediate mounting Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side No No No IP65	Suitable for front mounting 4-hole		No
Suitable for intermediate mounting Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side Yes Other Other Screw connection IP65	Suitable for front mounting centre		No
Colour control element Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side Other No Screw connection IP65	Suitable for distribution board installation		No
Type of control element Interlockable Type of electrical connection of main circuit Degree of protection (IP), front side Other No Screw connection IP65	Suitable for intermediate mounting		Yes
Interlockable No Type of electrical connection of main circuit Screw connection Degree of protection (IP), front side IP65	Colour control element		Other
Type of electrical connection of main circuit Degree of protection (IP), front side Screw connection IP65	Type of control element		Other
Degree of protection (IP), front side	Interlockable		No
	Type of electrical connection of main circuit		Screw connection
Degree of protection (NEMA) 1	Degree of protection (IP), front side		IP65
	Degree of protection (NEMA)		1