Specifications

Eaton 255904

Eaton Moeller® series P3 Main switch, P3, 100 A, surface mounting, 3 pole, STOP function, With black rotary handle and locking ring, UL/CSA

General specifications	
PRODUCT NAME	Eaton Moeller® series P3 Main switch
CATALOG NUMBER	255904
EAN	4015082559045
PRODUCT LENGTH/DEPTH	169 mm
PRODUCT HEIGHT	280 mm
PRODUCT WIDTH	200 mm
PRODUCT WEIGHT	1.5 kg
CERTIFICATIONS	CSA Class No.: 3211-05 UL File No.: E36332 CSA-C22.2 No. 94 CE CSA UL CSA File No.: 012528 CSA-C22.2 No. 60947-4-1-14 UL 60947-4-1 UL Category Control No.: NLRV IEC/EN 60204 IEC/EN 60947-3 IEC/EN 60947 VDE 0660
MODEL CODE	P3-100/I5/SVB-SW-NA

Powering Business Worldwide

Features & Functions

FEATURES	Version as maintenance-/service switch Version as main switch
FITTED WITH:	Black rotary handle and locking ring
FUNCTIONS	STOP function Interlockable
NUMBER OF POLES	3

General

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
PRODUCT CATEGORY	Main switch
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)

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, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30

Terminal capacities

TERMINAL CAPACITY	1 x (1.5 - 25) mm^2, flexible with ferrules to DIN 46228 2 x (2.5 - 10) mm^2, solid or stranded 2 x (1.5 - 6) mm^2, flexible with ferrules to DIN 46228 1 x (2.5 - 35) mm^2, solid or stranded 14 - 2 AWG, solid or flexible with ferrule
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	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 L/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

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	100 A gG/gL, Fuse, Contacts

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 Iu is specified for max. cross-section.

Switching capacity

LOAD RATING	1.3 x I_e (with intermittent operation class 12, 60 % duty factor) 2 x I_e (with intermittent operation class 12, 25 % duty factor) 1.6 x I_e (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	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	Black
ACTUATOR TYPE	Door coupling rotary drive

Design verification

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	7.5 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.

Resources

BROCHURES	Brochure - T Rotary Cam switch and P Switch-disconnector
CATALOGUES	P Switch-disconnectors and T Rotary cam switches catalogue CA042001EN
DECLARATIONS OF CONFORMITY	DA-DC-00004896.pdf DA-DC-00004924.pdf
DRAWINGS	eaton-rotary-switches-p3-main-switch-dimensions-010.eps

	eaton-rotary-switches-t0-main-switch-symbol.eps eaton-general-switch-t0-main-switch-symbol.eps eaton-general-totally-insulated-t0-main-switch-symbol.eps
ECAD MODEL	DA-CE-ETN.P3-100_I5_SVB-SW-NA
INSTALLATION INSTRUCTIONS	eaton-rotary-switches-p3-63-p3-80-p3-100-cam-switch-disconnector-p3-instruction-leaflet-il03801010z.pdf
INSTALLATION VIDEOS	Eaton's P Switch-disconnectors used in a factory
MCAD MODEL	DA-CD-bauform15 DA-CS-bauform15
PRODUCT NOTIFICATIONS	MZ008006ZU_Orderform_Customized_Switch.pdf MZ008005ZU_Orderform_Customized_Switch.pdf
WIRING DIAGRAMS	eaton-rotary-switches-on-off-switch-p3-main-switch-wiring-diagram.eps

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

Eaton Corporation plc
Eaton House
30 Pembroke Road
Dublin 4, Ireland
Eaton.com

Follow us on social media to get the latest product and support information.