

Specifications

Eaton 233988

Eaton Moeller® series P1 Main switch, P1, 25 A, surface mounting, 3 pole, STOP function, With black rotary handle and locking ring

General specifications

PRODUCT NAME	Eaton Moeller® series P1 Main switch
CATALOG NUMBER	233988
MODEL CODE	P1-25/I1/SVB-SW
EAN	4015082339883
PRODUCT LENGTH/DEPTH	115 mm
PRODUCT HEIGHT	137 mm
PRODUCT WIDTH	80 mm
PRODUCT WEIGHT	0.335 kg
CERTIFICATIONS	IEC/EN 60947 IEC/EN 60947-3 VDE 0660 IEC/EN 60204
CATALOG NOTES	Rated Short-time Withstand Current (Icw) for a time of 1 second

Product specifications

PRODUCT CATEGORY	Main switch
FEATURES	Version as main switch Version as maintenance- /service switch
ACTUATOR COLOR	Black
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.
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.
FITTED WITH:	Black rotary handle and locking ring
OPERATING FREQUENCY	1200 Operations/h
POLLUTION DEGREE	3
CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	6000 V AC
RATED PERMANENT CURRENT AT AC-21, 400 V	25 A
RATED PERMANENT CURRENT AT AC-23, 400 V	25 A
RATED UNINTERRUPTED CURRENT (IU)	25 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W
SWITCHING POWER AT 400 V	13 kW

VOLTAGE PER CONTACT PAIR IN SERIES	60 V
ACCESSORIES	Auxiliary contact or neutral conductor fitted by user.
DEVICE CONSTRUCTION	Complete device in housing
RATED SHORT-TIME WITHSTAND CURRENT (ICW)	640 A, Contacts, 1 second 0.64 kA
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Screw connection
MOUNTING POSITION	As required
ACTUATOR TYPE	Door coupling rotary drive
AMBIENT OPERATING TEMPERATURE - MAX	40 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	0 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	1.1 W
NUMBER OF AUXILIARY CONTACTS (CHANGE-OVER CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)	50 kA
OVERVOLTAGE CATEGORY	III
CONTROL CIRCUIT RELIABILITY	1 failure per 100,000 switching operations statistically determined, at 24 V DC, 10 mA)
DEGREE OF PROTECTION	IP65

(FRONT SIDE)	
NUMBER OF POLES	3
MOUNTING METHOD	Surface mounting
DEGREE OF PROTECTION	NEMA 12
SUITABLE FOR	Ground mounting
FUNCTIONS	Interlockable STOP function
NUMBER OF SWITCHES	1
SAFE ISOLATION	440 V AC, Between the contacts, According to EN 61140
SCREW SIZE	M4, Terminal screw
SHOCK RESISTANCE	15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms
LIFESPAN, MECHANICAL	300,000 Operations
LOAD RATING	1.6 x I _e (with intermittent operation class 12, 40 % duty factor) 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)
TERMINAL CAPACITY	2 x (1 - 4) mm ² , flexible with ferrules to DIN 46228 1 x (1 - 4) mm ² , flexible with ferrules to DIN 46228 1 x (1.5 - 6) mm ² , solid or stranded 2 x (1.5 - 6) mm ² , solid or stranded
SAFETY PARAMETER (EN ISO 13849-1)	B10d values as per EN ISO 13849-1, table C.1
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
NUMBER OF CONTACTS IN SERIES AT DC-23A, 120 V	3
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
RATED BREAKING	190 A

CAPACITY AT 220/230 V (COS PHI TO IEC 60947-3)	
RATED BREAKING CAPACITY AT 400/415 V (COS PHI TO IEC 60947-3)	150 A
RATED BREAKING CAPACITY AT 500 V (COS PHI TO IEC 60947-3)	170 A
RATED BREAKING CAPACITY AT 660/690 V (COS PHI TO IEC 60947-3)	150 A
RATED MAKING CAPACITY UP TO 690 V (COS PHI TO IEC/EN 60947-3)	240 A
RATED OPERATING VOLTAGE (UE) - MAX	690 V
RATED OPERATING VOLTAGE (UE) - MIN	690 V
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
SHORT-CIRCUIT PROTECTION RATING	25 A gG/gL, Fuse, Contacts
RATED OPERATIONAL CURRENT (IE) AT AC-21, 440 V	25 A
RATED OPERATIONAL CURRENT (IE) AT AC-23A, 230 V	25 A
RATED OPERATIONAL CURRENT (IE) AT AC-23A, 400 V, 415 V	25 A
RATED OPERATIONAL CURRENT (IE) AT AC-23A, 500 V	17.4 A
RATED OPERATIONAL CURRENT (IE) AT AC-23A, 690 V	12.6 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 220 V, 230 V, 240 V	19.6 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V	15.2 A
RATED OPERATIONAL CURRENT (IE) AT AC-3, 500 V	12.1 A
RATED OPERATIONAL CURRENT (IE) AT AC-3,	8.8 A

660 V, 690 V	
RATED OPERATIONAL CURRENT (IE) AT DC-1, LOAD-BREAK SWITCHES L/R = 1 MS	25 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 120 V	12 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 24 V	25 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 48 V	25 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 60 V	25 A
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	25 A
RATED OPERATIONAL POWER AT AC-23A, 220/230 V, 50 HZ	5.5 kW
RATED OPERATIONAL POWER AT AC-23A, 400 V, 50 HZ	13 kW
RATED OPERATIONAL POWER AT AC-23A, 500 V, 50 HZ	11 kW
RATED OPERATIONAL POWER AT AC-23A, 690 V, 50 HZ	11 kW
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	7.5 kW
RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	7.5 kW
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	7.5 kW
TIGHTENING TORQUE	1.6 Nm, Screw terminals
UNINTERRUPTED CURRENT	Rated uninterrupted current I _u is specified for max. cross-section.

Resources

BROCHURES

[Brochure - T Rotary Cam switch and P Switch-disconnector](#)

CATALOGS	P Switch-disconnectors and T Rotary cam switches catalogue CA042001EN
DECLARATIONS OF CONFORMITY	DA-DC-00005059.pdf DA-DC-00005061.pdf
DRAWINGS	eaton-rotary-switches-surface-mounting-t0-main-switch-dimensions.eps eaton-rotary-switches-padlock-t0-main-switch-dimensions.eps eaton-general-totally-insulated-t0-main-switch-symbol.eps eaton-general-switch-t0-main-switch-symbol.eps eaton-rotary-switches-t0-main-switch-symbol.eps
ECAD MODEL	ETN.233988.edz
INSTALLATION INSTRUCTIONS	eaton-switch-discon-p1-insulated-enclosure-il03802001z.pdf
INSTALLATION VIDEOS	Eaton's P Switch-disconnectors used in a factory
MCAD MODEL	DA-CS-bauform2 DA-CD-bauform2
PRODUCT NOTIFICATIONS	MZ008005ZU_Orderform_Customized_Switch.pdf MZ008006ZU_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:



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