

Specifications

Photo is representative

Eaton 019890

Eaton Moeller® series P3 Main switch, P3, 100 A, flush mounting, 3 pole + N, Emergency switching off function, With red rotary handle and yellow locking ring, Lockable in the 0 (Off) position

General specifications

PRODUCT NAME	Eaton Moeller® series P3 Main switch
CATALOG NUMBER	019890
EAN	4015080198901
PRODUCT LENGTH/DEPTH	130 mm
PRODUCT HEIGHT	90 mm
PRODUCT WIDTH	90 mm
PRODUCT WEIGHT	0.496 kg
CERTIFICATIONS	UL File No.: E36332 CSA File No.: 012528 CSA UL Category Control No.: NLRV CE IEC/EN 60204 UL 60947-4-1 IEC/EN 60947 CSA Class No.: 3211-05 IEC/EN 60947-3 CSA-C22.2 No. 94 CSA-C22.2 No. 60947-4-1-14 UL VDE 0660
CATALOG NOTES	Rated Short-time Withstand Current (Icw) for a time of 1 second
MODEL CODE	P3-100/EA/SVB/N

Features & Functions

FEATURES	Version as main switch
	Version as emergency stop installation
	Version as maintenance-/service switch
FITTED WITH:	Red rotary handle and yellow locking ring
FUNCTIONS	Interlockable Emergency switching off function
LOCKING FACILITY	Lockable in the 0 (Off) position
NUMBER OF POLES	4

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

General

ACCESSORIES	Auxiliary contact fitted by user.
DEGREE OF PROTECTION	NEMA 12
DEGREE OF PROTECTION (FRONT SIDE)	IP65
LIFESPAN, MECHANICAL	100,000 Operations
MOUNTING METHOD	Flush 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	Branch circuits, suitable as motor disconnect, (UL/CSA) Front mounting 4-hole

Terminal capacities

TERMINAL CAPACITY	2 x (1.5 - 6) mm ² , flexible with ferrules to DIN 46228 2 x (2.5 - 10) mm ² , solid or stranded 14 - 2 AWG, solid or flexible with ferrule 1 x (1.5 - 25) mm ² , flexible with ferrules to DIN 46228 1 x (2.5 - 35) mm ² , solid or stranded
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
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)** 10 kA, SCCR (UL/CSA)
150A, max. Fuse, 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 I _u is specified for max. cross-section.

Switching capacity

LOAD RATING	1.6 x I _e (with intermittent operation class 12, 40 % duty factor)
	2 x I _e (with intermittent operation class 12, 25 % duty factor)
	1.3 x I _e (with intermittent operation class 12, 60 % 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)

90 A, Rated uninterrupted current 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)
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NUMBER OF AUXILIARY CONTACTS (CHANGE- OVER CONTACTS)	0
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NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
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NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
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Actuator

ACTUATOR COLOR	Red
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ACTUATOR TYPE	Door coupling rotary drive
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Design verification

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	0 W
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HEAT DISSIPATION CAPACITY PDISS	0 W
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HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	7.5 W
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RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	100 A
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STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W
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10.2.2 CORROSION RESISTANCE	Meets the product standard's requirements.
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10.2.3.1 VERIFICATION OF THERMAL STABILITY OF ENCLOSURES	Meets the product standard's requirements.
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10.2.3.2 VERIFICATION OF RESISTANCE OF INSULATING MATERIALS TO NORMAL HEAT	Meets the product standard's requirements.
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10.2.3.3 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS	Meets the product standard's requirements.
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10.2.4 RESISTANCE TO ULTRA-VIOLET (UV) RADIATION	UV resistance only in connection with protective shield.
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10.2.5 LIFTING	Does not apply, since the entire switchgear needs to be evaluated.
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10.2.6 MECHANICAL IMPACT	Does not apply, since the entire switchgear needs to be evaluated.
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10.2.7 INSCRIPTIONS	Meets the product standard's requirements.
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10.3 DEGREE OF PROTECTION OF ASSEMBLIES	Does not apply, since the entire switchgear needs to be evaluated.
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10.4 CLEARANCES AND CREEPAGE DISTANCES	Meets the product standard's requirements.
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10.5 PROTECTION AGAINST ELECTRIC SHOCK	Does not apply, since the entire switchgear needs to be evaluated.
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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-00004924.pdf](#) [DA-DC-00004896.pdf](#)

DRAWINGS

[eaton-rotary-switches-mounting-p3-main-switch-dimensions-003.eps](#)

	eaton-rotary-switches-mounting-p3-main-switch-dimensions-005.eps eaton-rotary-switches-padlock-t0-main-switch-dimensions.eps eaton-rotary-switches-mounting-p1-main-switch-3d-drawing.eps eaton-rotary-switches-t0-main-switch-symbol.eps eaton-general-mounting-p1-main-switch-symbol.eps
ECAD MODEL	DA-CE-ETN.P3-100 EA SVB N
INSTALLATION INSTRUCTIONS	eaton-switch-disconnector-p3-flush-mounting-il03802002z.pdf
INSTALLATION VIDEOS	Eaton's P Switch-disconnectors used in a factory
MCAD MODEL	DA-CS-p3 zz08 DA-CD-p3 zz08
PEP ECO-PASSPORT	EATO-00168-V01.01-EN.pdf
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-002.eps

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



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