

Specifications

Eaton 053117

Eaton Moeller® series P1 On-Off switch, P1, 25 A, service distribution board mounting, 3 pole, 1 N/O, 1 N/C, with black thumb grip and front plate

General Specifications

PRODUCT NAME	Eaton Moeller® series P1 On-off switch
CATALOG NUMBER	053117
EAN	4015080531173
PRODUCT LENGTH/DEPTH	91 mm
PRODUCT HEIGHT	70 mm
PRODUCT WIDTH	69 mm
PRODUCT WEIGHT	0.193 kg
CERTIFICATIONS	CSA-C22.2 No. 94 CSA-C22.2 No. 60947-4-1-14 UL File No.: E36332 CSA CSA File No.: 012528 VDE 0660 CSA Class No.: 3211-05 UL UL Category Control No.: NLRV CE UL 60947-4-1 IEC/EN 60204 IEC/EN 60947-3 IEC/EN 60947
CATALOG NOTES	Rated Short-time Withstand Current (I _{cw}) for a time of 1 second
MODEL CODE	P1-25/IVS/HI11

Features & Functions

FITTED WITH: Black thumb grip and front plate

NUMBER OF POLES 3

General information

ACCESSORIES Auxiliary contact or neutral conductor fitted by user.

DEGREE OF PROTECTION NEMA Other

DEGREE OF PROTECTION (FRONT SIDE) IP30

LIFESPAN, MECHANICAL 300,000 Operations

MOUNTING METHOD Service distribution board mounting

MOUNTING POSITION As required

OPERATING FREQUENCY 1200 Operations/h

OVERVOLTAGE CATEGORY III

POLLUTION DEGREE 3

PRODUCT CATEGORY On-Off switch

PRODUCT CATEGORY On-Off 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)
Distribution board installation

Climatic environmental conditions

AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
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AMBIENT OPERATING TEMPERATURE - MAX	50 °C
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AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C
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AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C
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CLIMATIC PROOFING	Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78
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Terminal capacities

TERMINAL CAPACITY	2 x (1.5 - 6) mm ² , solid or stranded 1 x (1.5 - 6) mm ² , solid or stranded 2 x (1 - 4) mm ² , flexible with ferrules to DIN 46228 14 - 8 AWG, solid or flexible with ferrule 1 x (1 - 4) mm ² , flexible with ferrules to DIN 46228
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SCREW SIZE	M4, Terminal screw
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TIGHTENING TORQUE	1.6 Nm, Screw terminals 14.1 lb-in, Screw terminals
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Electrical rating

**RATED BREAKING
CAPACITY AT 220/230 V** 190 A
(COS PHI TO IEC 60947-3)

**RATED BREAKING
CAPACITY AT 400/415 V** 150 A
(COS PHI TO IEC 60947-3)

**RATED BREAKING
CAPACITY AT 500 V (COS
PHI TO IEC 60947-3)** 170 A

**RATED BREAKING
CAPACITY AT 660/690 V** 150 A
(COS PHI TO IEC 60947-3)

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,** 19.6 A
220 V, 230 V, 240 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,** 15.2 A
380 V, 400 V, 415 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,** 12.1 A
500 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,** 8.8 A
660 V, 690 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-21,** 25 A
440 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,** 25 A
230 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,** 25 A
400 V, 415 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,** 17.4 A
500 V

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,** 12.6 A
690 V

**RATED OPERATIONAL
CURRENT (IE) AT DC-1,
LOAD-BREAK SWITCHES** 25 A
L/R = 1 MS

**RATED OPERATIONAL
CURRENT (IE) AT DC-23A,** 25 A
24 V

**RATED OPERATIONAL
CURRENT (IE) AT DC-23A,** 25 A
48 V

**RATED OPERATIONAL
CURRENT (IE) AT DC-23A,** 25 A

Short-circuit rating

**RATED CONDITIONAL
SHORT-CIRCUIT CURRENT** 50 kA
(IQ)

**RATED SHORT-TIME
WITHSTAND CURRENT** 640 A, Contacts, 1 second
(ICW) 0.64 kA

**SHORT-CIRCUIT CURRENT
RATING (BASIC RATING)** 110A, max. Fuse, SCCR
(UL/CSA)
5 kA, SCCR (UL/CSA)

**SHORT-CIRCUIT CURRENT
RATING (HIGH FAULT)** 10 kA, SCCR (UL/CSA)
50 A, Class J, max. Fuse,
SCCR (UL/CSA)

**SHORT-CIRCUIT
PROTECTION RATING** 25 A gG/gL, Fuse, Contacts

60 V	
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 120 V	12 A
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, 500 V, 50 HZ	7.5 kW
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	7.5 kW
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 VOLTAGE (UE) AT AC - MAX	690 V
RATED UNINTERRUPTED CURRENT (IU)	25 A
UNINTERRUPTED CURRENT	Rated uninterrupted current I _u is specified for max. cross-section.

Switching capacity

LOAD RATING	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)
	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)

20 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)

240 A

VOLTAGE PER CONTACT PAIR IN SERIES

60 V

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

NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)

1

NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)

1

Motor rating

ASSIGNED MOTOR

POWER AT 115/120 V, 60 HZ, 1-PHASE 1 HP

ASSIGNED MOTOR

POWER AT 200/208 V, 60 HZ, 1-PHASE 2 HP

ASSIGNED MOTOR

POWER AT 200/208 V, 60 HZ, 3-PHASE 3 HP

ASSIGNED MOTOR

POWER AT 230/240 V, 60 HZ, 1-PHASE 3 HP

ASSIGNED MOTOR

POWER AT 230/240 V, 60 HZ, 3-PHASE 5 HP

ASSIGNED MOTOR

POWER AT 460/480 V, 60 HZ, 3-PHASE 10 HP

ASSIGNED MOTOR

POWER AT 575/600 V, 60 HZ, 3-PHASE 15 HP

Actuator

ACTUATOR COLOR

Black

ACTUATOR TYPE

Short thumb-grip

Design verification

**EQUIPMENT HEAT
DISSIPATION, CURRENT-
DEPENDENT PVID** 0 W

**HEAT DISSIPATION
CAPACITY PDISS** 0 W

**HEAT DISSIPATION PER
POLE, CURRENT-
DEPENDENT PVID** 1.1 W

**RATED OPERATIONAL
CURRENT FOR SPECIFIED
HEAT DISSIPATION (IN)** 25 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** Meets the product
standard's requirements.

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	eaton-main-switch-declaration-of-conformity-uk251289en.pdf eaton-main-switch-declaration-of-conformity-eu250806en.pdf
DRAWINGS	eaton-rotary-switches-mounting-p1-on-off-switch-dimensions-002.eps eaton-rotary-switches-front-plate-t0-on-off-switch-symbol-002.eps eaton-general-rotary-switch-t0-step-switch-symbol-005.eps

ECAD MODEL	ETN.053117.edz
INSTALLATION INSTRUCTIONS	eaton-switch-disconnector-p1-rear-mounting-il03802004z.pdf
INSTALLATION VIDEOS	Eaton's P Switch-disconnectors used in a factory
MCAD MODEL	DA-CD-p1_zz26 DA-CS-p1_zz26
PRODUCT NOTIFICATIONS	MZ008005ZU_Orderform_Customized_Switch.pdf MZ008006ZU_Orderform_Customized_Switch.pdf
WIRING DIAGRAMS	eaton-rotary-switches-contact-p1-main-switch-wiring-diagram.eps

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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