

Specifications

Eaton 237541

Eaton Moeller® series P1 On-Off switch, P1, 32 A, surface mounting, 3 pole, 1 N/O, 1 N/C, with black thumb grip and front plate, UL/CSA

General Specifications

PRODUCT NAME	Eaton Moeller® series P1 On-off switch
CATALOG NUMBER	237541
EAN	4015082375416
PRODUCT LENGTH/DEPTH	107 mm
PRODUCT HEIGHT	180 mm
PRODUCT WIDTH	100 mm
PRODUCT WEIGHT	0.462 kg
CERTIFICATIONS	CSA Class No.: 3211-05 IEC/EN 60947-3 IEC/EN 60204 CSA-C22.2 No. 60947-4-1-14 UL File No.: E36332 CE CSA-C22.2 No. 94 IEC/EN 60947 VDE 0660 CSA CSA File No.: 012528 UL Category Control No.: NLRV UL 60947-4-1 UL
MODEL CODE	P1-32/I2/HI11-NA

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 12

DEGREE OF PROTECTION (FRONT SIDE) IP65

LIFESPAN, MECHANICAL 300,000 Operations

MOUNTING METHOD Surface 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 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 2 x (1 - 4) mm², flexible with ferrules to DIN 46228
2 x (1.5 - 6) mm², solid or stranded
1 x (1.5 - 6) mm², solid or stranded
14 - 8 AWG, solid or flexible with ferrule
1 x (1 - 4) mm², flexible with ferrules to DIN 46228

SCREW SIZE M4, Terminal screw

TIGHTENING TORQUE 14.1 lb-in, Screw terminals
1.6 Nm, Screw terminals

Electrical rating

**RATED BREAKING
CAPACITY AT 220/230 V** 260 A
(COS PHI TO IEC 60947-3)

**RATED BREAKING
CAPACITY AT 400/415 V** 300 A
(COS PHI TO IEC 60947-3)

**RATED BREAKING
CAPACITY AT 500 V (COS
PHI TO IEC 60947-3)** 290 A

**RATED BREAKING
CAPACITY AT 660/690 V** 250 A
(COS PHI TO IEC 60947-3)

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,
220 V, 230 V, 240 V** 26.4 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,
380 V, 400 V, 415 V** 26.4 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,
500 V** 23.4 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,
660 V, 690 V** 14.7 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-21,
440 V** 32 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,
230 V** 32 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,
400 V, 415 V** 32 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,
500 V** 30 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,
690 V** 19.8 A

**RATED OPERATIONAL
CURRENT (IE) AT DC-1,
LOAD-BREAK SWITCHES
L/R = 1 MS** 32 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,** 25 A

Short-circuit rating

**RATED CONDITIONAL
SHORT-CIRCUIT CURRENT
(IQ)** 80 kA

**RATED SHORT-TIME
WITHSTAND CURRENT
(ICW)** 640 A, Contacts, 1 second
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)** 50 A, Class J, max. Fuse,
SCCR (UL/CSA)
10 kA, SCCR (UL/CSA)

**SHORT-CIRCUIT
PROTECTION RATING** 50 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	13 kW
RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	13 kW
RATED OPERATIONAL POWER AT AC-3, 500 V, 50 HZ	18.5 kW
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	15 kW
RATED OPERATIONAL POWER AT AC-23A, 220/230 V, 50 HZ	7.5 kW
RATED OPERATIONAL POWER AT AC-23A, 400 V, 50 HZ	15 kW
RATED OPERATIONAL POWER AT AC-23A, 500 V, 50 HZ	18.5 kW
RATED OPERATIONAL POWER AT AC-23A, 690 V, 50 HZ	15 kW
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
RATED UNINTERRUPTED CURRENT (IU)	32 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)

30 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)

320 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 7.5 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** 1.8 W

**HEAT DISSIPATION
CAPACITY PDISS** 0 W

**HEAT DISSIPATION PER
POLE, CURRENT-
DEPENDENT PVID** 1.8 W

**RATED OPERATIONAL
CURRENT FOR SPECIFIED
HEAT DISSIPATION (IN)** 32 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	eaton-main-switch-declaration-of-conformity-uk251289en.pdf eaton-main-switch-declaration-of-conformity-eu250806en.pdf
DRAWINGS	eaton-rotary-switches-t0-on-off-switch-dimensions.eps eaton-rotary-switches-front-plate-t0-on-off-switch-symbol-002.eps eaton-general-rotary-switch-t0-step-switch-symbol.eps

	eaton-general-totally-insulated-t0-main-switch-symbol.eps
ECAD MODEL	ETN.237541.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-bauform6 DA-CD-bauform6
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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