

Specifications

Photo is representative

Eaton 197449

Eaton Moeller® series T0 T0, 20 A, surface mounting, 3 contact unit(s), 90 °, maintained, 0-1, in steel enclosure, Design number 15683

General specifications

PRODUCT NAME	Eaton Moeller® series T0 On-off switch
CATALOG NUMBER	197449
EAN	4015080895862
PRODUCT LENGTH/DEPTH	200 mm
PRODUCT HEIGHT	127 mm
PRODUCT WIDTH	150 mm
PRODUCT WEIGHT	1.59 kg
CERTIFICATIONS	IEC/EN 60947-3 IEC/EN 60204 IEC/EN 60947 VDE 0660
MODEL CODE	T0-3-15683/SE1

Features & Functions

FITTED WITH:	Black thumb grip and front plate
INSCRIPTION	0-1
NUMBER OF POLES	Three-pole

General

DEGREE OF PROTECTION	NEMA 12
DEGREE OF PROTECTION (FRONT SIDE)	IP65
LIFESPAN, MECHANICAL	400,000 Operations
MOUNTING METHOD	Surface mounting
MOUNTING POSITION	As required
NUMBER OF CONTACT UNITS	3
OPERATING FREQUENCY	1200 Operations/h
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	3
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
SWITCHING ANGLE	90 °

Climatic environmental conditions

AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MIN	-25 °C
AMBIENT OPERATING TEMPERATURE (ENCLOSED) - MAX	40 °C

Terminal capacities

TERMINAL CAPACITY	2 x (0.75 - 2.5) mm ² , flexible with ferrules to DIN 46228 1 x (1 - 2.5) mm ² , solid or stranded 2 x (1 - 2.5) mm ² , solid or stranded 1 x (0.75 - 2.5) mm ² , flexible with ferrules to DIN 46228
SCREW SIZE	M3.5, Terminal screw
TIGHTENING TORQUE	8.8 lb-in, Screw terminals 1 Nm, Screw terminals

Electrical rating

**RATED BREAKING
CAPACITY AT 220/230 V
(COS PHI TO IEC 60947-3)** 100 A

**RATED BREAKING
CAPACITY AT 400/415 V
(COS PHI TO IEC 60947-3)** 110 A

**RATED BREAKING
CAPACITY AT 500 V (COS
PHI TO IEC 60947-3)** 80 A

**RATED BREAKING
CAPACITY AT 660/690 V
(COS PHI TO IEC 60947-3)** 60 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-21,
440 V** 20 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,
230 V** 13.3 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,
400 V, 415 V** 13.3 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,
500 V** 13.3 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-23A,
690 V** 7.6 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,
220 V, 230 V, 240 V** 11.5 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,
380 V, 400 V, 415 V** 11.5 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,
500 V** 9 A

**RATED OPERATIONAL
CURRENT (IE) AT AC-3,
660 V, 690 V** 4.9 A

**RATED OPERATIONAL
CURRENT (IE) AT DC-1,
LOAD-BREAK SWITCHES
L/R = 1 MS** 10 A

**RATED OPERATIONAL
CURRENT (IE) AT DC-13,
CONTROL SWITCHES L/R
= 50 MS** 10 A

**RATED OPERATIONAL
CURRENT (IE) AT DC-21,** 1 A

Short-circuit rating

**RATED CONDITIONAL
SHORT-CIRCUIT CURRENT
(IQ)** 6 kA

**RATED SHORT-TIME
WITHSTAND CURRENT
(ICW)** 320 A, Contacts, 1 second
0.32 kA

**SHORT-CIRCUIT
PROTECTION RATING** 20 A gG/gL, Fuse, Contacts

240 V	
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 120 V	5 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 24 V	10 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 240 V	5 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 48 V	10 A
RATED OPERATIONAL CURRENT (IE) AT DC-23A, 60 V	10 A
RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 220/230 V	20 A
RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 380/400 V	20 A
RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 500 V	15.6 A
RATED OPERATIONAL CURRENT (IE) STAR- DELTA AT AC-3, 690 V	8.5 A
RATED OPERATIONAL POWER AT AC-23A, 220/230 V, 50 HZ	3 kW
RATED OPERATIONAL POWER AT AC-23A, 400 V, 50 HZ	5.5 kW
RATED OPERATIONAL POWER AT AC-23A, 500 V, 50 HZ	7.5 kW
RATED OPERATIONAL POWER AT AC-23A, 690 V, 50 HZ	5.5 kW
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	5.5 kW
RATED OPERATIONAL POWER AT AC-3, 415 V, 50 HZ	5.5 kW
RATED OPERATIONAL POWER AT AC-3, 690 V, 50 HZ	4 kW
RATED OPERATIONAL	5.5 kW

POWER STAR-DELTA AT 220/230 V, 50 HZ	
RATED OPERATIONAL POWER STAR-DELTA AT 380/400 V, 50 HZ	7.5 kW
RATED OPERATIONAL POWER STAR-DELTA AT 500 V, 50 HZ	7.5 kW
RATED OPERATIONAL POWER STAR-DELTA AT 690 V, 50 HZ	5.5 kW
RATED OPERATIONAL VOLTAGE (UE) AT AC - MAX	690 V
RATED UNINTERRUPTED CURRENT (IU)	20 A
UNINTERRUPTED CURRENT	Rated uninterrupted current Iu is specified for max. cross-section.
UNINTERRUPTED CURRENT	Rated uninterrupted current Iu is specified for max. cross-section.

Switching capacity

**NUMBER OF CONTACTS
IN SERIES AT DC-21A, 240
V**

1

**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**

3

**NUMBER OF CONTACTS
IN SERIES AT DC-23A, 120
V**

3

**NUMBER OF CONTACTS
IN SERIES AT DC-23A, 240
V**

5

**RATED MAKING
CAPACITY UP TO 690 V
(COS PHI TO IEC/EN
60947-3)**

130 A

**VOLTAGE PER CONTACT
PAIR IN SERIES**

60 V

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)

Actuator

ACTUATOR COLOR

Black

ACTUATOR FUNCTION

Maintained

ACTUATOR TYPE

Short thumb-grip

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)**

1

**NUMBER OF AUXILIARY
CONTACTS (NORMALLY
OPEN CONTACTS)**

2

Design verification

**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

UV resistance only in

ULTRA-VIOLET (UV) RADIATION	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

CATALOGUES	P Switch-disconnectors and T Rotary cam switches catalogue CA042001EN
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DECLARATIONS OF CONFORMITY	DA-DC-00004927.pdf DA-DC-00004895.pdf
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DRAWINGS	eaton-rotary-switches-t0-main-switch-dimensions-003.eps eaton-rotary-switches-t0-changeover-switch-3d-drawing.eps eaton-general-totally-insulated-t0-main-switch-symbol.eps eaton-general-rotary-switch-t0-step-switch-symbol.eps eaton-rotary-switches-front-plate-t0-on-off-switch-symbol-002.eps
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ECAD MODEL	DA-CE-ETN.T0-3-15683_SE1
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INSTALLATION INSTRUCTIONS	IL008054ZU
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WIRING DIAGRAMS	eaton-rotary-switches-switch-t0-main-switch-wiring-diagram-002.eps
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PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



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