Specifications

Eaton 222541

Catalog Number: 222541

Eaton Moeller® series T0 On-Off switch, 3 pole + N, 20 A, 90 °, surface mounting T0-2-10/I1

General specifications

Product Name
Eaton Moeller® series T0 On-off switch

Catalog Number
222541

EAN
4015082225414

Product Length/Depth
137 mm

Product Height
102 mm

Product Width
80 mm

Product Weight
0.264 kg

Certifications
IEC 60947
EN 60947
EN 60204
VDE
IEC/EN 60947
IEC/EN 60204
IEC/EN 60947-3
VDE 0660

Catalog Notes
Rated Short-time Withstand Current (Icw) for a time of 1 second

Product specifications

Product Category

On-Off switch

Actuator color

Black

Actuator function

Maintained

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

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-00004927.pdf

DA-DC-00004895.pdf

Drawings

eaton-rotary-switches-t0-changeover-switch-dimensions.eps

eaton-rotary-switches-dimensions-t0-step-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.T0-2-10_I1

Installation instructions

IL03801007Z2021_06.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-t0-on-off-switch-wiring-diagram-028.eps

eaton-rotary-switches-t0-on-off-switch-wiring-diagram-027.eps

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 thumb grip and front plate

Operating frequency

1200 Operations/h

Pollution degree

3

Climatic proofing

Damp heat, constant, to IEC 60068-2-78
Damp heat, cyclic, to IEC 60068-2-30

Rated impulse withstand voltage (Uimp)

6000 V AC

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 permanent current at AC-21, 400 V

20 A

Rated permanent current at AC-23, 400 V

13.3 A

Rated uninterrupted current (Iu)

20 A

Static heat dissipation, non-current-dependent Pvs

0 W

Switching angle

90 °

Switching power at 400 V

5.5 kW

Voltage per contact pair in series

60 V

Rated operational power at AC-3, 500 V, 50 Hz

5.5 kW

Device construction

Complete device in housing

Rated short-time withstand current (Icw)

320 A, Contacts, 1 second

0.32 kA

Electrical connection type of main circuit

Screw connection

Design

10

Mounting position

As required

Actuator type

Short thumb-grip

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

0.6 W

Heat dissipation capacity Pdiss

0 W

Heat dissipation per pole, current-dependent Pvid

0.6 W

Number of auxiliary contacts (change-over contacts)

0

Number of auxiliary contacts (normally closed contacts)

0

Rated conditional short-circuit current (Iq)

6 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 (front side)

IP65

Number of poles

4

Mounting method

Surface mounting

Degree of protection

NEMA 12

Suitable for

Ground mounting

Number of switches

1

Safe isolation

440 V AC, Between the contacts, According to EN 61140

Screw size

M3.5, Terminal screw

Inscription

0-1

Shock resistance

15 g, Mechanical, According to IEC/EN 60068-2-27, Half-sinusoidal shock 20 ms

Lifespan, mechanical

400,000 Operations

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)

Terminal capacity

2 x (0.75 - 2.5) mm², flexible with ferrules to DIN 46228
1 x (1 - 2.5) mm², solid or stranded
1 x (0.75 - 2.5) mm², flexible with ferrules to DIN 46228
2 x (1 - 2.5) mm², 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 contact units

2

Number of contacts in series at DC-21A, 240 V

1

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, 240 V

5

Number of contacts in series at DC-23A, 48 V

2

Number of contacts in series at DC-23A, 60 V

3

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 making capacity up to 690 V (cos phi to IEC/EN 60947-3)

130 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

20 A gG/gL, Fuse, Contacts

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, 240 V

1 A

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 current for specified heat dissipation (In)

20 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 power star-delta at 220/230 V, 50 Hz

5.5 kW

Rated operational power star-delta at 380/400 V, 50 Hz

7.5 kW

Tightening torque

1 Nm, Screw terminals

Uninterrupted current

Rated uninterrupted current Iu is specified for max. cross-section.

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