Specifications

Eaton 222470

Catalog Number: 222470

Eaton Moeller® series T0 step switch for heating, T0, 20 A, surface mounting, 2 contact unit(s), Contacts: 4, 60 °, maintained, With 0 (Off) position, 0-3, Design number 95

General specifications

Product Name
Eaton Moeller® series T0 Step switch

Catalog Number
222470

EAN
4015082224707

Product Length/Depth
98 mm

Product Height
100 mm

Product Width
80 mm

Product Weight
0.264 kg

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

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

Product specifications

Type

Step switch for heating

Features

Complete device in housing

Actuator function

Maintained

With 0 (Off) position

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.

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-dimensions-t0-step-switch-dimensions.eps

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

eaton-rotary-switches-front-plate-t0-step-switch-symbol-022.eps

eaton-general-rotary-switch-t0-step-switch-symbol.eps

eaton-general-totally-insulated-t0-main-switch-symbol.eps

eCAD model

DA-CE-ETN.T0-2-95_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

MZ008006ZU_Orderform_Customized_Switch.pdf

MZ008005ZU_Orderform_Customized_Switch.pdf

Wiring diagrams

eaton-rotary-switches-t0-step-switch-wiring-diagram-004.eps

eaton-rotary-switches-t0-step-switch-wiring-diagram-003.eps

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.

Fitted with:

Black thumb grip and front plate
0 (off) position

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 uninterrupted current (Iu)

20 A

Static heat dissipation, non-current-dependent Pvs

0 W

Switching angle

60 °

Voltage per contact pair in series

60 V

Width in number of modular spacings

0

Product category

Control switches

Number of poles

Single-pole

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

5.5 kW

Device construction

Surface mounted device

Switch type

Level switch

Rated short-time withstand current (Icw)

320 A, Contacts, 1 second

Actuator type

Toggle

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 W

Mounting position

As required

Mounting method

Surface mounting

Rated conditional short-circuit current (Iq)

6 kA

Degree of protection

IP65

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
NEMA 12

Number of contacts

4

Suitable for

Ground mounting

Heat dissipation capacity Pdiss

0 W

Heat dissipation per pole, current-dependent Pvid

0.6 W

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

Front shield size

48x48 mm

Safe isolation

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

Screw size

M3.5, Terminal screw

Inscription

0-3

Shock resistance

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

Lifespan, mechanical

400,000 Operations

Number of switch positions

4

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, 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) at AC - max

690 V

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

Safety parameter (EN ISO 13849-1)

B10d values as per EN ISO 13849-1, table C.1

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, 230 V

20 A

Rated operational current (Ie) star-delta at AC-3, 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, 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

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

Terminal capacity (flexible with ferrule)

2 x (0.75 - 2.5) mm², ferrules to DIN 46228

1 x (0.75 - 2.5) mm², ferrules to DIN 46228

Short-circuit protection rating

20 A gG/gL, Fuse, Contacts

Terminal capacity (solid/stranded)

1 x (1 - 2.5) mm²

2 x (1 - 2.5) mm²

Tightening torque

1 Nm, Screw terminals

Uninterrupted current

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

Design

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