Product specifications

Eaton 019872

Catalog Number: 019872

Eaton Moeller® series T0 Changeoverswitches, T0, 20 A, flush mounting, 1 contact unit(s), Contacts: 2, 45 °, maintained, With 0 (Off) position, HAND-0-AUTO, Design number 15431

General specifications

Product Name
Eaton Moeller® series T0 Changeover switch

Catalog Number
019872

Product Length/Depth
76 mm

Product Height
48 mm

Product Width
48 mm

Product Weight
0.083 kg

Certifications
CSA-C22.2 No. 94
CSA Class No.: 3211-05
IEC/EN 60947-3
CE
UL
IEC/EN 60947
IEC/EN 60204
CSA
CSA File No.: 012528
CSA-C22.2 No. 60947-4-1-14
UL File No.: E36332
VDE 0660
UL 60947-4-1
UL Category Control No.: NLRV

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

EAN
4015080198727

Model Code
T0-1-15431/E

Powering Business Worldwide

defaultTaxonomyAttributeLabel

Type

Changeover switch

Actuator function

With 0 (Off) position

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

Meets the product standard's requirements.

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

DA-DC-00004927.pdf

DA-DC-00004895.pdf

Drawings

eaton-rotary-switches-mounting-t0-step-switch-dimensions-034.eps

eaton-rotary-switches-mounting-t0-changeover-switch-3d-drawing-002.eps

eaton-rotary-switches-front-plate-t0-changeover-switch-symbol-017.eps

eaton-general-rotary-switch-t0-step-switch-symbol-002.eps

eCAD model

DA-CE-ETN.T0-1-15431_E

Installation instructions

IL03801020Z

Installation videos

Eaton's P Switch-disconnectors used in a factory

mCAD model

DA-CD-t0_1_e

DA-CS-t0_1_e

Wiring diagrams

eaton-rotary-switches-switch-t0-changeover-switch-wiring-diagram.eps

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

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

45 °

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

Built-in device

Switch type

Reverser

Rated short-time withstand current (Icw)

320 A, Contacts, 1 second

Actuator type

Toggle

Ambient operating temperature - max

50 °C

Ambient operating temperature - min

-25 °C

Ambient operating temperature (enclosed) - max

40 °C

Ambient operating temperature (enclosed) - min

-25 °C

Assigned motor power at 115/120 V, 60 Hz, 1-phase

0.5 HP

Assigned motor power at 200/208 V, 60 Hz, 1-phase

1 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

1.5 HP

Assigned motor power at 230/240 V, 60 Hz, 3-phase

3 HP

Assigned motor power at 460/480 V, 60 Hz, 3-phase

7.5 HP

Assigned motor power at 575/600 V, 60 Hz, 3-phase

7.5 HP

Equipment heat dissipation, current-dependent Pvid

0 W

Mounting position

As required

Mounting method

Flush mounting

Rated conditional short-circuit current (Iq)

6 kA

Degree of protection

NEMA 12

IP65

NEMA 1

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

2

Suitable for

Branch circuits, suitable as motor disconnect, (UL/CSA)

Front mounting

Heat dissipation capacity Pdiss

0 W

Heat dissipation per pole, current-dependent Pvid

0.6 W

Number of contact units

1

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

" HAND-0-AUTO "

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

3

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)

Switching capacity (auxiliary contacts, general use)

10A, IU, (UL/CSA)

Switching capacity (auxiliary contacts, pilot duty)

A600 (UL/CSA)
P300 (UL/CSA)

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

Switching capacity (main contacts, general use)

16 A, Rated uninterrupted current max. (UL/CSA)

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)

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

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

Short-circuit current rating (basic rating)

50A, max. Fuse, SCCR (UL/CSA)

5 kA, SCCR (UL/CSA)

Short-circuit current rating (high fault)

20 A, Class J, max. Fuse, SCCR (UL/CSA)

10 kA, SCCR (UL/CSA)

Short-circuit protection rating

20 A gG/gL, Fuse, Contacts

Terminal capacity (solid/flexible with ferrule AWG)

18 - 14

Terminal capacity (solid/stranded)

1 x (1 - 2.5) mm²

2 x (1 - 2.5) mm²

Tightening torque

1 Nm, Screw terminals

8.8 lb-in, Screw terminals

Uninterrupted current

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

Design

15431