

# Eaton 055459

Catalog Number: 055459

Eaton Moeller® series T0 Changeoverswitches, T0, 20 A, service distribution board mounting, 1 contact unit(s), Contacts: 2, 90 °, maintained, Without 0 (Off) position, 1-2, Design number 8220



Photo is representative

## General specifications

### Product Name

Eaton Moeller® series T0 Changeover switch

### Catalog Number

055459

### Product Length/Depth

82 mm

### Product Height

55 mm

### Product Width

54 mm

### Product Weight

0.106 kg

### Certifications

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

### Catalog Notes

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

### EAN

4015080554592

### Model Code

T0-1-8220/IVS

## Type

Changeover switch

## Product Category

Control switches

## Actuator function

Maintained

Without 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

Meets the product standard's requirements.

## 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.

## 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-002.eps

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

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

eaton-rotary-switches-front-plate-t0-changeover-switch-symbol-014.eps

eaton-general-rotary-switch-t0-step-switch-symbol-005.eps

## eCAD model

DA-CE-ETN.T0-1-8220\_IVS

## Installation instructions

IL03801006Z

## Installation videos

Eaton's P Switch-disconnectors used in a factory

## mCAD model

DA-CS-t0\_1\_ivs

DA-CD-t0\_1\_ivs

## Wiring diagrams

eaton-rotary-switches-contact-t0-changeover-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

#### 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

#### Enclosure material

Plastic

#### Rated impulse withstand voltage (Uimp)

6000 V AC

#### Actuator type

Short thumb-grip

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  $P_{vid}$

0 W

Heat dissipation capacity  $P_{diss}$

0 W

Heat dissipation per pole, current-dependent  $P_{vid}$

0.6 W

Number of auxiliary contacts (change-over contacts)

0

Number of auxiliary contacts (normally closed contacts)

0

Number of auxiliary contacts (normally open contacts)

0

Number of contact units

1

Rated short-time withstand current ( $I_{cw}$ )

320 A, Contacts, 1 second

Electrical connection type of main circuit

Screw connection

Mounting position

As required

Rated conditional short-circuit current (I<sub>q</sub>)

6 kA

Mounting method

Service distribution board mounting

Overvoltage category

III

Control circuit reliability

1 failure per 100,000 switching operations statistically determined, at 24 V DC, 10 mA)

Number of poles

1

Degree of protection

IP30

Number of contacts

2

Model

Reverser

Degree of protection (front side)

IP30

NEMA 2

Inscription

1-2

Lifespan, mechanical

400,000 Operations

Safe isolation

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

Rated operational current (I<sub>e</sub>)

20 A at AC-3, 400 V star-delta

8.5 A at AC-3, 690 V star-delta

15.6 A at AC-3, 500 V star-delta

20 A at AC-3, 230 V star-delta

Screw size

M3.5, Terminal screw

#### Shock resistance

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

#### Load rating

$1.6 \times I_e$  (with intermittent operation class 12, 40 % duty factor)

$1.3 \times I_e$  (with intermittent operation class 12, 60 % duty factor)

$2 \times I_e$  (with intermittent operation class 12, 25 % duty factor)

#### Switching capacity (auxiliary contacts, general use)

10A, IU, (UL/CSA)

#### Tightening torque

8.8 lb-in, Screw terminals

1 Nm, Screw terminals

#### Switching capacity (auxiliary contacts, pilot duty)

A600 (UL/CSA)

P300 (UL/CSA)

#### 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 operational current (I<sub>e</sub>) at AC-21, 440 V

20 A

Rated operational current (I<sub>e</sub>) at AC-23A, 230 V

13.3 A

Rated operational current (I<sub>e</sub>) at AC-23A, 400 V, 415 V

13.3 A

Rated operational current (I<sub>e</sub>) at AC-23A, 500 V

13.3 A

Rated operational current (I<sub>e</sub>) at AC-23A, 690 V

7.6 A

Rated operational current (I<sub>e</sub>) at AC-3, 220 V, 230 V, 240 V

11.5 A

Rated operational current (I<sub>e</sub>) at AC-3, 380 V, 400 V, 415 V

11.5 A

Rated operational current (I<sub>e</sub>) at AC-3, 500 V

9 A

Rated operational current (I<sub>e</sub>) at AC-3, 660 V, 690 V

4.9 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

Short-circuit protection rating

20 A gG/gL, Fuse, Contacts

Terminal capacity (flexible with ferrule)

2 x (0.75 - 2.5) mm<sup>2</sup>, ferrules to DIN 46228

1 x (0.75 - 2.5) mm<sup>2</sup>, ferrules to DIN 46228

Suitable for

Distribution board installation

Ground mounting

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

Rated operational current (I<sub>e</sub>) at DC-1, load-break switches I/r = 1 ms

10 A

Rated operational current (I<sub>e</sub>) at DC-13, control switches L/R = 50 ms

10 A

Rated operational current (I<sub>e</sub>) 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 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

4 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

Rated operational voltage (Ue) at AC - max

690 V

Rated uninterrupted current (Iu)



20 A

Static heat dissipation, non-current-dependent P<sub>vs</sub>

0 W

Switching angle

90 °

Voltage per contact pair in series

60 V

Short-circuit current rating (high fault)

10 kA, SCCR (UL/CSA)

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

Short-circuit current rating (basic rating)

5 kA, SCCR (UL/CSA)

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

Terminal capacity (solid/flexible with ferrule AWG)

18 - 14

Terminal capacity (solid/stranded)

1 x (1 - 2.5) mm<sup>2</sup>

2 x (1 - 2.5) mm<sup>2</sup>

Uninterrupted current

Rated uninterrupted current I<sub>u</sub> is specified for max. cross-section.

Design

8220



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