Specifications

Eaton 255904

Catalog Number: 255904

Eaton Moeller® series P3 Main switch, P3, 100 A, surface mounting, 3 pole, STOP function, With black rotary handle and locking ring, UL/CSA

General specifications

Product Name
Eaton Moeller® series P3 Main switch

Catalog Number
255904

EAN
4015082559045

Product Length/Depth
169 mm

Product Height
280 mm

Product Width
200 mm

Product Weight
1.5 kg

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

Product specifications

Product Category

Main switch

Features

Version as maintenance-/service switch

Version as main switch

Actuator color

Black

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-00004924.pdf

DA-DC-00004896.pdf

Drawings

eaton-rotary-switches-p3-main-switch-dimensions-010.eps

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

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

eaton-rotary-switches-t0-main-switch-symbol.eps

eCAD model

DA-CE-ETN.P3-100_I5_SVB-SW-NA

Installation instructions

eaton-rotary-switches-p3-63-p3-80-p3-100-cam-switch-disconnector-p3-instruction-leaflet-il03801010z.pdf

Installation videos

Eaton's P Switch-disconnectors used in a factory

mCAD model

DA-CD-bauform15

DA-CS-bauform15

Product notifications

MZ008006ZU_Orderform_Customized_Switch.pdf

MZ008005ZU_Orderform_Customized_Switch.pdf

Wiring diagrams

eaton-rotary-switches-on-off-switch-p3-main-switch-wiring-diagram.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 rotary handle and locking ring

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 permanent current at AC-21, 400 V

100 A

Rated permanent current at AC-23, 400 V

100 A

Rated uninterrupted current (Iu)

100 A

Static heat dissipation, non-current-dependent Pvs

0 W

Switching power at 400 V

55 kW

Voltage per contact pair in series

60 V

Accessories

Auxiliary contact or neutral conductor fitted by user.

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

45 kW

Device construction

Complete device in housing

Rated short-time withstand current (Icw)

2 kA

Electrical connection type of main circuit

Screw connection

Mounting position

As required

Actuator type

Door coupling rotary drive

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

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

5 HP

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

10 HP

Assigned motor power at 200/208 V, 60 Hz, 3-phase

20 HP

Assigned motor power at 230/240 V, 60 Hz, 1-phase

15 HP

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

25 HP

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

60 HP

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

75 HP

Equipment heat dissipation, current-dependent Pvid

7.5 W

Heat dissipation capacity Pdiss

0 W

Heat dissipation per pole, current-dependent Pvid

7.5 W

Number of auxiliary contacts (change-over contacts)

0

Number of auxiliary contacts (normally closed contacts)

0

Rated conditional short-circuit current (Iq)

4 kA (Load side)

80 kA (Supply side)

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

3

Mounting method

Surface mounting

Degree of protection

NEMA 12

Suitable for

Ground mounting

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

Functions

STOP function

Interlockable

Number of switches

1

Safe isolation

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

Screw size

M5, Terminal screw

Shock resistance

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

Lifespan, mechanical

100,000 Operations

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)

Switching capacity (auxiliary contacts, general use)

10A, IU, (UL/CSA)

Switching capacity (auxiliary contacts, pilot duty)

A600 (UL/CSA)
P600 (UL/CSA)

Terminal capacity

1 x (1.5 - 25) mm², flexible with ferrules to DIN 46228
2 x (2.5 - 10) mm², solid or stranded
2 x (1.5 - 6) mm², flexible with ferrules to DIN 46228
1 x (2.5 - 35) mm², solid or stranded
14 - 2 AWG, solid or flexible with ferrule

Switching capacity (main contacts, general use)

100 A, If used with neutral conductor IU = max. 90 A, Rated uninterrupted current max. (UL/CSA)

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 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, 48 V

2

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

2

Rated breaking capacity at 220/230 V (cos phi to IEC 60947-3)

760 A

Rated breaking capacity at 400/415 V (cos phi to IEC 60947-3)

740 A

Rated breaking capacity at 500 V (cos phi to IEC 60947-3)

880 A

Rated breaking capacity at 660/690 V (cos phi to IEC 60947-3)

520 A

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

950 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 current rating (basic rating)

150A, max. Fuse, SCCR (UL/CSA)
10 kA, SCCR (UL/CSA)

Short-circuit protection rating

100 A gG/gL, Fuse, Contacts

Rated operational current (Ie) at AC-21, 440 V

100 A

Rated operational current (Ie) at AC-23A, 230 V

100 A

Rated operational current (Ie) at AC-23A, 400 V, 415 V

100 A

Rated operational current (Ie) at AC-23A, 500 V

96 A

Rated operational current (Ie) at AC-23A, 690 V

68 A

Rated operational current (Ie) at AC-3, 220 V, 230 V, 240 V

71 A

Rated operational current (Ie) at AC-3, 380 V, 400 V, 415 V

71 A

Rated operational current (Ie) at AC-3, 500 V

65 A

Rated operational current (Ie) at AC-3, 660 V, 690 V

23.8 A

Rated operational current (Ie) at DC-1, load-break switches l/r = 1 ms

100 A

Rated operational current (Ie) at DC-23A, 120 V

25 A

Rated operational current (Ie) at DC-23A, 24 V

50 A

Rated operational current (Ie) at DC-23A, 48 V

50 A

Rated operational current (Ie) at DC-23A, 60 V

50 A

Rated operational current for specified heat dissipation (In)

100 A

Rated operational power at AC-23A, 220/230 V, 50 Hz

30 kW

Rated operational power at AC-23A, 400 V, 50 Hz

55 kW

Rated operational power at AC-23A, 500 V, 50 Hz

55 kW

Rated operational power at AC-23A, 690 V, 50 Hz

55 kW

Rated operational power at AC-3, 380/400 V, 50 Hz

37 kW

Rated operational power at AC-3, 415 V, 50 Hz

37 kW

Rated operational power at AC-3, 690 V, 50 Hz

37 kW

Tightening torque

3 Nm, Screw terminals

26.5 lb-in, Screw terminals

Uninterrupted current

Rated uninterrupted current Iu is specified for max. cross-

section.

Rated Switching Capacity

10 HP at 200 V AC, single-phase

15 HP at 240 V AC, single-phase

20 HP at 200 V AC, three-phase

25 HP at 240 V AC, three-phase

5 HP at 120 V AC, single-phase

60 HP at 480 V AC, three-phase

75 HP at 600 V AC, three-phase

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