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T0-1-102/XZ - On-Off switch, T0, 20 A, rear mounting, Basic switch, 1 contact unit(s), 2 pole



005736 T0-1-102/XZ

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005736 T0-1-102/XZ

On-Off switch, T0, 20 A, rear mounting, Basic switch, 1 contact unit(s), 2 pole

EL-Nummer (Norway) 1456651

On-Off switch, Product range: On-Off switch, Part group reference: T0, 2 pole, Design: rear mounting, Basic switch, Switching angle: 90 °, Motor rating AC-23A, 50 - 60 Hz 400 V: P= 5.5 kW, Rated uninterrupted current: $I_u = 20$ A, 1 contact unit(s), Standards: IEC/EN 60947, VDE 0660, IEC/EN 60204, Switch-disconnector according to IEC/EN 60947-3



- Delivery program
- Technical data
- Design verification as per IEC/EN 61439
- Technical data ETIM 7.0

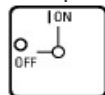
Delivery program

Product range
On-Off switch
Part group reference
T0
Number of poles
2 pole
Design
rear mounting
Basic switch
Contact sequence



○ ○ ○ ○
- 2 3 4
Switching angle
90 °

Design number
102
Front plate no.



FS 908

Motor rating AC-23A, 50 - 60 Hz [P]
400 V [P]
5.5 kW
Rated uninterrupted current [I_u]
20 A

Note on rated uninterrupted current I_u
Rated uninterrupted current I_u is specified for max. cross-section.
Number of contact units

1 contact unit(s)

Technical data

General

Standards

IEC/EN 60947, VDE 0660, IEC/EN 60204

Switch-disconnector according to IEC/EN 60947-3

Climatic proofing

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

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

Ambient temperature Open

-25 - +50 °C

Ambient temperature Enclosed

-25 - +40 °C

Overvoltage category/pollution degree

III/3

Rated impulse withstand voltage [U_{imp}]

6000 V AC

Mechanical shock resistance

15 g

Mounting position

As required

Contacts

Mechanical variables Number of poles

2 pole

Electrical characteristics Rated operational voltage [U_e]

690 V AC

Electrical characteristics Rated uninterrupted current [I_u]

20 A

Electrical characteristics Note on rated uninterrupted current I_u

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

Load rating with intermittent operation, class 12AB 25 % DF

$2 \times I_e$

Load rating with intermittent operation, class 12AB 40 % DF

$1.6 \times I_e$

Load rating with intermittent operation, class 12AB 60 % DF

$1.3 \times I_e$

Short-circuit rating Fuse

20 A gG/gL

Rated short-time withstand current (1 s current) [I_{cw}]

320 A_{rms}

Note on rated short-time withstand current I_{cw}

Current for a time of 1 second

Rated conditional short-circuit current [I_c]

6 kA

Switching capacity

cos ϕ rated making capacity as per IEC 60947-3

130 A

Rated breaking capacity cos ϕ to IEC 60947-3 230 V

100 A

Rated breaking capacity cos ϕ to IEC 60947-3 400/415 V

110 A

Rated breaking capacity cos ϕ to IEC 60947-3 500 V

80 A

Rated breaking capacity cos ϕ to IEC 60947-3 690 V

60 A

Safe isolation to EN 61140 between the contacts

440 V AC

Safe isolation to EN 61140 Current heat loss per contact at I_e

0.6 W

Safe isolation to EN 61140 Current heat loss per auxiliary circuit at I_e (AC-15/230 V)

0.6 W

Lifespan, mechanical [Operations]

$> 0.4 \times 10^6$

Maximum operating frequency [Operations/h]

1200

AC AC-3 Rating, motor load switch [P] 220 V 230 V [P]

3 kW

AC AC-3 Rating, motor load switch [P]230 V Star-delta [P]
 5.5 kW
 AC AC-3 Rating, motor load switch [P]400 V 415 V [P]
 5.5 kW
 AC AC-3 Rating, motor load switch [P]400 V Star-delta [P]
 7.5 kW
 AC AC-3 Rating, motor load switch [P]500 V [P]
 5.5 kW
 AC AC-3 Rating, motor load switch [P]500 V Star-delta [P]
 7.5 kW
 AC AC-3 Rating, motor load switch [P]690 V [P]
 4 kW
 AC AC-3 Rating, motor load switch [P]690 V Star-delta [P]
 5.5 kW
 AC AC-3 Rated operational current motor load switch 230 V [I_e]
 11.5 A
 AC AC-3 Rated operational current motor load switch 230 V star-delta [I_e]
 20 A
 AC AC-3 Rated operational current motor load switch 400 V 415 V [I_e]
 11.5 A
 AC AC-3 Rated operational current motor load switch 400 V star-delta [I_e]
 20 A
 AC AC-3 Rated operational current motor load switch 500 V [I_e]
 9 A
 AC AC-3 Rated operational current motor load switch 500 V star-delta [I_e]
 15.6 A
 AC AC-3 Rated operational current motor load switch 690 V [I_e]
 4.9 A
 AC AC-3 Rated operational current motor load switch 690 V star-delta [I_e]
 8.5 A
 AC AC-23A motor rating AC-23A, 50 - 60 Hz [P]230 V [P]
 3 kW
 AC AC-23A motor rating AC-23A, 50 - 60 Hz [P]400 V 415 V [P]
 5.5 kW
 AC AC-23A motor rating AC-23A, 50 - 60 Hz [P]500 V [P]
 7.5 kW
 AC AC-23A motor rating AC-23A, 50 - 60 Hz [P]690 V [P]
 5.5 kW
 AC AC-23A Rated operational current motor load switch 230 V [I_e]
 13.3 A
 AC AC-23A Rated operational current motor load switch 400 V 415 V [I_e]
 13.3 A
 AC AC-23A Rated operational current motor load switch 500 V [I_e]
 13.3 A
 AC AC-23A Rated operational current motor load switch 690 V [I_e]
 7.6 A
 DC DC-1, Load-break switches L/R = 1 ms Rated operational current [I_e]
 10 A
 DC DC-1, Load-break switches L/R = 1 ms Voltage per contact pair in series
 60 V
 DC DC-21A [I_e] Rated operational current [I_e]
 1 A
 DC DC-21A [I_e] Contacts
 1 Quantity
 DC DC-23A, motor load switch L/R = 15 ms 24 V Rated operational current [I_e]
 10 A
 DC DC-23A, motor load switch L/R = 15 ms 24 V Contacts
 1 Quantity
 DC DC-23A, motor load switch L/R = 15 ms 48 V Rated operational current [I_e]
 10 A
 DC DC-23A, motor load switch L/R = 15 ms 48 V Contacts
 2 Quantity
 DC DC-23A, motor load switch L/R = 15 ms 60 V Rated operational current [I_e]
 10 A
 DC DC-23A, motor load switch L/R = 15 ms 60 V Contacts
 3 Quantity
 DC DC-23A, motor load switch L/R = 15 ms 120 V Rated operational current [I_e]
 5 A
 DC DC-23A, motor load switch L/R = 15 ms 120 V Contacts

3 Quantity
 DDC-23A, motor load switch L/R = 15 ms/240 V Rated operational current [I_e]
 5 A
 DDC-23A, motor load switch L/R = 15 ms/240 V Contacts
 5 Quantity
 DDC-13, Control switches L/R = 50 ms Rated operational current [I_e]
 10 A
 DDC-13, Control switches L/R = 50 ms Voltage per contact pair in series
 32 V
 Control circuit reliability at 24 V DC, 10 mA [Fault probability]
 $< 10^{-5}$, < 1 failure in 100,000 switching operations H
 Terminal capacities
 Solid or stranded
 1 x (1 - 2,5)
 2 x (1 - 2,5) mm²
 Flexible with ferrules to DIN 46228
 1 x (0.75 - 2.5)
 2 x (0.75 - 2.5) mm²
 Terminal screw
 M3.5
 Tightening torque for terminal screw
 1 Nm
 Technical safety parameters:
Notes
 B10_d values as per EN ISO 13849-1, table C1
 Rating data for approved types
 Terminal capacity Terminal screw
 M3.5

Design verification as per IEC/EN 61439

Technical data for design verification
 Rated operational current for specified heat dissipation [I_n]
 20 A
 Heat dissipation per pole, current-dependent [P_{vid}]
 0.6 W
 Equipment heat dissipation, current-dependent [P_{vid}]
 0 W
 Static heat dissipation, non-current-dependent [P_{vs}]
 0 W
 Heat dissipation capacity [P_{diss}]
 0 W
 Operating ambient temperature min.
 -25 °C
 Operating ambient temperature max.
 +50 °C
 IEC/EN 61439 design verification
 10.2 Strength of materials and parts 10.2.2 Corrosion resistance
 Meets the product standard's requirements.
 10.2 Strength of materials and parts 10.2.3.1 Verification of thermal stability of enclosures
 Meets the product standard's requirements.
 10.2 Strength of materials and parts 10.2.3.2 Verification of resistance of insulating materials to normal heat
 Meets the product standard's requirements.
 10.2 Strength of materials and parts 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects
 Meets the product standard's requirements.
 10.2 Strength of materials and parts 10.2.4 Resistance to ultra-violet (UV) radiation
 UV resistance only in connection with protective shield.
 10.2 Strength of materials and parts 10.2.5 Lifting
 Does not apply, since the entire switchgear needs to be evaluated.
 10.2 Strength of materials and parts 10.2.6 Mechanical impact
 Does not apply, since the entire switchgear needs to be evaluated.
 10.2 Strength of materials and parts 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 Insulation properties 10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

10.9 Insulation properties 10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

10.9 Insulation properties 10.9.4 Testing of enclosures made of insulating material

Is the panel builder's responsibility.

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.

Technical data ETIM 7.0

Low-voltage industrial components (EG000017) / Switch disconnecter (EC000216)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnecter (ecl@ss10.0.1-27-37-14-03 [AKF060013])

Version as main switch

No

Version as maintenance-/service switch

No

Version as safety switch

No

Version as emergency stop installation

No

Version as reversing switch

No

Number of switches

1

Max. rated operation voltage U_e AC

690 V

Rated operating voltage

690 - 690 V

Rated permanent current I_u

20 A

Rated permanent current at AC-23, 400 V

13.3 A

Rated permanent current at AC-21, 400 V

20 A

Rated operation power at AC-3, 400 V

5.5 kW

Rated short-time withstand current I_{cw}

0.32 kA

Rated operation power at AC-23, 400 V

5.5 kW

Switching power at 400 V

5.5 kW

Conditioned rated short-circuit current I_q

6 kA

Number of poles

2

Number of auxiliary contacts as normally closed contact

0

Number of auxiliary contacts as normally open contact

0

Number of auxiliary contacts as change-over contact

0

Motor drive optional

No
 Motor drive integrated
 No
 Voltage release optional
 No
 Device construction
 Built-in device fixed built-in technique
 Suitable for ground mounting
 Yes
 Suitable for front mounting 4-hole
 No
 Suitable for front mounting centre
 No
 Suitable for distribution board installation
 No
 Suitable for intermediate mounting
 Yes
 Colour control element
 Black
 Type of control element
 Toggle
 Interlockable
 No
 Type of electrical connection of main circuit
 Screw connection
 Degree of protection (IP), front side
 IP00
 Degree of protection (NEMA)
 Other

CAD data

- [Product-specific CAD data](#)
(Web)
- [3D Preview](#)
(Web)

DWG files

- [DA-CD-t0_xz_1](#)
File
(Web)

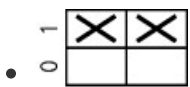
edz files

- [DA-CE-ETN.T0-1-102_XZ](#)
File
(Web)

Step files

- [DA-CS-t0_xz_1](#)
File
(Web)

Wiring diagram



115S008-2

Line drawing

On-Off switches w without auxiliary contacts

Symbol



FS 908

115K001

Graphic

FS908 standard front plate

Product photo



1150PIC-531

Photo

Declaration of Conformity

EU

- [Rotary Cam Switch T0 \(DA-DC-00003632\)](#)
Asset
(PDF)

UK

- [Rotary Cam Switch T0 \(DA-DC-00004000\)](#)
Asset
(PDF)

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