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T0-3-8250/E - Step switches, T0, 20 A, flush mounting, 3 contact unit(s), Contacts: 6, 45 °, maintained, Without 0 (Off) position, 1-3, design no. 8250



013451 T0-3-8250/E

[Overview](#) [Specifications](#) [Resources](#)



013451 T0-3-8250/E

Step switches, T0, 20 A, flush mounting, 3 contact unit(s), Contacts: 6, 45 °, maintained, Without 0 (Off) position, 1-3, design no. 8250

EL-Nummer (Norway)

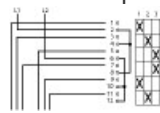
1456340

Step switch, Product range: Control switches, Standards: IEC/EN 60947, VDE 0660, IEC/EN 60204, CSA, UL, Switch-disconnector according to IEC/EN 60947-3, Part group reference: T0, with black thumb grip and front plate, Contacts: 6, Degree of Protection: Front IP65, Design: flush mounting, Switching angle: 45 °, Switching performance: maintained, Without 0 (Off) position, 3 contact unit(s), Rated uninterrupted current: I_u= 20 A, front plate: 1-3

- [Delivery program](#)
- [Technical data](#)
- [Design verification as per IEC/EN 61439](#)
- [Technical data ETIM 7.0](#)
- [Approvals](#)
- [Dimensions](#)

Delivery program

Product range
Control switches
Part group reference
T0
Basic function
Step switches
with black thumb grip and front plate
Contacts
6
Degree of Protection
Front IP65
Design
flush mounting

Contact sequence

Switching angle
45 °
Switching performance
maintained
Without 0 (Off) position
Design number
8250
Front plate no.



FS 404
front plate
1-3
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
3 contact unit(s)

Technical data

General
Standards
IEC/EN 60947, VDE 0660, IEC/EN 60204, CSA, UL
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
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
 $\cos \phi$ rated making capacity as per IEC 60947-3
130 A
Rated breaking capacity $\cos \phi$ to IEC 60947-3 230 V
100 A
Rated breaking capacity $\cos \phi$ to IEC 60947-3 400/415 V
110 A
Rated breaking capacity $\cos \phi$ to IEC 60947-3 500 V
80 A
Rated breaking capacity $\cos \phi$ 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 CO
 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
 DDC-1, Load-break switches L/R = 1 ms Rated operational current [I_e]
 10 A
 DDC-1, Load-break switches L/R = 1 ms Voltage per contact pair in series
 60 V
 DDC-21A [I_e] Rated operational current [I_e]
 1 A
 DDC-21A [I_e] Contacts
 1 Quantity
 DDC-23A, motor load switch L/R = 15 ms 24 V Rated operational current [I_e]
 10 A

DDC-23A, motor load switch L/R = 15 ms24 VContacts
 1 Quantity
 DDC-23A, motor load switch L/R = 15 ms48 VRated operational current [I_e]
 10 A
 DDC-23A, motor load switch L/R = 15 ms48 VContacts
 2 Quantity
 DDC-23A, motor load switch L/R = 15 ms60 VRated operational current [I_e]
 10 A
 DDC-23A, motor load switch L/R = 15 ms60 VContacts
 3 Quantity
 DDC-23A, motor load switch L/R = 15 ms120 VRated operational current [I_e]
 5 A
 DDC-23A, motor load switch L/R = 15 ms120 VContacts
 3 Quantity
 DDC-23A, motor load switch L/R = 15 ms240 VRated operational current [I_e]
 5 A
 DDC-23A, motor load switch L/R = 15 ms240 VContacts
 5 Quantity
 DDC-13, Control switches L/R = 50 msRated operational current [I_e]
 10 A
 DDC-13, Control switches L/R = 50 msVoltage 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 $\frac{H}{F}$
 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
 ContactsRated operational voltage [U_e]
 600 V AC
 ContactsRated uninterrupted current max.Main conducting pathsGeneral use
 16 A
 ContactsRated uninterrupted current max.Auxiliary contactsGeneral Use [I_u]
 10 A
 ContactsRated uninterrupted current max.Auxiliary contactsPlot Duty
 A 600
 P 300
 Switching capacityMaximum motor ratingSingle-phase120 V AC
 0.5 HP
 Switching capacityMaximum motor ratingSingle-phase200 V AC
 1 HP
 Switching capacityMaximum motor ratingSingle-phase240 V AC
 1.5 HP
 Switching capacityMaximum motor ratingThree-phase200 V AC
 3 HP
 Switching capacityMaximum motor ratingThree-phase240 V AC
 3 HP
 Switching capacityMaximum motor ratingThree-phase480 V AC
 7.5 HP
 Switching capacityMaximum motor ratingThree-phase600 V AC
 7.5 HP
 Short Circuit Current RatingBasic Rating
 5 kA
 Short Circuit Current Ratingmax. Fuse
 50 A
 Short Circuit Current RatingHigh fault rating
 10 kA
 Short Circuit Current Ratingmax. Fuse

20, Class J A
Terminal capacity Solid or flexible conductor with ferrule
18 - 14 AWG
Terminal capacity Terminal screw
M3.5
Terminal capacity Tightening torque
8.8 lb-in

Design verification as per IEC/EN 61439

Technical data for design verification

Rated operational current for specified heat dissipation [I_r]

20 A

Heat dissipation per pole, current-dependent [P_{id}]

0.6 W

Equipment heat dissipation, current-dependent [P_{id}]

0 W

Static heat dissipation, non-current-dependent [P_s]

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) / Control switch (EC002611)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Control switch (ecl@ss10.0.1-27-37-14-14 [ACN998011])

Type of switch

Level switch

Number of poles

2

Max. rated operation voltage U_e AC

690 V

Rated permanent current I_u

20 A

Number of switch positions

3

With 0 (off) position

No

With retraction in 0-position

No

Device construction

Built-in device

Width in number of modular spacings

0

Suitable for ground mounting

No

Suitable for front mounting 4-hole

Yes

Suitable for distribution board installation

No

Suitable for intermediate mounting

No

Complete device in housing

No

Type of control element

Toggle

Front shield size

48x48 mm

Degree of protection (IP), front side

IP65

Degree of protection (NEMA), front side

12

Approvals

Product Standards

UL 60947-4-1; CSA - C22.2 No. 60947-4-1-14; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking

UL File No.

E36332

UL Category Control No.

NLRV

CSA File No.

12528

CSA Class No.

3211-05

North America Certification

UL listed, CSA certified

Suitable for

Branch circuits, suitable as motor disconnect

Degree of Protection

IEC: IP65; UL/CSA Type 1, 12

Dimensions



ZFS-... Label mount not included as standard

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

DWG files

- [DA-CD-t0_3_e](#)
File
(Web)


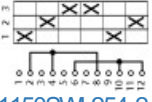
edz files

- [DA-CE-ETN.T0-3-8250_E](#)
File
(Web)

Step files

- [DA-CS-t0_3_e](#)
File
(Web)

Wiring diagram

- 
[1150SW-254](#)
Line drawing
- 
[1150SW-254-2](#)
Line drawing

Dimensions single product


- 
[115X412](#)
Line drawing
Flush mounting
 ZFS-... Label mount not included as standard

Product photo

- 

[1150PIC-399](#)
Photo

Symbol

- [000Z079](#)
Graphic
Rotary switch installation
- 
FS 404
[115K022](#)

Graphic
FS404 standard front plate

Instruction Leaflet

- [T0 Camswitches: Mounting \(IL03801020Z\)](#)
Asset
former AWA115-587, IL00802008E
(PDF, 06/2021, multilingual)

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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