



098806
T5-1-102/V/SVB

Overview

Specifications

Resources



Delivery program

Technical data

Design verification as
per IEC/EN 61439

Technical data ETIM 7.0

Dimensions

DELIVERY PROGRAM

Product range
Main switch
maintenance switch
Repair switch

Part group reference
T5

Stop Function
Emergency switching off function

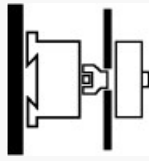
With red rotary handle and yellow locking ring

Number of poles
2 pole

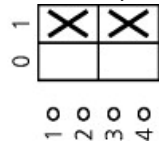
Locking facility
Lockable in the 0 (Off) position

Degree of Protection
Front IP65

Design
rear mounting



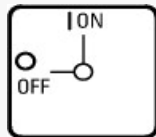
Contact sequence



Switching angle
90°

Design number
102

Function



Motor rating AC-23A, 50 - 60 Hz [P]

400 V [P]
55 kW

Rated uninterrupted current [I_u]
100 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]

100 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 12
AB 25 % DF
 $2 \times I_e$

Load rating with intermittent operation, class 12
AB 40 % DF
 $1.6 \times I_e$

Load rating with intermittent operation, class 12
AB 60 % DF
 $1.3 \times I_e$

Short-circuit rating
Fuse
100 A gG/gL

Rated short-time withstand current (1 s current)
 $[I_{cw}]$
 $1700 A_{rms}$

Note on rated short-time withstand current I_{cw}
Current for a time of 1 second

Rated conditional short-circuit current $[I_k]$
2 kA

Switching capacity

$\cos \phi$ rated making capacity as per IEC 60947-3
950 A

Rated breaking capacity $\cos \phi$ to IEC 60947-3
230 V
760 A

Rated breaking capacity $\cos \phi$ to IEC 60947-3
400/415 V
740 A

Rated breaking capacity $\cos \phi$ to IEC 60947-3
500 V
590 A

Rated breaking capacity $\cos \phi$ to IEC 60947-3
690 V
420 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
7.5 W

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

Lifespan, mechanical [Operations]
> 0.5 x 10⁶

Maximum operating frequency [Operations/h]
1200

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

AC
AC-3
Rating, motor load switch [P]
230 V Star-delta [P]
30 kW

AC
AC-3
Rating, motor load switch [P]
400 V 415 V [P]
30 kW

AC
AC-3
Rating, motor load switch [P]
400 V Star-delta [P]
45 kW

AC
AC-3

Rating, motor load switch [P]
500 V [P]
30 kW

AC
AC-3
Rating, motor load switch [P]
500 V Star-delta [P]
45 kW

AC
AC-3
Rating, motor load switch [P]
690 V [P]
15 kW

AC
AC-3
Rating, motor load switch [P]
690 V Star-delta [P]
22 kW

AC
AC-3
Rated operational current motor load switch
230 V [I_n]
71 A

AC
AC-3
Rated operational current motor load switch
230 V star-delta [I_n]
100 A

AC
AC-3
Rated operational current motor load switch
400V 415 V [I_n]
55 A

AC
AC-3
Rated operational current motor load switch
400 V star-delta [I_n]
95.3 A

AC
AC-3
Rated operational current motor load switch
500 V [I_n]
44 A

AC
AC-3
Rated operational current motor load switch
500 V star-delta [I_e]
76.2 A

AC
AC-3
Rated operational current motor load switch
690 V [I_e]
17 A

AC
AC-3
Rated operational current motor load switch
690 V star-delta [I_e]
29.4 A

AC
AC-23A
Motor rating AC-23A, 50 - 60 Hz [P]
230 V [P]
30 kW

AC
AC-23A
Motor rating AC-23A, 50 - 60 Hz [P]
400 V 415 V [P]
55 kW

AC
AC-23A
Motor rating AC-23A, 50 - 60 Hz [P]
500 V [P]
37 kW

AC
AC-23A
Motor rating AC-23A, 50 - 60 Hz [P]
690 V [P]
30 kW

AC
AC-23A
Rated operational current motor load switch
230 V [I_e]
100 A

AC
AC-23A
Rated operational current motor load switch
400 V 415 V [I_e]
100 A

AC
AC-23A
Rated operational current motor load switch
500 V [I_e]
55 A

AC
AC-23A
Rated operational current motor load switch
690 V [I_e]
32 A

DC
DC-1, Load-break switches L/R = 1 ms
Rated operational current [I_e]
80 A

DC
DC-1, Load-break switches L/R = 1 ms
Voltage per contact pair in series
60 V

Control circuit reliability at 24 V DC, 10 mA [Fault probability]
< 10^{-5} , < 1 failure in 100,000 switching operations
H_F

Terminal capacities

Solid or stranded
1 x (2,5 - 35)
2 x (2,5 - 16) mm²

Flexible with ferrules to DIN 46228
1 x (1 - 25)
2 x (1,5 - 10) mm²

Terminal screw
M6

Tightening torque for terminal screw
4 Nm

Technical safety parameters:

Notes

Rating data for approved types

Contacts
Rated operational voltage [U_e]
600 V AC

Contacts
Rated uninterrupted current max.
Main conducting paths
General use
65 A

Terminal capacity
Terminal screw
M6

Terminal capacity
Tightening torque
35.32 lb-in

DESIGN VERIFICATION AS PER IEC/EN 61439

Technical data for design verification

Rated operational current for specified heat
dissipation [I_n]
100 A

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

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

Static heat dissipation, non-current-dependent [P_{is}]
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 (ec1@ss10.0.1-27-37-14-03 [AKF060013])

Version as main switch

Yes

Version as maintenance-/service switch

Yes

Version as safety switch

No

Version as emergency stop installation

Yes

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

100 A

Rated permanent current at AC-23, 400 V

100 A

Rated permanent current at AC-21, 400 V
100 A

Rated operation power at AC-3, 400 V
30 kW

Rated short-time withstand current I_{cw}
1.7 kA

Rated operation power at AC-23, 400 V
55 kW

Switching power at 400 V
55 kW

Conditioned rated short-circuit current I_q
2 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
Red

Type of control element
Door coupling rotary drive

Interlockable
Yes

Type of electrical connection of main circuit
Screw connection

Degree of protection (IP), front side
IP65

Degree of protection (NEVA)
Other

DIMENSIONS

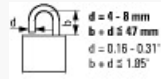


- ☐ Shaft and interlock extension with ZAV-P3 + ZVV-P3 possible; max. 4 x 25 = 100 mm
- ☐ ZFS-... Label mount not included as standard

☐ Drilling dimensions base

☐ Drilling dimensions door

Cam switches T5B and T5 have the exact same design; the only difference between them is



☐ 3 padlocks

