



029382 T0-3-8342/EA/SVB

Overview

Specifications

Resources







# **DELIVERY PROGRAM**

Delivery program

Product range
Main switch
maintenance switch
Repair switch

Technical data

Design verification as per IEC/EN 61439

Part group reference

Τ'n

Technical data E∏M7.0

Stop Function

Emergency switching off function

Approvals

With red rotary handle and yellow locking ring

Dimensions

Number of poles 6 pole

Locking facility
Lockable in the 0 (Off) position

Degree of Protection Front IP65

# Design flush mounting Contact sequence XXXXXX Switching angle 90° Design number 8342 **Function** O OFF 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  $\mathbf{l}_{u}$  Rated uninterrupted current  $\mathbf{l}_{u}$  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 [ $U_{mp}$ ] 6000 V AC

Mechanical shock resistance 15 g

Mounting position As required

#### **Contacts**

Mechanical variables Number of poles 6 pole

Bectrical characteristics Rated operational voltage [U<sub>e</sub>] 690 V AC

Bectrical characteristics
Rated uninterrupted current [I<sub>u</sub>]
20 A

Bectrical characteristics

Note on rated uninterrupted current !u

Rated uninterrupted current !u is specified for max.

cross-section.

Load rating with intermittent operation, class 12 AB 25 % DF  $_{\rm 2\,X\,I_{\rm e}}$ 

Load rating with intermittent operation, class 12 AB 40 % DF 1.6 x  $I_{\rm e}$ 

Load rating with intermittent operation, class 12 AB 60 % DF 1.3 x  $I_{\rm e}$ 

Short-circuit rating Fuse 20 A gG/gL

Rated short-time withstand current (1 s current)  $[l_{\text{cw}}]$  320  $A_{\text{rms}}$ 

Note on rated short-time withstand current lcw Current for a time of 1 second

Rated conditional short-circuit current  $[\mathsf{I}_q]$  6 kA

## **Switching capacity**

 $\cos\phi$  rated making capacity as per IEC 60947-3 130 A

Rated breaking capacity cos  $\varphi$  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  $\varphi$  to IEC 60947-3 500 V  $80~\mbox{A}$ 

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 BN 61140 Current heat loss per contact at  $\rm l_e$  0.6 W

Safe isolation to EN 61140 Ourrent heat loss per auxiliary circuit at  $\rm I_{\rm e}$  (AC-15/230 V)  $0.6~\rm CO$ 

Lifespan, mechanical [Operations] > 0.4 x 10<sup>6</sup>

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 [ $_{\rm e}$ ] 11.5 A

AC
AC-3
Rated operational current motor load switch
230 V star-delta [l<sub>e</sub>]
20 A

AC AC-3 Rated operational current motor load switch 400V 415 V [ $l_{\rm e}$ ] 11.5 A

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

AC
AC-3
Rated operational current motor load switch
500 V [I<sub>e</sub>]
9 A

AC AC-3 Rated operational current motor load switch 500 V star-delta [I $_{\rm e}$ ] 15.6 A

AC
AC-3
Rated operational current motor load switch
690 V [I<sub>e</sub>]
4.9 A

AC
AC-3
Rated operational current motor load switch
690 V star-delta [I<sub>e</sub>]
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 [la]
13.3 A

AC AC-23A Rated operational current motor load switch 400 V 415 V [[,] 13.3 A AC
AC-23A
Rated operational current motor load switch
500 V [Le]
13.3 A

AC
AC-23A
Rated operational current motor load switch
690 V [La]
7.6 A

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

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

DC DC-21A [ $l_e$ ] Rated operational current [ $l_e$ ] 1 A

DC DC-21A [l<sub>e</sub>] Contacts 1 Quantity

DC
DC-23A, motor load switch L/R = 15 ms
24 V
Rated operational current [I<sub>e</sub>]
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<sub>e</sub>] 10 A

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 [le] 10 A 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 [le] 5 A DC DC-23A, motor load switch L/R = 15 ms 120 V Contacts 3 Quantity DC DC-23A, motor load switch L/R = 15 ms Rated operational current [le] 5 A DC DC-23A, motor load switch L/R = 15 ms 240 V Contacts 5 Quantity

DC DC-13, Control switches L/R = 50 ms Rated operational current [le] 10 A

DC DC-13, Control switches L/R = 50 ms Voltage per contact pair in series 32 V

probability]  $< 10^{-5}, < 1$  failure in 100,000 switching operations H<sub>=</sub>

## **Terminal capacities**

Solid or stranded 1 x (1 - 2,5) 2 x (1 - 2,5) mm<sup>2</sup>

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

Terminal screw MB.5

Tightening torque for terminal screw 1 Nm

## **Technical safety parameters:**

#### Notes

B10<sub>d</sub> values as per EN ISO 13849-1, table C1

## Rating data for approved types

Contacts
Rated operational voltage [U<sub>e</sub>]
600 V AC

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

Contacts
Rated uninterrupted current max.
Auxiliary contacts
General Use [I<sub>U</sub>]
10 A

Contacts
Rated uninterrupted current max.
Auxiliary contacts
Filot Duty

A 600 P300

Switching capacity
Maximum motor rating
Single-phase
120 V AC
0.5 HP

Switching capacity
Maximum motor rating
Single-phase
200 V AC
1 HP

Switching capacity Maximum motor rating Single-phase 240 V AC 1.5 HP

Switching capacity Maximum motor rating Three-phase 200 V AC 3 HP

Switching capacity
Maximum motor rating
Three-phase
240 V AC
3 HP

Switching capacity Maximum motor rating Three-phase 480 V AC 7.5 HP

Switching capacity Maximum motor rating Three-phase 600 V AC 7.5 HP

Short Circuit Current Rating Basic Rating 5 kA

Short Circuit Current Rating max. Fuse 50 A Short Circuit Current Rating High fault rating 10 kA

Short Circuit Current Rating max. 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  $[I_n]$  20 A

Heat dissipation per pole, current-dependent  $[P_{id}] \\ 0.6 \, W$ 

Equipment heat dissipation, current-dependent  $[P_{\text{vid}}] \\ 0 \, \text{W}$ 

Static heat dissipation, non-current-dependent [P\_\s] 0 W

Heat dissipation capacity  $[P_{diss}]$  0 W

Operating ambient temperature min.

Operating ambient temperature max. +50 °C

#### IEC/EN 61439 design verification

10.2 Strength of materials and parts10.2.2 Corrosion resistanceWeets 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 parts10.2.3.2 Verification of resistance of insulating materials to normal heatWeets 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 parts10.2.4 Resistance to ultra-violet (UV) radiationUV resistance only in connection with protective shield.

10.2 Strength of materials and parts10.2.5 LiftingDoes not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts10.2.6 Mechanical impactDoes not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts10.2.7 InscriptionsMeets the product standard's requirements.

10.3 Degree of protection of ASSEVBLIES

Does not apply, since the entire switchgear needs

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 properties10.9.4 Testing of enclosures made of insulating materialIs 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.

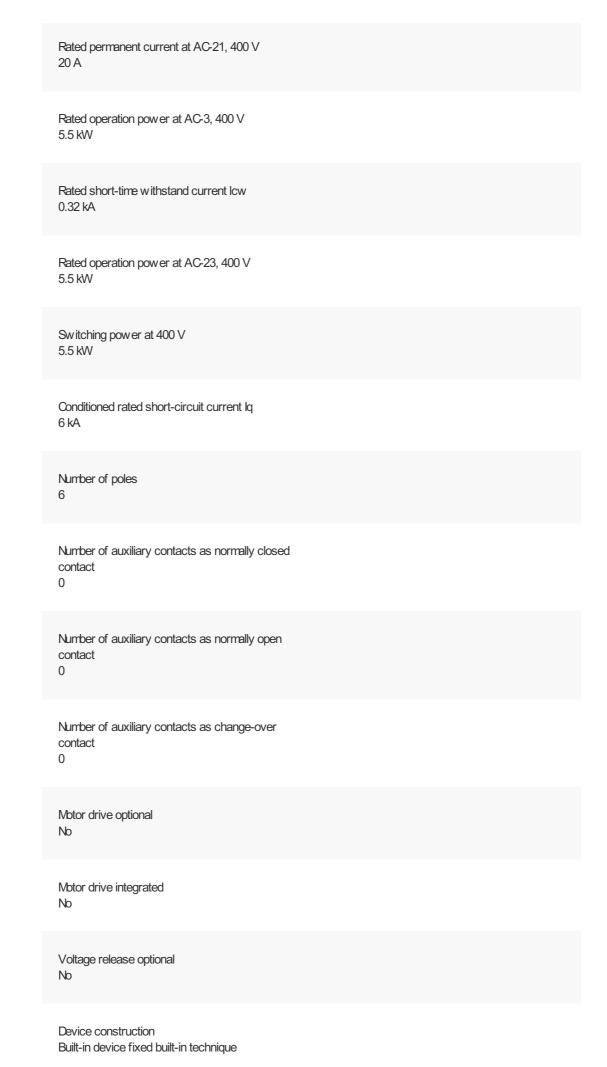
10.13 Mechanical function
The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

# **TECHNICAL DATA ETIM 7.0**

Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)
Bectric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnector (ecl@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 Ue AC 690 V
Rated operating voltage 690 - 690 V
Rated permanent current lu 20 A

Rated permanent current at AC-23, 400  $\rm V$ 

13.3 A



Suitable for ground mounting No
Suitable for front mounting 4-hole No
Suitable for front mounting centre Yes
Suitable for distribution board installation No
Suitable for intermediate mounting No
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) 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**









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