



095417 AT4/11-1/I/R316

Overview

Specifications

Resources







# **DELIVERY PROGRAM**

Delivery program

Basic function
Position switches
Safety position switches

Technical data

Design verification as per IEC/EN 61439

Part group reference

AT4

Technical data ETIM 7.0

Product range Rotary lever

Approvals

Degree of Protection

IP65

Features Complete unit

Ambient temperature -25 - +70 °C

Design EN 50041 Form A Approval

totally insulated

#### **Contacts**

NO = Normally open 1 NO

NC = Normally closed 1 NC

Notes

 $_{\mbox{\tiny $\square$}}$  = safety function, by positive opening to IEC/EN 60947-5-1

Contact sequence

Contact travel■ = Contact closed□ = Contact open

13-14 21-22 0° 34° 44° 72° 7w = 50°

Positive opening (ZW) yes

### Colour

Enclosure covers Grey

Enclosure covers



Housing Insulated material

Connection type Screw terminal

#### Notes

The operating head can be rotated at 90° intervals to adapt to the specified approach direction. For degree of protection IP65, use V-M20 (206910) cable glands with connecting thread of max. 9 mm length.

## **TECHNICAL DATA**

#### **General**

Standards IEC/EN 60947

Climatic proofing
Damp heat, constant, to IEC 60068-2-78; damp heat, cyclical, to IEC 60068-2-30

Ambient temperature -25 - +70 °C

Mounting position As required

Degree of Protection IP65

Terminal capacities Solid 1 x (0.75 - 2.5) 2 x (0.75 - 1.5) mm<sup>2</sup>

Terminal capacities Flexible with ferrule 1 x (0.5 - 1.5) 2 x (0.5 - 1.5) mm<sup>2</sup>

Repetition accuracy 0.02 mm

### Contacts/switching capacity

Rated impulse withstand voltage [U<sub>imp</sub>] 6000 V AC Rated insulation voltage [Ui] 500 V Overvoltage category/pollution degree 111/3 Rated operational current [le] AC-15 24 V [l<sub>e</sub>] 10 A Rated operational current [le] AC-15 220 V 230 V 240 V [le] 6 A Rated operational current [le] AC-15 380 V 400 V 415 V [l<sub>e</sub>] 4 A Rated operational current [le] DC-13 24 V [l<sub>e</sub>] 10 A Rated operational current [le] DC-13 110 V [l<sub>e</sub>] 1 A Rated operational current [le] DC-13 220 V [l<sub>e</sub>] 0.5 A Supply frequency max. 400 Hz Short-circuit rating to IEC/EN 60947-5-1 max. fuse 6 A gG/gL

Rated conditional short-circuit current

#### **Mechanical variables**

Lifespan, mechanical [Operations] 8 x 10<sup>6</sup>

Contact temperature of roller head  $\square$  100 °C

Mechanical shock resistance (half-sinusoidal shock, 20 ms)
Standard-action contact
5 g

Mechanical shock resistance (half-sinusoidal shock, 20 ms)
Snap-action contact
2 g

Operating frequency [Operations/h]  $\square$  6000

#### **Actuation**

Mechanical Actuating force at beginning/end of stroke 8.0/20.0 N

Mechanical Actuating torque of rotary drives 0.3 Nm

## **DESIGN VERIFICATION AS PER IEC/EN 61439**

## Technical data for design verification

Rated operational current for specified heat dissipation  $\left[I_{n}\right]$  6 A

Heat dissipation per pole, current-dependent  $[P_{id}] \\ 0.1 \, W$ 

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

0 W

Static heat dissipation, non-current-dependent  $[P_{\!\scriptscriptstyle V\!S}]$  0 W

Heat dissipation capacity [P<sub>diss</sub>] 0 W

Operating ambient temperature min. -25 °C

Operating ambient temperature max. +70 °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 parts 10.2.3.2 Verification of resistance of insulating materials to normal heat Weets 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 Meets the product standard's requirements.

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 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 properties10.9.3 Impulse withstand voltageIs 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**

Sensors (EG000026) / End switch (EC000030)

Bectric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Position switch / Position switch (Type 1) (ecl@ss10.0.1-27-27-06-01 [AGZ382015])

Width sensor 40 mm

Diameter sensor 0 mm

Height of sensor 83 mm

Length of sensor 0 mm

Rated operation current le at AC-15, 24 V  $10\,\mathrm{A}$ 

Rated operation current le at AC-15, 125 V  $0\,\mathrm{A}$ 

| Rate<br>6 A  | ed operation current le at AC-15, 230 V        |
|--------------|--|
| Rate<br>10 / | ed operation current le at DC-13, 24 V<br>A    |
| Rate<br>1 A  | ed operation current le at DC-13, 125 V        |
| Rate         | ed operation current le at DC-13, 230 V<br>A   |
|              | itching function<br>w-action switch            |
| Swi<br>No    | itching function latching                      |
| Out<br>No    | put electronic                                 |
| For<br>Yes   | ced opening                                    |
| Nun<br>1     | rber of safety auxiliary contacts              |
| Nun<br>1     | rber of contacts as normally closed contact    |
| Nun<br>1     | rber of contacts as normally open contact      |
| Nun<br>0     | rber of contacts as change-over contact        |
| Typ<br>Non   | ne of interface<br>ne                          |
| Typ<br>Non   | be of interface for safety communication<br>ne |
| Con          | nstruction type housing                        |

| Ouboid  |
|---|
| Material housing<br>Plastic                     |
| Coating housing<br>Other                        |
| Type of control element Rotary lever            |
| Alignment of the control element<br>Other       |
| Type of electric connection<br>Other            |
| With status indication No                       |
| Suitable for safety functions<br>Yes            |
| Explosion safety category for gas<br>None       |
| Explosion safety category for dust<br>None      |
| Ambient temperature during operating 25 - 70 °C |
| Degree of protection (IP) IP65                  |
| Degree of protection (NEVA) Other               |

# **APPROVALS**

**Product Standards** 

UL 508; CSA-C22.2 No. 14; IEC/EN 60947-4-1; CE marking UL File No. E29184 UL Category Control No. NKCR CSA File No. 12528 CSA Class No. 3211-03 North America Certification UL listed, CSA certified Specially designed for North America Suitable for Branch circuits Max. Voltage Rating 600 V AC

Degree of Protection

UL: 1, 4X; CSA: 1, 3R, 4, 4X, 12, 13



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