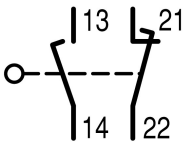
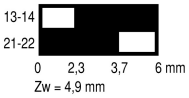
# DATASHEET - AT4/11-2/IA/S

**Position switch, 1early N/O+1late N/C, wide, IP65_x, plunger**

| | |
|---|---|
| **Part no.** | **AT4/11-2/IA/S** |
| **Catalog No.** | **024229** |
| **Alternate Catalog No.** | **AT4/11-2/IA/S** |

Powering Business Worldwide™

## Delivery program

| | | |
|---|---|---|
| Basic function | | Position switches<br>Safety position switches |
| Part group reference | | AT4 |
| Product range | | Rounded plunger |
| Degree of Protection | | IP65 |
| Features | | Complete unit |
| Ambient temperature | °C | -25 - +70 |
| Design | | EN 50041 Form B |
| Approval | | totally insulated |
| **Contacts** | | |
| N/O = Normally open | | 1 N/O |
| N/C = Normally closed | | 1 NC |
| Notes | | = safety function, by positive opening to IEC/EN 60947-5-1 |
| Contact sequence | |  |
| Contact travel ■ = Contact closed □ = Contact open | |  |
| Positive opening (ZW) | | yes |
| **Colour** | | |
| Enclosure covers | | Grey |
| Enclosure covers | |  |
| Housing | | Insulated material |
| Connection type | | Screw terminal |

**Notes** 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 | °C | -25 - +70 |
| Mounting position | | As required |
| Degree of Protection | | IP65 |
| Terminal capacities | $mm^2$ | |
| Solid | $mm^2$ | 1 x (0.75 - 2.5)<br>2 x (0.75 - 1.5) |

| | | | |
|---|---|---|---|
| Flexible with ferrule | | $mm^2$ | 1 x (0.5 - 1.5)<br>2 x (0.5 - 1.5) |
| Repetition accuracy | | mm | 0.02 |

## Contacts/switching capacity

| | | | |
|---|---|---|---|
| Rated impulse withstand voltage | $U_{imp}$ | V AC | 6000 |
| Rated insulation voltage | $U_i$ | V | 500 |
| Overvoltage category/pollution degree | | | III/3 |
| Rated operational current | $I_e$ | A | |
| AC-15 | | | |
| 24 V | $I_e$ | A | 10 |
| 220 V 230 V 240 V | $I_e$ | A | 6 |
| 380 V 400 V 415 V | $I_e$ | A | 4 |
| DC-13 | | | |
| 24 V | $I_e$ | A | 10 |
| 110 V | $I_e$ | A | 1 |
| 220 V | $I_e$ | A | 0.5 |
| Supply frequency | | Hz | max. 400 |
| Short-circuit rating to IEC/EN 60947-5-1 | | | |
| max. fuse | | A gG/gL | 6 |

## Mechanical variables

| | | | |
|---|---|---|---|
| Lifespan, mechanical | Operations | $x\ 10^6$ | 8 |
| Contact temperature of roller head | | °C | ≦ 100 |
| Mechanical shock resistance (half-sinusoidal shock, 20 ms) | | | |
| Standard-action contact | | g | 5 |
| Snap-action contact | | g | 2 |
| Operating frequency | Operations/h | | ≦ 6000 |

## Actuation

| | | | |
|---|---|---|---|
| Mechanical | | | |
| Actuating force at beginning/end of stroke | | N | 8.0/20.0 |
| Actuating torque of rotary drives | | Nm | 0.3 |
| Max. operating speed with DIN cam | | m/s | 0.5/0.5 |
| **Notes** | | | for angle of actuation α = 0°/30° |

# Design verification as per IEC/EN 61439

| | | | |
|---|---|---|---|
| Technical data for design verification | | | |
| Rated operational current for specified heat dissipation | $I_n$ | A | 6 |
| Heat dissipation per pole, current-dependent | $P_{vid}$ | W | 0.1 |
| Equipment heat dissipation, current-dependent | $P_{vid}$ | W | 0 |
| Static heat dissipation, non-current-dependent | $P_{vs}$ | W | 0 |
| Heat dissipation capacity | $P_{diss}$ | W | 0 |
| Operating ambient temperature min. | | °C | -25 |
| Operating ambient temperature max. | | °C | 70 |
| IEC/EN 61439 design verification | | | |
| 10.2 Strength of materials and parts | | | |
| 10.2.2 Corrosion resistance | | | Meets the product standard's requirements. |
| 10.2.3.1 Verification of thermal stability of enclosures | | | Meets the product standard's requirements. |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat | | | Meets the product standard's requirements. |
| 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. |
| 10.2.4 Resistance to ultra-violet (UV) radiation | | | Meets the product standard's requirements. |
| 10.2.5 Lifting | | | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.2.6 Mechanical impact | | | Does not apply, since the entire switchgear needs to be evaluated. |
| 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. |
| 10.9.3 Impulse withstand voltage | | Is the panel builder's responsibility. |
| 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)

Electric 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 | mm | 56 |
| Diameter sensor | mm | 0 |
| Height of sensor | mm | 83 |
| Length of sensor | mm | 0 |
| Rated operation current Ie at AC-15, 24 V | A | 10 |
| Rated operation current Ie at AC-15, 125 V | A | 0 |
| Rated operation current Ie at AC-15, 230 V | A | 6 |
| Rated operation current Ie at DC-13, 24 V | A | 10 |
| Rated operation current Ie at DC-13, 125 V | A | 1 |
| Rated operation current Ie at DC-13, 230 V | A | 0.4 |
| Switching function | | Slow-action switch |
| Switching function latching | | No |
| Output electronic | | No |
| Forced opening | | Yes |
| Number of safety auxiliary contacts | | 1 |
| Number of contacts as normally closed contact | | 1 |
| Number of contacts as normally open contact | | 1 |
| Number of contacts as change-over contact | | 0 |
| Type of interface | | None |
| Type of interface for safety communication | | None |
| Construction type housing | | Cuboid |
| Material housing | | Plastic |
| Coating housing | | Other |
| Type of control element | | Plunger |
| Alignment of the control element | | Other |
| Type of electric connection | | Other |
| With status indication | | No |
| Suitable for safety functions | | Yes |
| Explosion safety category for gas | | None |
| Explosion safety category for dust | | None |
| Ambient temperature during operating | °C | 25 - 70 |
| Degree of protection (IP) | | IP65 |
| Degree of protection (NEMA) | | 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 | No |
| Suitable for | Branch circuits |
| Max. Voltage Rating | 600 V AC |
| Degree of Protection | UL: 1, 4X; CSA: 1, 3R, 4, 4X, 12, 13 |