## DATASHEET - AT4/11-S/I/S



### Position switch, 1N/O+1N/C, narrow, IP65\_x, plunger

Part no. AT4/11-S/I/S Catalog No. 090673 Alternate Catalog AT4/11-S/I/S



Delivery program		
Basic function		Position switches 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
Snap-action contact		Yes
Approval		totally insulated
Contacts		
N/0 = Normally open		1 N/0
N/C = Normally closed		1 NC →
Notes		= safety function, by positive opening to IEC/EN 60947-5-1
Contact sequence		0-\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Contact travel = Contact closed = Contact open		13-14 21-22 13-14 21-22 13-14 ← 0 1.8 3.2 6 mm Zw = 4.7 mm
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 conne	ecting thread of max. 9 mm	n length.

### **Technical data**

#### General

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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

Decree of Dectarding			IDEC
Degree of Protection			IP65
Terminal capacities		mm <sup>2</sup>	
Solid		mm <sup>2</sup>	1 x (0.75 - 2.5) 2 x (0.75 - 1.5)
Flexible with ferrule		mm <sup>2</sup>	1 x (0.5 - 1.5) 2 x (0.5 - 1.5)
Repetition accuracy		mm	0.02
Contacts/switching capacity			
Rated impulse withstand voltage	U <sub>imp</sub>	V AC	6000
Rated insulation voltage	Ui	V	500
Overvoltage category/pollution degree			III/3
Rated operational current	I <sub>e</sub>	Α	
AC-15			
24 V	I <sub>e</sub>	Α	10
220 V 230 V 240 V	I <sub>e</sub>	Α	6
380 V 400 V 415 V	I <sub>e</sub>	Α	4
DC-13			
24 V	I <sub>e</sub>	Α	10
110 V	l <sub>e</sub>	Α	1
220 V	l <sub>e</sub>	Α	0.5
Supply frequency		Hz	max. 400
Short-circuit rating to IEC/EN 60947-5-1			
max. fuse		A gG/gL	6
Rated conditional short-circuit current		kA	1
Mechanical variables			
Lifespan, mechanical	Operations	x 10 <sup>6</sup>	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 $\alpha=0^{\circ}/30^{\circ}$

# Design verification as per IEC/EN 61439

echnical data for design verification			
Rated operational current for specified heat dissipation	In	Α	6
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0.1
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	0
Static heat dissipation, non-current-dependent	$P_{vs}$	W	0
Heat dissipation capacity	P <sub>diss</sub>	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	70
EC/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.

Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Position switch / Position switch (Type 1)

#### **Technical data ETIM 7.0**

Explosion safety category for gas

Explosion safety category for dust

Degree of protection (IP)

Ambient temperature during operating

Sensors (EG000026) / End switch (EC000030)

(ecl@ss10.0.1-27-27-06-01 [AGZ382015]) Width sensor 40 Diameter sensor mm 0 Height of sensor 83 mm Length of sensor 0 mm Rated operation current le at AC-15, 24 V Α 10 Rated operation current le at AC-15, 125 V 0 Α Rated operation current le at AC-15, 230 V Α 6 Rated operation current le at DC-13, 24 V 10 Α Rated operation current le at DC-13, 125  $\rm V$ Α Rated operation current le at DC-13, 230 V Α 0.4 Switching function Quick-break switch Switching function latching No Output electronic No Yes Forced opening Number of safety auxiliary contacts 1 Number of contacts as normally closed contact 1 Number of contacts as normally open contact Number of contacts as change-over contact 0 Type of interface None Type of interface for safety communication None Cuboid Construction type housing Plastic Material housing Coating housing **Other** Plunger Type of control element Alignment of the control element Other Type of electric connection Other With status indication No Suitable for safety functions Yes

°C

None

None

25 - 70

IP65

Degree of protection (NEMA)	Other	
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# Approvals

UL File No.  E29184  UL Category Control No.  NKCR  CSA File No.  12528  CSA Class No.  North America Certification  Specially designed for North America  Suitable for  Max. Voltage Rating  E29184  NCR  NCR  NCR  NCR  L12528  UL listed, CSA certified  No  Branch circuits  600 V AC	• •	
UL Category Control No.  CSA File No.  12528  CSA Class No.  3211-03  North America Certification  UL listed, CSA certified  Specially designed for North America  No  Suitable for  Max. Voltage Rating  NKCR  12528  12528  121-03	Product Standards	UL 508; CSA-C22.2 No. 14; IEC/EN 60947-4-1; CE marking
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	UL File No.	E29184
CSA Class No.  North America Certification  UL listed, CSA certified  No  Specially designed for North America  No  Suitable for  Branch circuits  Max. Voltage Rating  8211-03  UL listed, CSA certified  No  800 V AC	UL Category Control No.	NKCR
North America Certification  UL listed, CSA certified  No  Specially designed for North America  No  Branch circuits  Max. Voltage Rating  OUV AC	CSA File No.	12528
Specially designed for North America  No Suitable for Branch circuits  Max. Voltage Rating  600 V AC	CSA Class No.	3211-03
Suitable for Branch circuits  Max. Voltage Rating 600 V AC	North America Certification	UL listed, CSA certified
Max. Voltage Rating 600 V AC	Specially designed for North America	No
	Suitable for	Branch circuits
Degree of Protection UL: 1, 4X; CSA: 1, 3R, 4, 4X, 12, 13	Max. Voltage Rating	600 V AC
	Degree of Protection	UL: 1, 4X; CSA: 1, 3R, 4, 4X, 12, 13