DATASHEET - ATO-11-2-IA/ZS



Position switch, 1early N/O+1late N/C, wide, IP65_x, rounded plunger, centre fixing



Part no. AT0-11-2-IA/ZS Catalog No. 095394 Alternate Catalog AT0-11-2-IA/ZS No.

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Delivery program			
Basic function		Position switches Safety position switches	
Part group reference		ATO	
Product range		Rounded plunger, centre fixing	
Degree of Protection		IP65	
Features		Basic device, not expandable	
Ambient temperature	°C	-25 - +70	
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		0-\frac{127}{28} \frac{15}{16}	
Contact travel = Contact closed = Contact open		17-18 25-26 0 2.1 3.4 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 connecting thread of max. 9 mm 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
Degree of Protection		IP65
Terminal capacities	mm^2	
Solid	mm ²	1 x (0.75 - 2.5) 2 x (0.75 - 1.5)
Flexible with ferrule	mm ²	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 _{imp}	V AC	6000
Rated insulation voltage	Ui	V	500
Overvoltage category/pollution degree			III/3
Rated operational current	I _e	Α	
AC-15			
24 V	I _e	Α	10
220 V 230 V 240 V	I _e	Α	6
380 V 400 V 415 V	I _e	Α	4
DC-13			
24 V	I _e	Α	10
110 V	I _e	Α	1
220 V	I _e	Α	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	20
Notes			(If approached from the side: 1)
Contact temperature of roller head		°C	≦ 100
Mechanical shock resistance (half-sinusoidal shock, 20 ms)			
Standard-action contact		g	25
Snap-action contact		g	2
Operating frequency	Operations/h		≦ 6000
Actuation			
Mechanical			
Actuating force at beginning/end of stroke		N	1.0/8.0
Actuating torque of rotary drives		Nm	0.2
Max. operating speed with DIN cam		m/s	1/0.5

Design verification as per IEC/EN 61439

Notes

Fechnical data for design verification			
Rated operational current for specified heat dissipation	I_n	Α	6
Heat dissipation per pole, current-dependent	P _{vid}	W	0.13
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
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 $ \frac{1}{2} \left(\frac{1}{2} \right) = \frac{1}{2} \left(\frac{1}{2} \right) \left($			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.

for angle of actuation α = 0°/30°

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)

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	51	
Diameter sensor	mm	0	
Height of sensor	mm	51	
Length of sensor	mm	0	
Rated operation current le at AC-15, 24 V	Α	10	
Rated operation current le at AC-15, 125 V	А	0	
Rated operation current le at AC-15, 230 V	А	6	
Rated operation current le at DC-13, 24 V	Α	10	
Rated operation current le at DC-13, 125 V	Α	1	
Rated operation current le at DC-13, 230 V	Α	0.5	
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	