## **DATASHEET - AT0-11-S-IA/V**



Position switch, 1N/0+1N/C, wide,  $IP65_x$ , adjustable roller lever

Part no. ATO-11-S-IA/V
Catalog No. 036070
Alternate Catalog ATO-11-S-IA/V



### **Delivery program**

Part group reference Product range Degree of Protection Peatures Degree of Protection Peatures Product range Degree of Protection Peatures Product range Degree of Protection Peatures Product range Degree of Protection Peatures Protection Peatures Protection Peatures Protection Peatures Protection Peatures Protection Protection Peatures Protection Pro	Delivery program		
Adjustable roller lever    P85	Basic function		
Degree of Protection PRES Complete unit Complete unit Ambient temperature  "C - 25 - 770  Yes Contacts  N/O = Normally open N/C = Normally closed Notes Contact sequence Contact travel = Contact closed = Contact open  Conta	Part group reference		ATO
Complete unit Ambient temperature  "C -25 - 770  Yes  Intotally insulated  Contacts  NO = Normally closed  Notes  Notes  Contact sequence  Contact travel = Contact closed = Contact open  Contact travel = Contact open  Contact tr	Product range		Adjustable roller lever
Ambient temperature  **C - 2570  Yes  **Contacts  **N/O = Normally open  **Notes  **Notes  **Notes  **Outland to sequence  **Contact sequence  **Contact sequence  **Contact sequence  **Contact trave = Contact closed = Contact open  **Incomparison of the contact open  **Incomparison of the contact closed = Contact open  **Incomparison of the contact open  **Incomparison of the contact open  **Incomparison of the contact open of the contact open  **Incomparison of the contact open opening to IEC/EN 60947-5-1  **Incomparison of the contact open opening to IEC/EN 60947-5-1  **Incomparison opening to IEC/EN 60947-5-1  **Incompariso	Degree of Protection		IP65
Seasy-action contact   Approval   Itotally insulated	Features		Complete unit
Contacts  N0 = Normally open  NC = Normally closed  Notes  Contact sequence  Contact trave  = Contact closed = Contact open  Positive opening [ZW)  Enclosure covers  Enclosure covers  Contact sequence  I N/0  1	Ambient temperature	°C	-25 - +70
Contacts  N/O = Normally open  Notes  Notes  Contact sequence  Contact trave = Contact closed = Contact open  Colour  Enclosure covers  Enclosure covers  Enclosure covers  Enclosure description in sulated in soulable in sulated in the contact open in the contact closed in the contact closed in the contact open in the contact closed in the c	Snap-action contact		Yes
N/O = Normally closed  Notes  Notes  Contact sequence  Contact travel = Contact closed = Contact open  Positive opening (ZW)  Enclosure covers  Enclosure c	Approval		totally insulated
Notes  Notes  Contact sequence  Contact travel ■ = Contact closed □ = Contact open  Contact travel ■ = Contact closed □ = Contact clos	Contacts		
Notes  Ontact sequence  Contact travel = Contact closed = Contact open  Contac	N/O = Normally open		1 N/O
contact sequence  Contact travel = Contact closed = Contact open  Contact travel = Contact travel = Contact open  Contact travel = Contact travel = Contact travel = Contact t	N/C = Normally closed		1 NC →
Contact travel = Contact closed = Contact open    13-14   21-22   13-14   21-22   21-2	Notes		= safety function, by positive opening to IEC/EN 60947-5-1
Positive opening (ZW)  Positive opening (ZW)  Enclosure covers  Enclosure covers  Final Surface Covers  Final	Contact sequence		<u> </u>
Enclosure covers Enclosure covers  Enclosure covers	Contact travel ■ = Contact closed = Contact open		13-14 21-22 0° 10° 23° 54°
Enclosure covers  Enclosure covers  Grey	Positive opening (ZW)		yes
Enclosure covers	Colour		
	Enclosure covers		Grey
lousing Insulated material	Enclosure covers		
	Housing		Insulated material
Connection type Screw terminal	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	°C	-25 - +70
Mounting position		As required
Degree of Protection		IP65

Terminal capacities		$\mathrm{mm}^2$	
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	l <sub>e</sub>	Α	
AC-15			
24 V	I <sub>e</sub>	Α	10
220 V 230 V 240 V	l <sub>e</sub>	Α	6
380 V 400 V 415 V	l <sub>e</sub>	Α	4
DC-13			
24 V	I <sub>e</sub>	Α	10
110 V	I <sub>e</sub>	Α	1
220 V	le	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 <sup>6</sup>	20
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	8.0/20.0
Actuating torque of rotary drives		Nm	0.2
Max. operating speed with DIN cam		m/s	1.5
Notes			for angle of actuation $\alpha$ = 30°, L = 125 mm

### **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	0.13
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	0
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	W	0
Heat dissipation capacity	P <sub>diss</sub>	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	70
C/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**

Technical data ETTIVI 7.0		
Sensors (EG000026) / End switch (EC000030)		
Electric engineering, automation, process control engineering / Binary sensor technolog (ecl@ss10.0.1-27-27-06-01 [AGZ382015])	gy, safety-related sei	nsor technology / Position switch / Position switch (Type 1)
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	А	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	А	10
Rated operation current le  at DC-13, 125 V	А	1
Rated operation current le at DC-13, 230 V	А	0.5
Switching function		Quick-break 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		Adjustable rotary lever
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