DATASHEET - ATO-20-1-IA



Position switch, 2N/O, wide, IP65_x

Part no.AT0-20-1-IACatalog No.014725Eaton Catalog No.AT0-20-1-IAEL-Nummer0004356015(Norway)



Delivery program

Prigroup reference For transpin federence For transpin federence For transpin federence Product range For transpin federence For transpin federence For transpin federence Features For transpin federence For transpin federence For transpin federence Approval For transpin federence For transpin federence For transpin federence NO = Normally open For transpin federence For transpin federence For transpin federence NO = Normally open For transpin federence For transpin federence For transpin federence Contract sequence For transpin federence For transpin federence For transpin federence Colour For transpin federence For transpin federence For transpin federence Enclosure covers For transpin federence For transpin federence For transpin federence Housing For transpin federence For transpin federence For transpin federence Housing For transpin federence For transpin federence For transpin federence Housing For transpin federence For transpin federence For transpin federence Housing For transpin federence For transpin federence<			
Poduct ange Image:	Basic function		Position switches
Degree of Protection P65 Features Basic device, expandable Anhient temperature -25 - 70 Approval Totality insulated Contacts -25 - 70 N/0 = Normally open Interfeature Contact sequence 21/0 Contact travel = Contact closed = Contact open Interfeature Enclosure covers Interfeature Enclosure covers Interfeature Housing Contaction type Housing Interfeature	Part group reference		ATO
Features Baic davice, expandable Annoient temperature Contacts N0 = Normally open Contact sequence Contact sequence Image: Contact closed = Contact closed = Contact copen Contact traveler = Contact closed = Contact copen Image: Contact closed = Contact closed = Contact copen Colour Image: Contact closed = Contact copen Enclosure covers Image: Contact closed = Contact closed	Product range		Rounded plunger
Ambient temperature Approval FC 25 + 70 Approval Intellity insulated Contacts Intellity insulated N/0 = Normally open Intellity insulated Contact sequence Intellity insulated Contact travell = Contact closed = Contact open Intellity insulated Colour Intellity insulated Enclosure covers Intellity insulated Enclosure covers Intellity insulated Housing Intellity insulated Contact travell Intellity insulated Contact travell Intellity insulated	Degree of Protection		IP65
Approval Contacts NO = Normally open Contact sequence Contact sequence Contact travel = Contact closed = Contact open Enclosure covers Enclosure covers Enclosure covers Housing Contactin type Insulated material Serve terminal	Features		Basic device, expandable
Contacts Iterally insulated N0 = Normally open 2 N/0 Contact sequence Image: Sequence Contact trave = Contact closed = Contact open Image: Sequence Colour Image: Sequence Enclosure covers Image: Sequence Housing Image: Sequence Housing Image: Sequence Contact trave Image: Sequence Housing Image: Sequence Contact trave Image: Sequence Housing Image: Sequence Contact trave Image: Sequence Screw terminal Screw terminal	Ambient temperature	°C	-25 - +70
N/0 = Normally open 2 N/0 Contact sequence Image: Imag	Approval		totally insulated
Contact sequence Image: Im	Contacts		
Contact travel = Contact closed = Contact open IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	N/O = Normally open		2 N/O
23-24 3 5 mm Colour Fnclosure covers Grey Enclosure covers Image: Colour covers Image: Colour covers Housing Image: Colour covers Image: Colour covers Housing Image: Colour covers Image: Colour covers Connection type Image: Colour covers Screw terminal	Contact sequence		$\sim + - +$
Enclosure covers Grey Enclosure covers Image: Covers Housing Image: Covers Connection type Image: Covers	Contact travel = Contact closed = Contact open		23-24
Enclosure covers Housing Connection type Insulated material Screw terminal	Colour		
HousingInsulated materialConnection typeIo	Enclosure covers		Grey
Connection type Screw terminal	Enclosure covers		
	Housing		Insulated material
Notes For degree of protection IP65, use V-M20 (206910) cable glands with connecting thread of max. 9 mm length.	Connection type		Screw terminal

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 × (0.75 - 2.5) 2 × (0.75 - 1.5)
Flexible with ferrule		mm ²	1 x (0.5 - 1.5) 2 x (0.5 - 1.5)
Contacts/switching capacity			
Rated impulse withstand voltage	U _{imp}	V AC	6000
Rated insulation voltage	Ui	V	500
Overvoltage category/pollution degree			111/3
Rated operational current	Ι _e	Α	
AC-15			

2111		•	10
24 V	le	A	10
220 V 230 V 240 V	le	A	6
380 V 400 V 415 V	l _e	А	4
DC-13			
24 V	le	А	10
110 V	le	А	1
220 V	le	А	0.5
Supply frequency		Hz	max. 400
Short-circuit rating to IEC/EN 60947-5-1			
max. fuse		A gG/gL	6
Repetition accuracy		mm	0.02
Mechanical variables			
Lifespan, mechanical	Operations	x 10 ⁶	20
Notes			(If approached from the side: 6)
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		Ν	1.0/8.0
Actuating torque of rotary drives		Nm	0.2
Max. operating speed with DIN cam		m/s	1/0.5
Notes			for angle of actuation $\alpha=0^{\circ}/30^{\circ}$

Design verification as per IEC/EN 61439

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Technical data for design verification			
Rated operational current for specified heat dissipation	I _n	А	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
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	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		Slow-action switch
Switching function latching		No
Output electronic		No
Forced opening		No
Number of safety auxiliary contacts		0
Number of contacts as normally closed contact		0
Number of contacts as normally open contact		2
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		No
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