DATASHEET - AT4/11-S/I/RS



Position switch, 1N/0+1N/C, narrow, $IP65_x$, roller plunger

Part no. AT4/11-S/I/RS Catalog No. 085927 Alternate Catalog AT4/11-S/I/RS



Delivery program		
Basic function		Position switches Safety position switches
Part group reference		AT4
Product range		Roller plunger
Degree of Protection		IP65
Features		Complete unit
Ambient temperature	°C	-25 - +70
Design		EN 50041 Form C
Snap-action contact		Yes
Approval		totally insulated
Contacts		
N/O = 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-\frac{13}{14}\frac{21}{22}
Contact travel = Contact closed = Contact open		13-14 21-22 13-14 21-27 0 1.3 2.7 5.7 mm Zw = 4.3 mm
Positive opening (ZW)		yes
Colour		
Enclosure covers		Grey
Enclosure covers		
Housing		Insulated material
Connection type		Screw terminal
Notes The operating head can be rotated at 90° intervals to adapt to the specified For degree of protection IP65, use V-M20 (206910) cable glands with connecting the		

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
Mounting position			
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	U_{i}	V	500
Overvoltage category/pollution degree			III/3
Rated operational current	I _e	Α	
AC-15			
24 V	l _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	l _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
Rated conditional short-circuit current		kA	1
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

Design verification as per IEC/EN 61439

Notes

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	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.

for angle of actuation $\alpha = 0^{\circ}/30^{\circ}$

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

Electric origineering, automation, process control engineering / Binary sansor technology, selesty-related sursering (ed. 1872-78-66 01 IAG-282819)) mm 40 Width sensor mm 0 9 Height of sensor mm 0 0 Rated operation current le at AC-15, 24 V Am 0 0 Rated operation current le at AC-15, 25 V Am 0 0 Rated operation current le at AC-15, 25 V Am 0 0 Rated operation current le at AC-15, 25 V Am 0 0 Rated operation current le at DC-13, 25 V Am 0 1 Rated operation current le at DC-13, 25 V Am 0 1 Rated operation current le at DC-13, 25 V Am 0 1 Rated operation current le at DC-13, 25 V Am 0 4 Rated operation current le at DC-13, 25 V Am 0 4 Rated operation current le at DC-13, 25 V Am 0 4 Rated operation current le at DC-13, 25 V 0 0 4 Rated operation current le at DC-13, 25 V 0 1	Technical data ETTIVI 7.0		
Ecclosers 101-127-27-06-01 AG2382015 Width sensor	Sensors (EG000026) / End switch (EC000030)		
Diameter sensor mm 0 Height of sensor mm 83 Length of sensor mm 0 Rated operation current le at AC-15, 24 V A 0 Rated operation current le at AC-15, 25 V A 0 Rated operation current le at DC-13, 24 V A 0 Rated operation current le at DC-13, 24 V A 0 Rated operation current le at DC-13, 25 V A 0 Rated operation current le at DC-13, 25 V A 0 Rated operation current le at DC-13, 25 V A 0 Rated operation current le at DC-13, 25 V A 0 Rated operation current le at DC-13, 25 V A 0 Rated operation current le at DC-13, 25 V A 0 Switching function latching 0 0 Output determine 0 No Number of safety swilliary contacts 1 1 Number of contacts as normally closed contact 1 1 Number of contacts as normally closed contact 1 No Vapo of interface for safety communication	Electric engineering, automation, process control engineering / Binary sensor technol (ecl@ss10.0.1-27-27-06-01 [AGZ382015])	ogy, safety-related se	ensor technology / Position switch / Position switch (Type 1)
Height of sensor mm 3 Length of sensor mm 0 Rated operation current le at AC-15, 24 V A 10 Rated operation current le at AC-15, 125 V A 6 Rated operation current le at DC-13, 24 V A 10 Rated operation current le at DC-13, 125 V A 10 Rated operation current le at DC-13, 125 V A 10 Rated operation current le at DC-13, 125 V A 0 Rated operation current le at DC-13, 125 V A 0 Rated operation current le at DC-13, 125 V A 0 Rated operation current le at DC-13, 125 V A 0 Rated operation current le at DC-13, 125 V A 0 Rated operation current le at DC-13, 125 V A 0 Rated operation current le at DC-13, 125 V A 0 Rated operation current le at DC-13, 125 V A 0 Rated operation current le at DC-13, 125 V A 0 Rated operation current le at DC-13, 125 V A 0 Witching function 1 1 0	Width sensor	mm	40
Length of sensor mm 0 Rated operation current le at AC-15, 24 V A 10 Rated operation current le at AC-15, 125 V A 0 Rated operation current le at AC-15, 125 V A 10 Rated operation current le at DC-13, 24 V A 1 Rated operation current le at DC-13, 125 V A 1 Rated operation current le at DC-13, 230 V A 0.4 Switching function No No Switching function latching No No Output ledetronic No No Number of safety auxiliary contacts 1 1 Number of contacts as normally closed contact 1 1 Number of contacts as normally closed contact 1 None Number of contacts as change-over contact 1 None Type of interface 1 None Obstruction type housing 1 None Material housing 1 Plastic Coating housing 1 Other Type of control element 1 Other	Diameter sensor	mm	0
Rated operation current le at AC-15, 24 V A 10 Rated operation current le at AC-15, 125 V A 6 Rated operation current le at DC-13, 24 V A 10 Rated operation current le at DC-13, 24 V A 1 Rated operation current le at DC-13, 230 V A 0.4 Rated operation current le at DC-13, 230 V A 0.4 Switching function B Image: Company of the current le at DC-13, 230 V Switching function latching Image: Company of the current le at DC-13, 230 V A 0.4 Switching function latching Image: Company of the current le at DC-13, 230 V A 0.4 Switching function latching Image: Company of the current le at DC-13, 230 V A 0.4 Switching function latching Image: Company of the current le at DC-13, 230 V A 0.4 Number of safety swilliary contacts Image: Company of the current le at DC-13, 230 V Image: Company of the current le at DC-13, 230 V Image: Company of the current le at DC-13, 230 V Image: Company of the current le at DC-13, 230 V Image: Company of the current le at DC-13, 230 V Image: Company of the current le at DC-13, 230 V Image: Company of the current le at DC-13, 230 V<	Height of sensor	mm	83
Rated operation current le at AC-15, 230 V A 6 Rated operation current le at DC-13, 24 V A 10 Rated operation current le at DC-13, 125 V A 1 Rated operation current le at DC-13, 125 V A 0.4 Rated operation current le at DC-13, 230 V A 0.4 Switching function No 0.4 Switching function latching No No Output electronic No No Forced opening Yes No Number of safety auxiliary contacts 1 1 Number of contacts as normally loped contact 1 1 Number of contacts as change-over contact 0 0 Type of interface for safety communication None None Contruction type housing Plastic Cuboid Material housing Plastic Cubrid Control element Plastic Cubrid Alignment of the control element Plastic Other With status indication Plastic Other With status indication Non	Length of sensor	mm	0
Rated operation current le at AC-15, 230 V A 6 Rated operation current le at DC-13, 24 V A 1 Rated operation current le at DC-13, 125 V A 1 Rated operation current le at DC-13, 230 V A 0 Switching function latching Inches witch Switching function latching Inches witch Couptut electronic Inches witch Forced opening Inches witch Number of safety auxiliary contacts Inches witch Number of contacts as normally closed contact Inches witch Number of contacts as normally pen contact Inches witch Number of contacts as change-over contact Inches witch Number of contacts as change-over contact Inches witch Yippe of interface for safety communication Inches witch Construction type housing Inches witch Material housing Inches witch Coating housing Inches witch	Rated operation current le at AC-15, 24 V	Α	10
Rated operation current le at DC-13, 24V A 10 Rated operation current le at DC-13, 125 V A 1 Rated operation current le at DC-13, 230 V A 0.4 Switching function Cuick-break switch Switching function latching No Output electronic No Yes Forced opening Yes Number of safety auxiliary contacts 1 1 Number of contacts as normally closed contact 1 1 Number of contacts as normally open contact 1 1 Number of contacts as change-over contact 1 None Type of interface None None Type of interface for safety communication None Cubic Construction type housing 1 Plastic Material housing 1 Plastic Coting housing 1 Plastic Coting housing 1 Plastic Coting the control element 1 Plastic Algement of the control element 1 Plastic With status indication	Rated operation current le at AC-15, 125 V	Α	0
Rated operation current le at DC-13, 125 V A 1 Rated operation current le at DC-13, 230 V A 0.4 Switching function Cuick-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 for safety communication None Construction type housing Cuboid Material housing Plastic Conting housing Plastic Type of control element Where Alignment of the control element Where Sylight of the contro	Rated operation current le at AC-15, 230 V	Α	6
Rated operation current le at DC-13, 230 V A 0.4 Switching function 0uick-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 0 Construction type housing 1 Material housing 1 Coating housing 1 Type of control element 1 Alignment of the control element 1 Type of electric connection 1 With status indication 0 Suitable for safety functions 1 Suitable for safety functions <	Rated operation current le at DC-13, 24 V	Α	10
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 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 Other 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 No Explosion safety category for dust None	Rated operation current le at DC-13, 125 V	Α	1
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 Roller cam 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	Rated operation current le at DC-13, 230 V	Α	0.4
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 Construction type housing Cuboid Material housing Other Coating housing Other Type of ontrol element Other Alignment of the control element Other With status indication No Suitable for safety functions Yes Explosion safety category for gas None Explosion safety category for dust None	Switching function		Quick-break switch
Forced opening Number of safety auxiliary contacts Number of contacts as normally closed contact Number of contacts as normally open contact Number of contacts as normally open contact Number of contacts as change-over contact Number of contacts as change-over contact Type of interface Number of contacts as change-over contact Type of interface Number of contacts as change-over contact Type of interface Number of contacts as change-over contact Type of interface Number of contacts as change-over contact Type of interface Number of control televent Type of outsing Number of the control element Type of control element Type of electric connection With status indication Suitable for safety category for gas Explosion safety category for dust	Switching function latching		No
Number of safety auxiliary contacts Number of contacts as normally closed contact Number of contacts as normally open contact Number of contacts as normally open contact Number of contacts as change-over contact Type of interface Type of interface for safety communication Construction type housing Material housing Coating housing Coating housing Coating housing Coating the control element Alignment of the control element Type of electric connection With status indication Suitable for safety functions Explosion safety category for gas Explosion safety category for dust	Output electronic		No
Number of contacts as normally closed contact Number of contacts as normally open contact Number of contacts as change-over contact Number of contacts as change-over contact Type of interface Type of interface for safety communication Construction type housing Material housing Coating housing Coating housing Coating housing Type of control element Alignment of the control element Type of electric connection With status indication Suitable for safety functions Explosion safety category for dust	Forced opening		Yes
Number of contacts as normally open contact Number of contacts as change-over contact Type of interface Type of interface for safety communication Construction type housing Material housing Coating housing Coating housing Coating the control element Type of control element Alignment of the control element Type of selectric connection With status indication Suitable for safety functions Explosion safety category for dust Explosion safety category for dust	Number of safety auxiliary contacts		1
Number of contacts as change-over contact Type of interface Type of interface for safety communication Type of interface for safety communication Construction type housing Material housing Coating housing Coating housing Type of control element Type of control element Alignment of the control element Type of electric connection With status indication Suitable for safety functions Explosion safety category for gas Explosion safety category for dust Description None One None None None	Number of contacts as normally closed contact		1
Type of interface Type of interface for safety communication Construction type housing Material housing Coating housing Coating housing Type of control element Type of control element Type of control element Type of electric connection With status indication Suitable for safety functions Explosion safety category for gas Explosion safety category for dust None None None None None None None None	Number of contacts as normally open contact		1
Type of interface for safety communication Construction type housing Material housing Coating housing Coating housing Coating housing Type of control element Alignment of the control element Type of electric connection With status indication Suitable for safety functions Explosion safety category for gas Explosion safety category for dust None None None None	Number of contacts as change-over contact		0
Construction type housing Material housing Coating housing Coating housing Coating housing Coating housing Type of control element Type of control element Alignment of the control element Type of electric connection With status indication With status indication Suitable for safety functions Explosion safety category for dust Cuboid Plastic Cuboid Cuboid Cuboid Cuboid Plastic Roller cam Other Other Other No Yes Explosion safety category for gas None None	Type of interface		None
Material housing Coating housing Coating housing Type of control element Alignment of the control element Type of electric connection With status indication Suitable for safety functions Explosion safety category for dust Description Plastic Other Roller cam Other Other Other Yes Explosion safety category for dust None None	Type of interface for safety communication		None
Coating housing Coating housin	Construction type housing		Cuboid
Type of control element Alignment of the control element Type of electric connection Other With status indication Suitable for safety functions Explosion safety category for dust Other None Explosion safety category for dust Other Oth	Material housing		Plastic
Alignment of the control element Type of electric connection With status indication Suitable for safety functions Explosion safety category for dust Other Other No Other No No No No No No No No No N	Coating housing		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	Type of control element		Roller cam
With status indication No Suitable for safety functions Yes Explosion safety category for gas None Explosion safety category for dust None	Alignment of the control element		Other
Suitable for safety functions Explosion safety category for dust Yes None None None	Type of electric connection		Other
Explosion safety category for gas Explosion safety category for dust None	With status indication		No
Explosion safety category for dust None	Suitable for safety functions		Yes
	Explosion safety category for gas		None
Ambient temperature during operating °C 25 - 70	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

Assets (links)

Declaration of CE Conformity

00002833

Instruction Leaflets

IL05208012Z2018_06

Additional product information (links)

IL05208012Z (AWA1310-0544) Position switch

IL05208012Z (AWA1310-0544) Position switch ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05208012Z2018_06.pdf