# DATASHEET - ATR-11-S-IA

Position switch, 1N/O+1N/C, wide, IP65\_x





#### **Delivery program**

71 0		
Basic function		Position switches Safety position switches
Part group reference		ATR
Product range		Rounded plunger
Degree of Protection		IP65
Features		Basic device, expandable
Ambient temperature	°C	-25 - +70
Snap-action contact		Yes
Contacts		
N/O = Normally open		1 N/O
N/C = Normally closed		1 NC 🏵
Notes		$\Theta$ = safety function, by positive opening to IEC/EN 60947-5-1
Contact sequence		- + + + + + + + + + + + + + + + + + + +
Contact travel = Contact closed = Contact open		$\begin{array}{c} 13.14 \\ 21.22 \\ 13.14 \\ 21.22 \\ 0 \\ 1.6 \\ 3.0 \\ 2w = 4.5 mm \end{array} \rightarrow$
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	cting thread of max. 9 mm	length.

#### Technical data General

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 <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)	
Contacts/switching capacity				
Rated impulse withstand voltage	U <sub>imp</sub>	V AC	6000	
Rated insulation voltage	Ui	V	500	

Overvoltage category/pollution degree			111/3
Rated operational current	l <sub>e</sub>	А	
AC-15			
24 V	le	А	10
220 V 230 V 240 V	le	А	6
380 V 400 V 415 V	le	А	4
DC-13			
24 V	le	А	10
110 V	le	А	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
Repetition accuracy		mm	0.02
Mechanical variables			
Lifespan, mechanical	Operations	x 10 <sup>6</sup>	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
Max. operating speed with DIN cam		m/s	1/1
Notes			for angle of actuation $\alpha=0^{\circ}/30^{\circ}$

# Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	А	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
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	(FC000030)	)
0013013	(LUUUUU20)/	LIIU	30010011	120000000	/

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])

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Length of sensorImmImmRated operation current te at AC-15, 24VA0Rated operation current te at AC-15, 25VA0Rated operation current te at AC-15, 23VA0Rated operation current te at CD-13, 24VA0Rated operation current te at DC-13, 25VA0Switching functionB0Switching functionB0Output electricitiesA0Switching functionB0Output electricitiesA0Switching functionB0Output electricitiesA0Switching functionB0Switching functionB0Switching functionC0Switching functionC0Switchin	Diameter sensor	mm	0
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Rete operation current le at AC-15, 250 V   A   0     Rete operation current le at AC-15, 230 V   A   0     Rete operation current le at CC-13, 25 V   A   0     Rete operation current le at CC-13, 25 V   A   0     Switching function   Diack brack switch   Diack brack switch     Switching function   Diack brack switch   Diack brack switch     Switching function   Diack brack switch   No     Switching function   No   No     Number of contacts as normally closed contact   No   No     Number of contacts as normally closed contact   No   No     Switching function   Switching function   No     Switching function   No   No   No     Switching function   No   No   No     Switching function   No   No </td <td>Length of sensor</td> <td>mm</td> <td>0</td>	Length of sensor	mm	0
Ret do paratin current la x1 C-13, 23 V   A   0     Ret do paratin current la x1 C-13, 125 V   A   0     Ret do paratin current la x1 C-13, 125 V   A   0     Switching function   C   A   0     Switching function   C   A   0     Switching function   C   C   A     Dup deletroric   N   No   No     Switching functions   C   S   No     Number of safety auxiliary contacts   No   No   No     Number of contacts as normally open contact   M   No   No     Number of contacts as normally open contact   M   No   No   No     Number of contacts as normally open contact   M   No   No <td>Rated operation current le at AC-15, 24 V</td> <td>А</td> <td>0</td>	Rated operation current le at AC-15, 24 V	А	0
Rate operation current te at DC-13, 25 V     A     Construction       Switch operation current te at DC-13, 25 V     A     0       Switch operation current te at DC-13, 25 V     A     0       Switch operation current te at DC-13, 25 V     F     0       Switch operation current te at DC-13, 25 V     F     0       Switch operation current te at DC-13, 25 V     F     0       Switch operation current te at DC-13, 25 V     F     0       Switch operation current te at DC-13, 25 V     F     0       Switch operation current te at DC-13, 25 V     F     0       Switch operation current te at DC-13, 25 V     F     0       Switch operation current te at DC-13, 25 V     F     0       Switch operation current te at DC-13, 25 V     F     0       Switch operation current te at DC-13, 25 V     F     0       Switch operation current te at DC-13, 25 V     F     0       Switch operation current te at DC-13, 25 V     F     0       Number of contacts as normally closed contact     F     0     None       Switch operation contact     Switch operation contact     None     None	Rated operation current le at AC-15, 125 V	А	0
Rete operation current le at DC-13, 230 V   A   0     Switching function   Diuk-break switch   Diuk-break switch     Switching function latching   Diuk-break switch   No     Output electronic   No   No     Switching function stathing   No   No     Number of safety axiliary contacts   0   No     Number of safety axiliary contacts   0   No     Number of contacts as normally closed contact   I   No     Number of contacts as change-over contact   I   No     Ype of interface   No   No   No     Number of contacts as change-over contact   I   No   No     Statistic for safety communication   I   No   No     Number of contacts as change-over contact   I   No   No     Statistic for safety communication   I   No   No   No     Construction type housing   I   No	Rated operation current le at AC-15, 230 V	А	0
Rete operation current le at DC-13, 230 V   Image: Application operation current le at DC-13, 230 V   Image: Application operation current le at DC-13, 230 V   Image: Application current le at DC-13, 230 V </td <td>Rated operation current le at DC-13, 24 V</td> <td>А</td> <td>0</td>	Rated operation current le at DC-13, 24 V	А	0
Switching function     Model     Model       Switching function latching     No     No       Output electronic     No     No       Forced opening     No     No       Number of safely auxiliary contacts     No     No       Number of contacts as normally closed contact     No     No       Number of contacts as normally closed contact     No     No       Number of contacts as normally closed contact     No     No       Number of contacts as normally closed contact     No     No       Number of contacts as normally closed contact     No     No       Number of contacts as normally closed contact     No     No       Statistic for safety communication     No     No       Construction type housing     No     No       Coating housing     No     No       Type of control element     No     No       Align of safety functions     No     No       Statist for safety functions     No     No       Statist for safety functions     No     No       Statist for safety functions     No     No <td>Rated operation current le at DC-13, 125 V</td> <td>А</td> <td>0</td>	Rated operation current le at DC-13, 125 V	А	0
Switching function latching     Image: Solution is a formed of the solution is	Rated operation current le at DC-13, 230 V	А	0
Output electronicImage: set of the set of	Switching function		Quick-break switch
Fored opening   Ye     Number of safety auxiliary contacts   0     Number of contacts as normally closed contact   1     Number of contacts as normally closed contact   Image: Contact as a normally closed contact     Number of contacts as normally closed contact   Image: Contact as a normally closed contact     Number of contacts as normally closed contact   Image: Contact as a normally closed contact     Number of contacts as normally closed contact   Image: Contact as a normally closed contact     Number of contacts as normally closed contact   Image: Contact as a normally closed contact     Number of contacts as normally closed contact   Image: Contact as a normally closed contact     Number of contacts as normally closed contact   Image: Contact as a normally closed contact     Naterial housing   Image: Contact as normally closed contact     Nater of control element   Image: Contact as normally closed contact     Nater of control element   Image: Contact contact as normally closed contact     Nater of contact as normally closed contact   Image: Contact contact as normally closed contact as normally	Switching function latching		No
Number of safety axiliary contacts   Imper of safety axiliary contacts   Imper of safety axiliary contact     Number of contacts as normally closed contact   Imper of contacts as normally closed contact   Imper of contacts as normally closed contact     Number of contacts as normally closed contact   Imper of contacts as normally closed contact   Imper of contacts as normally closed contact     Number of contacts as normally closed contact   Imper of contacts as normally closed contact   Imper of contacts as normally closed contact     Number of contacts as normally closed contact   Imper of contacts as normally closed contact   Imper of contacts as normally closed contact     Number of contacts as normally closed contact   Imper of contacts as normally closed contact   Imper of contacts as normally closed contact     Number of contacts as normality closed contact   Imper of contacts as normally closed contact   Imper of contacts as normality closed contact     Number of contacts as normality closed contact   Imper of contacts as normality closed contact   Imper of contact contact     Nontacts as normality closed contact   Imper of contact contact   Imper of contact contact   Imper of contact contact     Nontacts as normality closed contact   Imper of contact contact   Imper of contact contact   Imper of contact     Nontacts as normality closed contact   Imper of contact contact <td< td=""><td>Output electronic</td><td></td><td>No</td></td<>	Output electronic		No
Number of contacts as normally closed contact   I   I     Number of contacts as normally open contact   I   I     Number of contacts as normally open contact   I   I     Number of contacts as normally open contact   I   I     Number of contacts as normally open contact   I   I     Number of contacts as normally copen contact   I   I     Number of contacts as normally open contact   I   I     Number of contacts as normally open contact   I   I     Number of contacts as normally open contact   I   I     Number of contacts as normally open contact   I   I   I     Number of contacts as normally open contact   I   I   I   I     Construction type housing   I	Forced opening		Yes
Number of contacts as normally open contact     Image: Provide the sector of t	Number of safety auxiliary contacts		0
Number of contacts as change-over contact   Image: Provide the sector of the sector	Number of contacts as normally closed contact		1
Type of interface   Mone     Type of interface for safety communication   Mone     Construction type housing   Mone     Material housing   Luboid     Coating housing   Duby     Type of ontrol element   Mone     Alignment of the control element   Mone     Type of electric connection   Mone     With status indication   Mone     Suitable for safety functions   Mone     Explosion safety category for gas   Mone     Anbient temperature during operating   Mone     Degree of protection (IP)   Mone	Number of contacts as normally open contact		1
Type of interface for safety communication   Image: Sector Sect	Number of contacts as change-over contact		0
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   Other     Suitable for safety functions   Image: Status indication     Explosion safety category for gas   Image: Status indication     Ambient temperature during operating   Image: Status indication     Ambient temperature during operating   Image: Status indication     Degree of protection (IP)   Image: Status indication	Type of interface		None
Material housing   Plastic     Coating housing   Other     Type of control element   Plunger     Alignment of the control element   Material housing     Type of electric connection   Material housing     With status indication   Material housing     Suitable for safety functions   Image: Status indication     Explosion safety category for gas   Image: Status indication     Ambient temperature during operating   Image: Status indication     Ambient temperature during operating   Image: Status indication     Status indication   Image: Status indication     Suitable for safety functions   Image: Status indication     Explosion safety category for dust   Image: Status indication     Status indication   Image: Status indication     Explosion safety category for dust   Image: Status indication     Ambient temperature during operating   Image: Status indication     Status indication   Image: Status indication	Type of interface for safety communication		None
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     Ambient temperature during operating   So     Paree of protection (IP)   So	Construction type housing		Cuboid
Type of control element   Plunger     Alignment of the control element   Other     Type of electric connection   Image: Control element     Vith status indication   Image: Control element     Suitable for safety functions   Image: Control element     Explosion safety category for gas   Image: Control element     Ambient temperature during operating   Image: Control element     Image: Control element   Image: Control element     Imag	Material housing		Plastic
Alignment of the control elementOtherType of electric connectionOtherWith status indicationOtherSuitable for safety functionsNoExplosion safety category for gasSomeAmbient temperature during operatingSomeDegree of protection (IP)Some	Coating housing		Other
Type of electric connectionConstraintsWith status indicationNoSuitable for safety functionsYesExplosion safety category for gasNoneAmbient temperature during operatingCPerce of protection (IP)Set of the set of the	Type of control element		Plunger
With status indicationNoSuitable for safety functionsImage: Sector Se	Alignment of the control element		Other
Suitable for safety functionsPerformYesExplosion safety category for gasNoneNoneExplosion safety category for dustNoneStatementAmbient temperature during operating°C25 70Degree of protection (IP)StatementIP65	Type of electric connection		Other
Explosion safety category for gasNoneExplosion safety category for dustNoneAmbient temperature during operating°CDegree of protection (IP)10	With status indication		No
Explosion safety category for dust None   Ambient temperature during operating °C 25 - 70   Degree of protection (IP) Image: Constant operation o	Suitable for safety functions		Yes
Ambient temperature during operating °C 25 - 70   Degree of protection (IP) IP65	Explosion safety category for gas		None
Degree of protection (IP)	Explosion safety category for dust		None
	Ambient temperature during operating	°C	25 - 70
Degree of protection (NEMA) Other	Degree of protection (IP)		IP65
	Degree of protection (NEMA)		Other

#### **Dimensions**

