# DATASHEET - AT4/11-2/IA/S



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





Part no.AT4/11-2/IA/SCatalog No.024229Alternate CatalogAT4/11-2/IA/S

## **Delivery program**

Part group reference       Safety position switches         Part group reference       Round a plunger         Poduct range       Round a plunger         Design       Complex unit         Antient summersture       Complex unit         Design       Consolies unit         Approval       Consolies unit         Notes       Fortune in the sector of t			
Product range         Rounded plunger           Degree of Protection         Features           Features         Complete unit           Ambient temperature         ES 5001           Degree         SE 5001           Approval         ES 5001           Contracts         ES 5001           Nor on Normally open         IN/O           Nor on Semally open         IN/O           Nortes         IN/O           Contact taxequence         IN/O           Positive agenerace         IN/O           Contact trave         E Contact closed = Contact open           Enclosure covers         Enclosure covers           Enclosure covers         Enclosure covers           Husing         Enclosure covers           Husing         Enclosure covers	Basic function		Position switches Safety position switches
Degree of Protection     Feld     Gomplete unit       Features     Complete unit       Antient tamperature     Cond     25 - 70       Design     KS0041 Form B       Approval     Intellity insulated       Contacts     Intellity insulated       NO - Normally open     Intellity insulated       Notes     Intellity insulated       Contact sequence     Intellity insulated       Contact sequence     Intellity insulated       Contact tava = Contact closed = Contact open     Intellity insulated       Rotore opening (ZW)     Intellity insulated       Colour     Intellity insulated       Rotore opening (ZW)     Intellity insulated       Rotore ope	Part group reference		AT4
Features       Complete unit         Anbient temperature       25 - 70         Design       EN 50041 Form B         Approval       EN 50041 Form B         Contacts       Into Cally insulated         NO - Normally open       1 NO         Notes       1 NC ®         Contact sequence       Into ® - safety function, by positive opening to IEC/EN 80947-5-1         Contact trave = - Contact copen       Into ® - safety function, by positive opening to IEC/EN 80947-5-1         Contact trave = - Contact copen       Into ® - safety function, by positive opening to IEC/EN 80947-5-1         Contact trave = - Contact copen       Into P - 113 - 21         Positive opening (ZW)       Into P - 114 - 22         Colour       Into P - 114 - 22         Enclosure covers       Enclosure covers         Enclosure covers       Enclosure covers <tr< th=""><th>Product range</th><th></th><th>Rounded plunger</th></tr<>	Product range		Rounded plunger
Anbient temperature       1°C       -25 - 70         Design       EN SOAH Form B         Approval       Intel Supperson         Contacts       Intol         N/O = Normally cosed       1 N/O         Notes       Intol         Contact sequence       Intol         Contact rave = - Contact closed = - Contact open       Intol         Positive opening (ZW)       yes         Colour       yes         Enclosure covers       Grey         Enclosure covers       Grey         Housing       Intel Supperson         Contact trave       Intel Supperson         Housing	Degree of Protection		IP65
Design       EN 5001 Form B         Approval       Intel I insulated         Contacts       N0 = Normally open         NC = Normally closed       N0         Notes       Intel I insulated         Contact sequence       Intel I insulated         Contact travel = Contact closed = Contact open       Intel I insulated         Positive opening (ZW)       Intel I insulated         Colour       Intel I insulated         Enclosure covers       Insulated	Features		Complete unit
Approval       Approval         Approval       Itality insulated         Contacts       IN/O         NO = hormally open       IN/O         NC = Normally closed       IN/O         Notes       Image: Second Se	Ambient temperature	°C	-25 - +70
Contacts       IN0         N0 = Normally open       1 N0         NC = Normally closed       1 NC          Notes       Image: Search Structure, by positive opening to IEC/EN 60947-5-1         Contact sequence       Image: Search Structure, by positive opening to IEC/EN 60947-5-1         Contact travell = Contact closed = Contact open       Image: Search Structure, by positive opening to IEC/EN 60947-5-1         Contact travell = Contact closed = Contact open       Image: Search Structure, by positive opening to IEC/EN 60947-5-1         Contact travell = Contact closed = Contact open       Image: Search Structure, by positive opening to IEC/EN 60947-5-1         Positive opening (ZW)       Image: Search Structure, Search Structur	Design		EN 50041 Form B
NO = Normally open       IN/O         NC = Normally closed       IN/O         Notes       INC Image: Second S	Approval		totally insulated
N/C = Normally closed       INC ③         Notes       INC ④         Contact sequence       Image: Seafery function, by positive opening to EC/EN 60947-5-1         Contact sequence       Image: Seafery function, by positive opening to EC/EN 60947-5-1         Contact travel = Contact closed = Contact open       Image: Seafery function, by positive opening to EC/EN 60947-5-1         Contact travel = Contact closed = Contact open       Image: Seafery function, by positive opening to EC/EN 60947-5-1         Positive opening (ZW)       Image: Seafery function, by positive opening to EC/EN 60947-5-1         Positive opening (ZW)       Image: Seafery function, by positive opening to EC/EN 60947-5-1         Colour       Image: Seafery function, by positive opening to EC/EN 60947-5-1         Enclosure covers       Image: Seafery function, by positive opening to EC/EN 60947-5-1         Enclosure covers       Image: Seafery function, by positive opening to EC/EN 60947-5-1         Enclosure covers       Image: Seafery function, by positive opening to EC/EN 60947-5-1         Housing       Image: Seafery function, by positive opening to EC/EN 60947-5-1         Housing       Image: Seafery function, by positive opening to EC/EN 60947-5-1         Housing       Image: Seafery function, by positive opening to EC/EN 60947-5-1         Gonection type       Image: Seafery function, by positive opening to EC/EN 60947-5-1	Contacts		
Notes       Incloid         Notes       Image: State of the content of the conten	N/O = Normally open		1 N/O
Contact sequence       Image: Sequence sequence       Image: Sequence s	N/C = Normally closed		1 NC 🕀
Contact sequence       Image: Sequence sequence       Image: Sequence s	Notes		$\Theta$ = safety function, by positive opening to IEC/EN 60947-5-1
Positive opening (ZW)   Colour   Enclosure covers   Enclosure covers   Enclosure covers   V   Enclosure covers   V   V   Enclosure covers   V   Enclosure covers   V   V   Enclosure covers   V   V   Enclosure covers   V   V   Enclosure covers   V <th>Contact sequence</th> <th></th> <th>∽-{]</th>	Contact sequence		∽-{]
Colour       Finclosure covers       Grey         Enclosure covers       Image: Comparison of the comparison	Contact travel = Contact closed = Contact open		21-22 0 2.3 3.7 6 mm
Enclosure covers       Grey         Enclosure covers       Image: Comparison of the comparison of t	Positive opening (ZW)		yes
Enclosure covers   Housing   Connection type     Insulated material   Screw terminal	Colour		
HousingInsulated materialConnection typeImage: Screw terminal	Enclosure covers		Grey
Connection type Screw terminal	Enclosure covers		
	Housing		Insulated material
Notes Foundations of another IDCE uses V/ MOD (000010) as blands with a some strands for the sole of the strands of the sole of the strands of the sole of the sol	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		
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)
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	۱ <sub>e</sub>	А	
AC-15			
24 V	۱ <sub>e</sub>	А	10
220 V 230 V 240 V	۱ <sub>e</sub>	А	6
380 V 400 V 415 V	۱ <sub>e</sub>	А	4
DC-13			
24 V	۱ <sub>e</sub>	А	10
110 V	۱ <sub>e</sub>	А	1
220 V	۱ <sub>e</sub>	А	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>	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		Ν	8.0/20.0
Actuating torque of rotary drives		Nm	0.3
Max. operating speed with DIN cam		m/s	0.5/0.5
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	0.1
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 (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])

With someImageSetSetDanker someImageImageImageReid op andImageImageImageReid op and on an	(eci@ss10.0.1-27-27-06-01 [A62382015])		
Height desardImmSinRatid person current e AC-15, 24 VImmImmRatid operation current e AC-15, 25 VImmImmSwitching functionImmImmSwitching	Width sensor	mm	56
Leigh of sensorImageImageImageImageBated operation current te at AC-15, 24VA0Bated operation current te at AC-15, 25VA0Bated operation current te at CD-13, 24VA0Bated operation current te at DC-13, 25VA0Switching functionA0Switching functionA0Switching functionA0Switching functionB0Switching functionBNSwitching functionBNSwitching functionBNSwitching functionBNSwitching functionNNSwitching functionNNSwitc	Diameter sensor	mm	0
Rade 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 AC-15, 28 V       A       0         Rated operation current le at AC-15, 28 V       A       0         Rated operation current le at AC-15, 28 V       A       0         Rated operation current le at AC-15, 28 V       A       0         Rated operation current le at AC-15, 28 V       A       0         Rated operation current le at AC-15, 28 V       A       0         Rated operation current le at AC-15, 28 V       A       0         Switching function       A       0       0         Switching function       A       0       0         Switching function       A       Non-orient et at AC-15, 28 V       Non-orient et at AC-15, 28 V         Switching function       A       0       Non-orient et at AC-15, 28 V         Switching function       A       Non-orient et at AC-15, 28 V       Non-orient et at AC-15, 28 V         Switching function       A       Non-Orient et at AC-15, 28 V       Non-Orient et at AC-15, 28 V         Number of setters asomally operatoration       A       Non-Orient et at AC-15, 28 V       Non-Orient et at AC-15, 28 V         Switching function <td< td=""><td>Height of sensor</td><td>mm</td><td>83</td></td<>	Height of sensor	mm	83
Rated operation current le at AC-15, 250 V       A       0         Rated operation current le at CC-13, 24 V       A       10         Rated operation current le at CC-13, 250 V       A       0         Rated operation current le at CC-13, 250 V       A       0         Switching function       Switching function       Switching function       Switching function         Switching function latching       Switching function       Switching function       Switching function         Switching function latching       F       N       Non-Control         Switching function latching       F       N       Non-Control         Switching function latching       F       N       Non-Control         Number of contacts as normally operation current te at Switching function       Non-Control       Non-Control         Switching function subscheme       F       Non-Control       Non-Control         Switchind function subscheme       F	Length of sensor	mm	0
Rete operation current leat AC-15,230 V       A       6         Rete operation current leat DC-13,24V       A       1         Rete operation current leat DC-13,125 V       A       1         Rete operation current leat DC-13,230 V       A       6         Switching function       Silve addition switching function       Silve addition switching function         Switching function       Silve addition switching function       No         Output electricities as nonselv closed contact       Silve addition switching function         Number of cafacts as nonselv closed contact       Silve addition switching function         Number of contacts as nonselv closed contact       Silve addition switching function         Number of contacts as change-over contact       Silve addition switching function         Number of contacts as change-over contact       Silve addition switching function         Number of contacts as change-over contact       Silve addition switching function         Number of contacts as change-over contact       Silve addition switching function         Number of contacts as change-over contact       Silve addition switching function         Number of contacts as change-over contact       Silve addition switching function         Number of contacts as change-over contact       Silve addition switching function         Number of contacts as change-over contact       <	Rated operation current le at AC-15, 24 V	Α	10
Rete operation current te at DC-13, 25 V       A       1         Bated operation current te at DC-13, 25 V       A       04         Switching function       A       04         Switching function       A       04         Switching function       A       04         Output detomic       B       04         Switching function latching       A       Non-Action switching         Output detomic       B       Non-Action switching         Switching function latching       B       Non-Action switching         Number of schery awailary contacts       A       1         Number of schery awailary contact       B       I         Number of schery awailary contact       I       I       I         Number of schery awailary contact       I       I       I       I       I       I       I       I       I       I       I       I       I       I	Rated operation current le at AC-15, 125 V	А	0
Red operation current le a DC-13, 280 V       A       I         Switching function       Switching function latching       Switching function latching         Switching function latching       Mo       Switching function latching         Output elertonic       Mo       Switching function latching         Switching function latching       Mo       Switching function         Output elertonic       Mo       Switching function         Switching function latching       Mo       Switching function         Number of safety axiolitiery contexts       Mo       Switching function         Number of contacts as normally closed contact       Mo       Switching function         Number of contacts as normally closed contact       Mo       Switching function         Number of contacts as normally closed contact       Mo       Switching function         Number of contacts as normally closed contact       Mo       Switching function         Number of contacts as normality closed contact       Mo       Switching function         Number of contacts as normality closed contact       Mo       Switching function         Number of contacts as normality closed contact       Mo       Switching function         Number of contacts as normality closed contact       Mo       Switching function         Number of contacts	Rated operation current le at AC-15, 230 V	А	6
Rete operation current le at DC-13, 23 V       Image: Application operation	Rated operation current le  at DC-13, 24 V	А	10
Switching functionImage: Section SwitchingSow-action switchingSwitching function latchingImage: Section SwitchingNoSubtradies a subscription Section S	Rated operation current le  at DC-13, 125 V	А	1
Nuclei function latching         No           Dutput electronic         No           Fored opening         Yes           Number of safety auxiliary contacts         I           Number of contacts as normally closed contact         I           Number of contacts as change-over contact         I           Ype of interface         I           Ype of interface         I           Ype of interface for safety communication         I           Construction type housing         I           Goating housing         I           Algoment of the control element         I           Type of interface         I           Vip of of control element         I           Stable for safety functions         I	Rated operation current le at DC-13, 230 V	А	0.4
Duput electronicNoForced openingYesNumber of safety auxiliary contactsYesNumber of contacts as normally closed contactYesNumber of contacts as change-over contactYesNumber of contacts as normally closedYesNumber of contacts as normally closedYesNumber of control elementYesNumber of control elementYesNumber of control elementYesNumber of contactionYesNumber of contactionYesNumber of contactionYesNumber of contactionNeNumber of contac	Switching function		Slow-action switch
Fored opening       Ver         Number of safety auxiliary contacts       1         Number of contacts as normally closed contact       1         Number of contacts as normality closed contact       1         Number of contact sea normality closed contact       1         Number of control clement       1         Number of contaction       1	Switching function latching		No
Number of safety axiliary contacts       I       I         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 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 open contact       None       I         Contacts as normally open contact       I       I       I         Construction type housing       I <t< td=""><td>Output electronic</td><td></td><td>No</td></t<>	Output electronic		No
Number of contacts as normally closed contactINumber of contacts as normally open contactINumber of contacts as normally open contactINumber of contacts as normally open contactINumber of contacts as change-over contactINumber of contacts as change-over contactNoneType of interfaceNoneConstruction type housingIConstruction type housingINaterial housingIType of control elementIAlignment of the control elementINy et of electric connectionIWith status indicationISutable for safety functionsIExplosion safety category for gasIExplosion safety category for dustIAlignment of the control elementISutable for safety functionsISutable for safety functionsIExplosion safety category for gasIExplosion safety category for dustIAnient temperature during operatingIDeg of protection (IP)IImper of the control (IP)IImper of the contr	Forced opening		Yes
Number of contacts as normally open contact       Image: A space of the space of t	Number of safety auxiliary contacts		1
Number of contacts as change-over contactImage of the fraceImage of interfaceType of interface for safety communicationKoeNoeConstruction type housingCubidCubidMaterial housingPatticPatticCoating housingUtherPungerType of control elementUtherUtherAlignment of the control elementUtherUtherType of electric connectionUtherUtherWith status indicationMoeUtherSuitable for safety functionsKoeNoeExplosion safety category for gasMoeNoeAnbient temperature during operatingMoeNoeDegree of protection (IP)Image of the formationNoeDegree of protection (IP)Image of the formationNoeMoeImage of the formationImage of the formationMoeImage of the formation	Number of contacts as normally closed contact		1
Type of interface       None         Type of interface for safety communication       None         Construction type housing       None         Material housing       Cubid         Coating housing       Type of control element         Alignment of the control element       Mone         Type of electric connection       Mone         Vith 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       None         Construction type housing       Cubid         Material housing       Plastic         Coating housing       Other         Type of control element       Plunger         Alignment of the control element       Other         Type of electric connection       Other         Vith status indication       Sole         Suitable for safety functions       Yes         Explosion safety category for dust       None         Ambient temperature during operating       Sole         Pagree of protection (IP)       Weith Status	Number of contacts as change-over contact		0
Construction type housing       Cubid         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       Status         Suitable for safety functions       Status         Explosion safety category for gas       Status         Anbient temperature during operating       Status         Partee of protection (IP)       Status	Type of interface		None
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: Company of the safety functions         Explosion safety category for gas       Image: Company of the safety functions         Ambient temperature during operating       Image: Company of the safety function (IP)	Type of interface for safety communication		None
Coating housing       Coating housing       Other         Type of control element       Funger       Plunger         Alignment of the control element       Other       Other         Type of electric connection       Other       Other         With status indication       Solution       Other         Suitable for safety functions       Solution       None         Explosion safety category for dust       None       None         Ambient temperature during operating       Solution       Solution         Degree of protection (IP)       Solution       Solution	Construction type housing		Cuboid
Type of control element       Image: Pluger         Alignment of the control element       Image: Pluger         Type of electric connection       Image: Pluger         With status indication       Image: Pluger         Suitable for safety functions       Image: Pluger         Explosion safety category for dust       Image: Pluger         Ambient temperature during operating       Image: Pluger         Perce of protection (P)       Image: Pluger	Material housing		Plastic
Alignment of the control element       Image: Control element       Other         Type of electric connection       Image: Control element       Other         With status indication       Image: Control element       No         Suitable for safety functions       Image: Control element       No         Explosion safety category for gas       Image: Control element       No         Ambient temperature during operating       Image: Control element       So         Degree of protection (IP)       Image: Control element       So	Coating housing		Other
Type of electric connection       Image: Book of the connection         With status indication       Mo         Suitable for safety functions       Mo         Explosion safety category for gas       Mo         Ambient temperature during operating       Mo         Degree of protection (IP)       Mo	Type of control element		Plunger
With status indicationNoSuitable for safety functionsYesExplosion safety category for gasNoneExplosion safety category for dustNoneAmbient temperature during operatingYesDegree of protection (IP)Image: State Stat	Alignment of the control element		Other
Suitable for safety functionsMarkYesExplosion safety category for gasNoneNoneAmbient temperature during operatingYesNoneDegree of protection (IP)YesNone	Type of electric connection		Other
Explosion safety category for gas     Image: Constraint of the sector of t	With status indication		No
Explosion safety category for dustNoneAmbient temperature during operating°C25 - 70Degree of protection (IP)C1965	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

## **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