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
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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		Θ = 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 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	Ui	V	500
Overvoltage category/pollution degree			III/3
Rated operational current	۱ _e	А	
AC-15			
24 V	۱ _e	А	10
220 V 230 V 240 V	۱ _e	А	6
380 V 400 V 415 V	۱ _e	А	4
DC-13			
24 V	۱ _e	А	10
110 V	۱ _e	А	1
220 V	۱ _e	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 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		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 _{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.
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