DATASHEET - AT4/11-2/I/R316



Position switch, 1early N/O+1late N/C, narrow, IP65 $_$ x, roller lever

NOTHER NO, HEITOW, II 03_X, TOHEL IEV

Part no. AT4/11-2/I/R316 Catalog No. 085926

Eaton Catalog No. AT4/11-2/I/R316 EL-Nummer 4355807

(Norway)



Delivery program

Basic function		Position switches
D		Safety position switches
Part group reference		AT4
Product range		Rotary lever
Degree of Protection		IP65
Features		Complete unit
Ambient temperature	°C	-25 - +70
Design		EN 50041 Form A
Snap-action contact		Yes
Approval		totally insulated
Contacts		
N/0 = Normally open		1 N/O
N/C = Normally closed		1 NC ⊕
Notes		e safety function, by positive opening to IEC/EN 60947-5-1
Contact sequence		0-\frac{13}{14} \frac{1}{22}
Contact travel = Contact closed = Contact open		13-14 21-22 0° 28° 43° 72° Zw = 60°
Positive opening (ZW)		yes
Colour		
Enclosure covers		Grey
Enclosure covers		
Housing		Insulated material
Connection type		Screw terminal

Technical data

delleral		
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

Degree of Protection Image: Protection Pess Torminal capacities mm² 1 x (0.75 - 2.5) 2 x (0.75 - 1.5) Flexible with ferrule mm² 1 x (0.75 - 2.5) 2 x (0.75 - 1.5) Contacts/switching capacity Rated insulation voltage Umo V AC 6000 Rated insulation voltage Umo V AC 6000 Rated operational current Ig AC Image: Protection of the protecti	Mounting position			As required
Solid	Degree of Protection			IP65
Flexible with ferrule	Terminal capacities		mm^2	
Contacts/switching capacity Rated impulse withstand voltage Umm VAC 6000 Acted impulse withstand voltage Ui V 500 Overvoltage category/pollution degree III/3 III/3 Rated operational current Ie A 10 AC-15 24 V Ie A 10 220 V 220 V 240 V Ie A 4 25 V 30 V 405 V 415 V Ie A 4 DC-13 Ie A 10 24 V Ie A 10 110 V Ie A 10 220 V 220 V 240 V Ie A 10 110 V Ie A 10 220 V Ie A 10 Supply frequency Ie A 0.5 Supply frequency Im A 0.5 Repetition accuracy Im 0.02 0.02 Repetition accuracy Im 0.02 0.02 Reparational	Solid		mm ²	
Rated inpulse withstand voltage Vine VAC 000 Rated insulation voltage Ui V 500 Overoritional current Ing AC 100 Rated operational current Ing AC 100 AC-15 Ing AC 100 24 V Ing AC 100 380 V 400 V 415 V Ing AC 100 24 V Ing AC 100 380 V 400 V 415 V Ing AC 100 24 V Ing AC 100 110 V Ing AC 100 200 V Ing AC 50 Stort-circuit string to IEC/EN 60947-5-1 MC AC Ing Ag6/J AG Repetition accuracy Ing Ag6/J AG Repetition accuracy Ing Ag6/J AG Reteracional short-circuit current Ing AG AG Mechanical variables Ing AG AG	Flexible with ferrule		mm ²	
Rated insulation voltage Ui V 500 Overvoltage category/pollution degree III/3 III/3 Rated operational current Je AC-15 24 V Ie AD 10 250 V 230 V 240 V Ie AD 6 300 V 400 V 415 V Ie AD 6 24 V Ie AD 10 110 V Ie AD 10 220 V Ie AD 10 200 V Ie AD 10 Supply frequency Ie AD 10 Supply frequency BD AB 10 Short-circuit rating to IEC/EN 60947-5-1 MD DD DD Rated conditional short-circuit current AB AB AB Mechanical variables BD AB AB Contact temperature of roller head MD AB AB Mechanical shock resistance (half-sinusoidal shock, 20 ms) AB BB BB BB BB BB	Contacts/switching capacity			
Overvoltage category/pollution degree In Item 19 (a) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	Rated impulse withstand voltage	U_{imp}	V AC	6000
Rated operational current	Rated insulation voltage	U_{i}	V	500
AC-15 24 V	Overvoltage category/pollution degree			III/3
1	Rated operational current	I _e	Α	
220 V 230 V 240 V	AC-15			
Base A A A DC-13	24 V	I _e	Α	10
DC-13	220 V 230 V 240 V	I _e	Α	6
24 V Ie A 10 110 V Ie A 1 220 V Ie A 0.5 Supply frequency Hz max. 400 Short-circuit rating to IEC/EN 60947-5-1 max. 400 max. fuse A gG/gL 6 Repetition accuracy mm 0.02 Rated conditional short-circuit current kA 1 Mechanical variables Lifespan, mechanical Operations x 106 8 Contact temperature of roller head °C ≤ 100 Mechanical shock resistance (half-sinusoidal shock, 20 ms) g 5 Standard-action contact g 5 Snap-action contact g 2 Operating frequency Operations/h ≤ 6000 Actuation N 8.0/20.0	380 V 400 V 415 V	I _e	Α	4
110 V 1e	DC-13			
220 V Ie A 0.5 Supply frequency Short-circuit rating to IEC/EN 60947-5-1 max. fuse Repetition accuracy Rated conditional short-circuit current Mechanical variables Lifespan, mechanical Contact temperature of roller head Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact Snap-action contact Querations/ Snap-action contact Querations/ Snap-action contact Querations/ Snap-action contact Nechanical Actuation Mechanical Actuation Mechanical Actuating force at beginning/end of stroke N 8.0/20.0	24 V	I _e	Α	10
Supply frequency Short-circuit rating to IEC/EN 60947-5-1 max. fuse Repetition accuracy Rated conditional short-circuit current Mechanical variables Lifespan, mechanical Contact temperature of roller head Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact Snap-action contact Goperations Poperating frequency Operations/h Actuation Mechanical Actuating force at beginning/end of stroke Hz max. 400 A g/G/L 6 6 C Do2 Mm D02 Rated Conditional Short-circuit current MACHANICAL MBC MBC MBC MBC MBC MBC MBC MB	110 V	I _e	Α	1
Short-circuit rating to IEC/EN 60947-5-1 max. fuse Repetition accuracy Rated conditional short-circuit current Mechanical variables Lifespan, mechanical Contact temperature of roller head Contact temperature of roller head Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact Snap-action contact Querations/h Snap-action contact Querations/h Actuation Mechanical Actuating force at beginning/end of stroke A g 6/gL 6 Mm 0.02 8 8 1 1 1 1 1 1 1 1 1 1 1	220 V	I _e	Α	0.5
max. fuse Repetition accuracy Repetition accuracy Rated conditional short-circuit current Mechanical variables Lifespan, mechanical Contact temperature of roller head Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact Snap-action contact Querations/h Querations/h Querations/h Standard-action contact Querations/h Actuation Mechanical Actuating force at beginning/end of stroke A g 5 6000 Actuation N 8.0/20.0	Supply frequency		Hz	max. 400
Repetition accuracy Rated conditional short-circuit current Mechanical variables Lifespan, mechanical Contact temperature of roller head Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact Snap-action contact Querations/h Querations/h Snap-action contact Querations/h Actuation Mechanical Actuating force at beginning/end of stroke mm Querations x 10 ⁶ 8 Contact temperature of roller head °C ≦ 100 9 5 6000 6000 80/20.0	Short-circuit rating to IEC/EN 60947-5-1			
Rated conditional short-circuit current Mechanical variables Lifespan, mechanical Contact temperature of roller head Contact temperature of roller head Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact Snap-action contact Guerations/h Snap-action contact Operations/h Actuation Mechanical Actuating force at beginning/end of stroke	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) g Standard-action contact g 5 Snap-action contact g 2 Operating frequency Operations/h ≤ 6000 Actuation N 8.0/20.0	Repetition accuracy		mm	0.02
Lifespan, mechanical Operations x 10 ⁶ 8 Contact temperature of roller head Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact Snap-action contact Operating frequency Operations/h Mechanical Actuating force at beginning/end of stroke Operations x 10 ⁶ 8 CO ≦ 100 9 5 5 6000 Actuation N 8.0/20.0	Rated conditional short-circuit current		kA	1
Contact temperature of roller head Contact temperature of roller head 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	Mechanical variables			
Mechanical shock resistance (half-sinusoidal shock, 20 ms) g 5 Standard-action contact g 5 Snap-action contact g 2 Operating frequency Operations/h ≤ 6000 Actuation Mechanical N 8.0/20.0	Lifespan, mechanical	Operations	x 10 ⁶	8
Standard-action contact g 5 Snap-action contact g 2 Operating frequency Operations/h ≤ 6000 Actuation Mechanical N 8.0/20.0	Contact temperature of roller head		°C	≦ 100
Snap-action contact g 2 Operating frequency Operations/h \$\frac{6000}{6000}\$ Actuation Mechanical Actuating force at beginning/end of stroke N 8.0/20.0	Mechanical shock resistance (half-sinusoidal shock, 20 ms)			
Operating frequency	Standard-action contact		g	5
Actuation Mechanical Actuating force at beginning/end of stroke N 8.0/20.0	Snap-action contact		g	2
Mechanical Actuating force at beginning/end of stroke N 8.0/20.0	Operating frequency	Operations/h		≦ 6000
Actuating force at beginning/end of stroke N 8.0/20.0	Actuation			
	Mechanical			
Astronomy of the state of the s	Actuating force at beginning/end of stroke		N	8.0/20.0
Actuating torque of rotary drives Nm 0.3	Actuating torque of rotary drives		Nm	0.3

Design verification as per IEC/EN 61439

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.
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

Technical data ETIM 7.0		
Sensors (EG000026) / End switch (EC000030)		
Electric engineering, automation, process control engineering / Binary sensor tech (ecl@ss10.0.1-27-27-06-01 [AGZ382015])	nology, safety-related s	sensor technology / Position switch / Position switch (Type 1)
Width sensor	mm	40
Diameter sensor	mm	0
Height of sensor	mm	83
Length of sensor	mm	0
Rated operation current le at AC-15, 24 V	Α	10
Rated operation current le at AC-15, 125 V	Α	0
Rated operation current le at AC-15, 230 V	А	6
Rated operation current le at DC-13, 24 V	Α	10
Rated operation current le at DC-13, 125 V	Α	1
Rated operation current le at DC-13, 230 V	Α	0.4
Switching function		Slow-action 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		None
Construction type housing		Cuboid
Material housing		Plastic
Coating housing		Other
Type of control element		Rotary lever
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
Ambient temperature during operating	°C	25 - 70
Degree of protection (IP)		IP65
Degree of protection (NEMA)		Other

Approvals

, the state			
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		

Additional product information (links)

IL05208012Z		

IL05208012Z (AWA1310-0544) Position switch

ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05208012Z2018_06.pdf