## **DATASHEET - M22-AK11**



Assembly of contact element with screw terminals and fixing adapter, 1 N/O, 1 NC



Part no. M22-AK11 Catalog No. 216505 **Alternate Catalog** M22-AK11Q

No.

**EL-Nummer** 4355433

(Norway)

Basic Intertion accessories  Description Connection technique Fixing Degrae of Protection Connection to SmartWire-DT  Contact NOC = Normally closed Notes Actuator travel and actuation force as per DIN EN 60947-5-1, K.5.4.1  Minimum force for positive opening Contact travel diagram, stroke in connection with front element  Contact travel diagram, stroke in connection with front element  Configuration  Configuration Connection technique	Delivery program		
Connection tochnique Scrow terminals   Fixing Front fixing   Degree of Protection IP20   Connection to SmartWire-DT no   Contact Contact Toward Jopen 1 N/0   N/C = Normally open 1 N/C ⊕   Notes INC ⊕   Actuator travel and actuation force as per DIN EN 60947-5-1, K.5.4.1  mm 4.8 // The positive opening to IEC/EN 80947-5-1   Maximum travel mm 5.7   Contact sequence 113 121   Contact travel diagram, stroke in connection with front element 1.3 1.2   Contact diagram 2.8   Configuration 1.4 3.6 2.5    Scrow terminals  Front fixing  Pront	Basic function accessories		Contact elements
Fixing Degree of Protection Connection Connection NO = Normally closed Notes Actuator travel and actuation force as per DIN EN 60947-5-1, K.5.4.1  Maximum travel Minimum force for positive opening Contact sequence  Contact travel diagram, stroke in connection with front element  Contact diagram  Configuration  Configuration  Front fixing P20  no  no  1 NO  1 NO  1 NO  1 NO  4.8  4.8  5.7  20  113 121  114 122  Contact travel diagram, stroke in connection with front element  Configuration  Configuration  Configuration	Description		Assembly of contact element with screw terminals and fixing adapter
Degree of Protection Connection to SmartWire-DT Contacts  N/O - Normally open Notes	Connection technique		Screw terminals
Contacts  NO - Normally open  NC - Normally closed  Notes  Actuator travel and actuation force as per DIN EN 60947-5-1, K.5.4.1  Maximum travel Minimum force for positive opening  Contact sequence  Contact travel diagram, stroke in connection with front element  Configuration  Configuration  Configuration  Configuration  No - Normally open  1 N/O  1	Fixing		Front fixing
N/C = Normally closed  N/C = Normally closed  Notes  Actuator travel and actuation force as per DIN EN 60947-5-1, K.5.4.1  Maximum travel Minimum force for positive opening  Contact sequence  Contact travel diagram, stroke in connection with front element  Configuration  Configuration  N/C = Normally closed  1 N/C  1 NC ⊕	Degree of Protection		IP20
N/O = Normally open  N/C = Normally closed  Notes  Actuator travel and actuation force as per DIN EN 60947-5-1, K.5.4.1  mm	Connection to SmartWire-DT		no
Notes  Actuator travel and actuation force as per DIN EN 60947-5-1, K.5.4.1  Maximum travel Minimum force for positive opening Contact sequence  Contact travel diagram, stroke in connection with front element  Contact diagram  Configuration  Configuration  INC	Contacts		
Notes  Actuator travel and actuation force as per DIN EN 60947-5-1, K.5.4.1  Maximum travel Minimum force for positive opening Contact sequence  Contact travel diagram, stroke in connection with front element  Contact diagram  Configuration  Configuration  Note  = safety function, by positive opening to IEC/EN 60947-5-1  4.8  5.7  113  121  114  22   Contact travel diagram, stroke in connection with front element  Configuration  Configuration  Configuration  Actuator travel diagram actuation force as per DIN EN 60947-5-1,	N/0 = Normally open		1 N/O
Actuator travel and actuation force as per DIN EN 60947-5-1, K.5.4.1  mm	N/C = Normally closed		1 NC →
K.5.4.1  mm  4.8  Maximum travel  mm  5.7  Minimum force for positive opening  Contact sequence  Contact travel diagram, stroke in connection with front element  Contact diagram  Contact diagram  Configuration  Configuration  mm  4.8  4.8  4.8  4.8  4.8  4.8  4.8			= safety function, by positive opening to IEC/EN 60947-5-1
Maximum travel Minimum force for positive opening  Contact sequence  Contact travel diagram, stroke in connection with front element  Contact diagram  Configuration  Mm  5.7  20  113			
Minimum force for positive opening  Contact sequence  Contact travel diagram, stroke in connection with front element  Contact diagram  Contact diagram  Configuration  20  113 121 14 22  2.8 0 1.2 5.5		mm	4.8
Contact travel diagram, stroke in connection with front element  Contact diagram  2.8  0 1.2 5.5  Configuration	Maximum travel	mm	5.7
Contact travel diagram, stroke in connection with front element  Contact diagram  2.8  0 1.2 5.5  Configuration	Minimum force for positive opening	N	20
Contact diagram  2.8  0 1.2 5.5  Configuration  1/4 3/6 2/5			\7
0 1.2 5.5  Configuration			
	Contact diagram		
Connection technique Screw terminals	Configuration		1/4 3/6 2/5
	Connection technique		Screw terminals

# **Technical data**

General			
Standards			IEC 60947-5-1
Lifespan, mechanical	Operations	x 10 <sup>6</sup>	>5
Operating frequency	Operations/h		≦ 3600
Actuating force		n	≦ 5 10
Degree of Protection			IP20
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
Open		°C	-25 - +70

Terminal capacities		$mm^2$	
Solid		mm <sup>2</sup>	0.75 - 2.5
Stranded		mm <sup>2</sup>	0.5 - 2.5
Flexible with ferrule		mm <sup>2</sup>	0.5 - 1.5
Contacts			
Rated impulse withstand voltage	U <sub>imp</sub>	V AC	6000
Rated insulation voltage	Ui	V	500
Overvoltage category/pollution degree			III/3
Control circuit reliability			
at 24 V DC/5 mA	H <sub>F</sub>	Fault probabil	$< 10^{-7}, < 1$ fault in $10^7$ operations
at 5 V DC/1 mA	H <sub>F</sub>	Fault probabil	$< 5 \times 10^{-6}$ , $< 1$ failure in $5 \times 10^{6}$ operations
Max. short-circuit protective device			
Fuseless		Type	PKZM0-10/FAZ-B6/1
Fuse	gG/gL	Α	10
Switching capacity			
Rated operational current	I <sub>e</sub>	A	
AC-15			
115 V	I <sub>e</sub>	Α	6
220 V 230 V 240 V	I <sub>e</sub>	Α	6
380 V 400 V 415 V	I <sub>e</sub>	Α	4
500 V	I <sub>e</sub>	Α	2
DC-13			
24 V	I <sub>e</sub>	Α	3
42 V	I <sub>e</sub>	Α	1.7
60 V	I <sub>e</sub>	Α	1.2
110 V	I <sub>e</sub>	Α	0.8
220 V	I <sub>e</sub>	Α	0.3
Lifespan, electrical			
AC-15			
230 V/0.5 A	Operations	x 10 <sup>6</sup>	1.6
230 V/1.0 A	Operations	x 10 <sup>6</sup>	1
230 V/3.0 A	Operations	x 10 <sup>6</sup>	0.7
DV-13			
12 V/2.8 A	Operations	x 10 <sup>6</sup>	1.2

**Auxiliary contacts** 

Rated conditional short-circuit current I<sub>q</sub> kA 1

# 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	$P_{\text{vid}}$	W	0.11
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	0
Static heat dissipation, non-current-dependent	$P_{vs}$	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**

Low-voltage industrial components (EG000017) / Auxiliary contact block (EC000041)

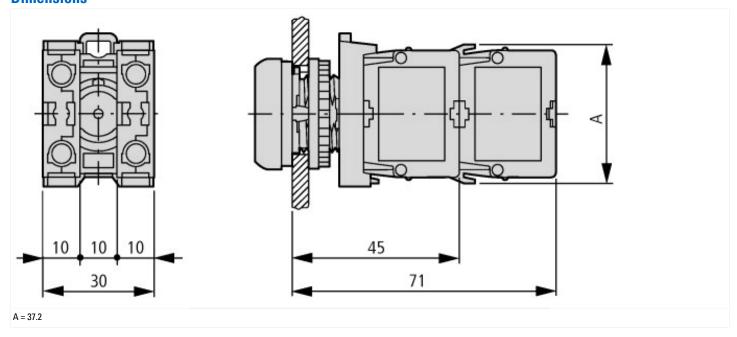
Electric engineering, automation, process control engineering / Low-voltage switch technology / Component for low-voltage switching technology / Auxiliary switch block (ecl@ss10.0.1-27-37-13-02 [AKN342013])

Number of contacts as change-over contact		0
Number of contacts as normally open contact		1
Number of contacts as normally closed contact		1
Number of fault-signal switches		0
Rated operation current le at AC-15, 230 V	А	6
Type of electric connection		Screw connection
Model		Top mounting
Mounting method		Front fastening
Lamp holder		None

# Approvals

Product Standards	IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94-91; CE marking
UL File No.	E29184
UL Category Control No.	NKCR
CSA File No.	012528
CSA Class No.	3211-03
North America Certification	UL listed, CSA certified
Degree of Protection	UL/CSA Type: -

# **Dimensions**



## **Additional product information (links)**

IL04716002Z (AWA1160-1745) RMQ-Titan System

IL04716002Z (AWA1160-1745) RMQ-Titan System ftp://ftp.moeller.net/DOCUMENTATION/AWA\_INSTRUCTIONS/IL04716002Z2018\_10.pdf