

## Contact element, Screw terminals, Front fixing, 1 NCL, 24 V 3 A, 220 V 230 V 240 V 6 A

Part no.	M22-K01D
Catalog No.	262165
Alternate Catalog No.	M22-K01DQ
EL-Nummer (Norway)	4355766

## Delivery program

Basic function accessories	Contact elements
Connection technique	Screw terminals
Fixing	Front fixing
Degree of Protection	IP20
Connection to SmartWire-DT	no
<b>Contacts</b>	
Notes	 = safety function, by positive opening to IEC/EN 60947-5-1
NC <sub>L</sub> =NC late-break	1 NCL 
<b>Actuator travel and actuation force as per DIN EN 60947-5-1, K.5.4.1</b>	
	mm 4.8
Maximum travel	mm 5.7
Minimum force for positive opening	N 15
Connection type	Single contact
Connection technique	Screw terminals

## Technical data

<b>General</b>			
Standards			IEC 60947-5-1
Lifespan, mechanical	Operations $\times 10^6$		> 5
Operating frequency	Operations/h		$\leq 3600$
Actuating force	n		$\leq 5$
Operating torque (screw terminals)	Nm		$\leq 0.8$
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
Mechanical shock resistance to IEC 60068-2-27 Shock duration 11 ms, half-sinusoidal	g		> 30
Terminal capacities	mm <sup>2</sup>		
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	U <sub>i</sub>	V	500
Overvoltage category/pollution degree			III/3
Control circuit reliability			
at 24 V DC/5 mA	H <sub>F</sub>	Fault probability	< 10 <sup>-7</sup> (i.e. 1 failure to 10 <sup>7</sup> operations)
at 5 V DC/1 mA	H <sub>F</sub>	Fault probability	< 5 x 10 <sup>-6</sup> (i.e. 1 failure in 5 x 10 <sup>6</sup> operations)
Max. short-circuit protective device			
Fuseless		Type	PKZM0-10/FAZ-B6/1

Fuse	gG/gL	A	10	
<b>Switching capacity</b>				
Rated operational current	$I_e$	A		
AC-15				
115 V	$I_e$	A	6	
220 V 230 V 240 V	$I_e$	A	6	
380 V 400 V 415 V	$I_e$	A	4	
500 V	$I_e$	A	2	
DC-13				
24 V	$I_e$	A	3	
42 V	$I_e$	A	1.7	
60 V	$I_e$	A	1.2	
110 V	$I_e$	A	0.6	
220 V	$I_e$	A	0.3	
Lifespan, electrical				
AC-15				
230 V/0.5 A	Operations	$\times 10^6$	1.6	
230 V/1.0 A	Operations	$\times 10^6$	1	
230 V/3.0 A	Operations	$\times 10^6$	0.7	
DV-13				
12 V/2.8 A	Operations	$\times 10^6$	1.2	

### Auxiliary contacts

Rated conditional short-circuit current	$I_q$	kA	1	
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## Design verification as per IEC/EN 61439

Technical data for design verification				
Rated operational current for specified heat dissipation	$I_n$	A	6	
Heat dissipation per pole, current-dependent	$P_{vid}$	W	0.11	
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 8.0

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