



**Break contact,Front**

**Part no. M22-K01**

**Article no. 216378**



Powering Business Worldwide™

Switching with the main contacts

Used for indicating and interlocking tasks

**Program**

Range			RMQ-Titan (drilling dimensions 22.5 mm)
Basic function			Accessories
Range			Accessories
Accessories			Standard auxiliary contact, trip-indicating auxiliary switch
Standard/Approval			UL/CSA, IEC
Construction size			NZM1/2/3/4
Single unit/Complete unit			Element
Connection technique			Screw terminals
Fixing			Front fixing
Auxiliary contacts:  = safety function, by positive opening to IEC/EN 60947-5-1			
N/C = Normally closed			1 N/C
Contact sequence			

Contact sequence			
Contact travel diagram, stroke in connection with front element			
Configuration			
Protection type			IP20
Connection to SmartWire-DT			no
Connection type			Single contact
Description standard auxiliary contact HIN			<p>Switching with the main contacts Used for indicating and interlocking tasks.</p> <p>Can be used with NZM1 circuit-breaker: a standard auxiliary contact can be clipped into the circuit-breaker.</p> <p>Can be used with NZM2 size circuit-breaker: a standard auxiliary contact can be clipped into the circuit-breaker.</p> <p>Can be used with NZM3, 4 circuit-breaker: up to three standard auxiliary contacts can be clipped into the circuit-breaker.</p> <p>Any combinations of the auxiliary contact types are possible.</p> <p>Marking on switch: HIN.</p> <p>On combination with remote operator NZM-XR... the right mounting location of standard auxiliary contact HIN can be fitted only with individual contacts.</p>
For use with			<p>NZM1(-4), 2(-4), 3(-4), 4(-4)</p> <p>PN1(-4), 2(-4), 3(-4)</p> <p>N(S)1(-4), 2(-4), 3(-4), 4(-4)</p>

## Approbationen

UL approval	Yes
CSA approval	Yes
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 CCN	NKCR
CSA File No.	012528
CSA Class No.	3211-03
NA Certification	UL listed, CSA certified
Degree of Protection	UL/CSA Type: -

## General

Standards			IEC/EN 60947 VDE 0660
Lifespan, mechanical	Operations	x 10 <sup>6</sup>	> 5
Operating frequency	Operations/h		3600
Actuating force		n	5
Operating torque (screw terminals)		Nm	0.8

Protection type			IP20
Climatic proofing			Damp heat, constant to IEC 60068-2-78 Damp heat, cyclic to IEC 60068-2-30
Ambient temperature		°C	
Open		°C	- 25 - + 70
Mounting position			As required
Mechanical shock resistance		g	30 Shock duration 11 ms Sinusoidal according to IEC 60068-2-27
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	$U_{imp}$	V AC	6000
Rated insulation voltage	$U_i$	V	500
Overtoltage category/pollution degree			III/3
Control circuit reliability			
at 24 V DC/5 mA	$H_F$	Fault probability	$< 10^{-7}$ (i.e. 1 failure to $10^7$ operations)
at 5 V DC/1 mA	$H_F$	Fault probability	$< 5 \times 10^{-6}$ (i.e. 1 failure in $5 \times 10^6$ operations)
Max. short-circuit protective device			
Fuseless		Type	PKZM0-10/FAZ-B6/1
Fuse	gG/gL	A	10

## Switching capacity

Rated operational current	$I_e$	A	
AC-15			
115 V	$I_e$	A	4
230 V	$I_e$	A	4
400 V	$I_e$	A	2
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	0.8
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 operational voltage	$U_e$	V	
Rated operational voltage	$U_e$	V AC	500
Rated operational voltage, max.	$U_e$	V DC	220
Conventional thermal current	$I_{th}=I_e$	CSA	4
Rated operational current	$I_e$	A	

Different rated operational currents when used as auxiliary contact for NZM circuit-breaker				bei AC = 50/60 Hz			
				Bemessungsbetriebsstrom	M22-K...	M22-CK...	XHIV
			AC-15	15 A	4	4	4
			230 V	15 A	4	4	4
			400 V	15 A	2	-	2
			500 V	15 A	1	-	1
			DC-124	15 A	3	3	3
			42 V	15 A	1.7	1	1.5
			60 V	15 A	1.2	0.8	0.8
			110 V	15 A	0.8	0.5	0.5
			220 V	15 A	0.3	0.2	0.2
Short-circuit protection							
max. fuse		A gG/ gL		10			
Max. miniature circuit-breaker		A		PKZM0-10/FAZ-B6			
Operating times							
				Early-make time of the HIV compared to the main contacts during with make and break switching.  (switch times with manual operation):  NZM1, PN1, N(S)1: ca. 20 ms  NZM2, PN2, N(S)2: ca. 20 ms  NZM3, PN3, N(S)3: ca. 20 ms  NZM4, N(S)4: approx. 90 ms, the HIV switch early <b>Offswitching not</b> forward.			
Terminal capacities		mm <sup>2</sup>					
Solid or flexible conductor with ferrule		mm <sup>2</sup>		1 x (0.75 - 2.5) 2 x (0.75 - 2.5)			
		AWG		1 x (18 - 14) 2 x (18 - 14)			
UL/CSA							
Rated operational current	I <sub>e</sub>	A		10 A – 600 V AC 1 A - 250 V DC			
Pilot Duty				A600/P300 above 300 V AC same polarity			
Other technical data (sheet catalogue)				Maximum equipment and position of the internal accessories			
Indoor and protected outdoor installation							

### Technical data according to ETIM 4.0

Suitable for earth leakage circuit breaker			No
Type of electric connection			Screw connection
Rated operation current I <sub>e</sub> at AC-15, 230 V		A	6
Mounting type			Front mount
Suitable for pendant switch			No
Suitable for front element			YES
Suitable for circuit-breakers			No
Suitable for safety position switches			No
Suitable for step switches			No
Suitable for pressure switch/selector switch actuator			YES
Suitable for cam switches			No
Suitable for motor protective circuit breakers			No
Suitable for series-mounting relays			No
Suitable for solenoid			No

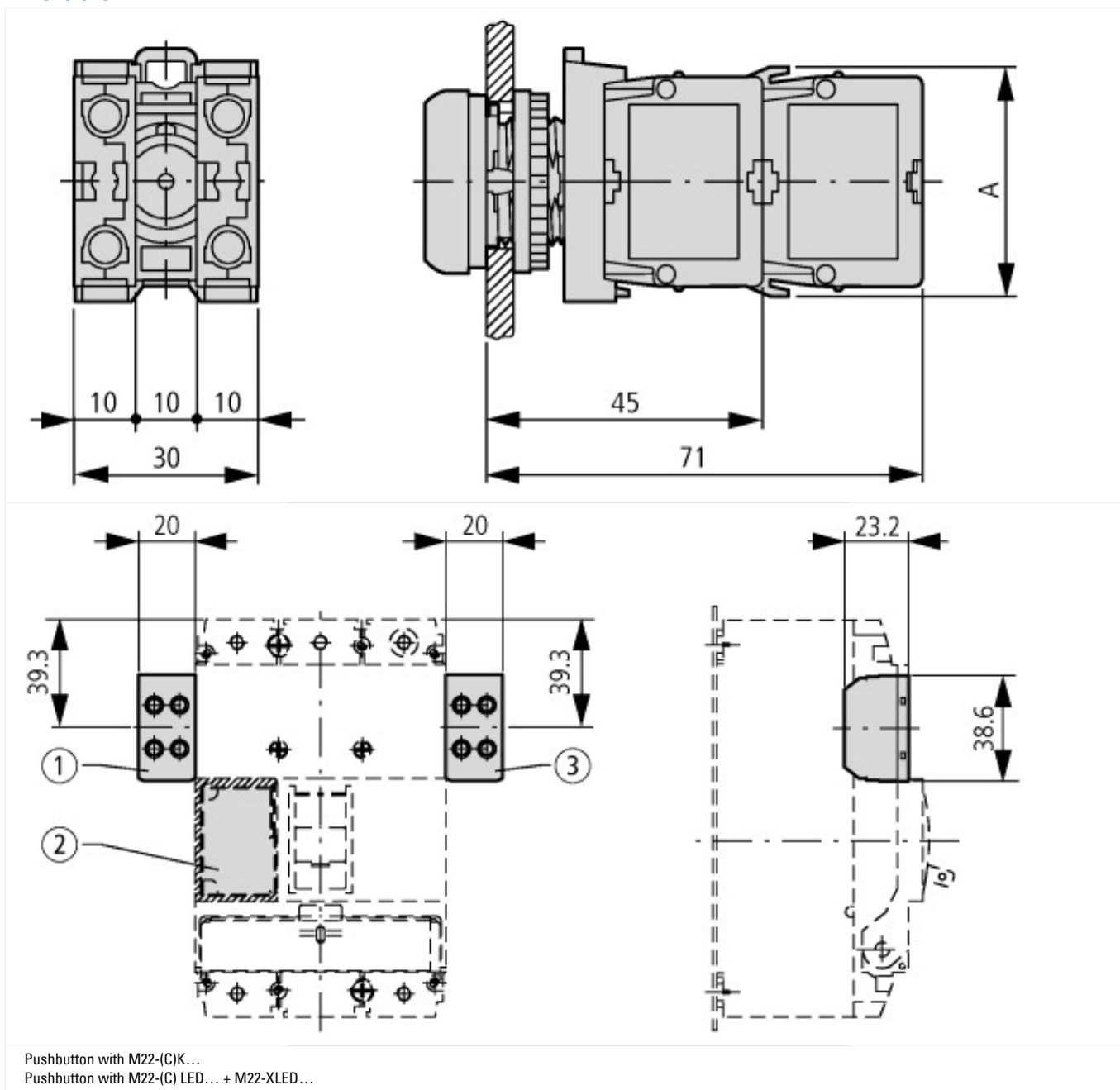
Suitable for compact switch-disconnector		No
Suitable for miniature circuit-breakers		No
Suitable for pulse relay		No
Suitable for contactor relay relay		No
Suitable for pendant pushbutton		No
Suitable for residual current device		No
Number of contacts as change-over contact		0
Number of contacts as N/O		0
Number of contacts as NC		1
Suitable for impulse relays		No
Suitable for position switches		No
Suitable for switch-disconnector/residual current device		No
Suitable for contactors		No
Suitable for installation contactor / installation relay		No

## CAD-Data

Product standards CAD data:

<http://eaton-moeller.partcommunity.com>

## Dimensions



## Additional product information (links)

IL04716002Z (AWA1160-1745) RMQ-Titan System

[ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL04716002Z2011\\_03.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL04716002Z2011_03.pdf)

