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M22-CK01 - Contact element, Cage Clamp, Front fixing, 1 NC, 24 V 3 A, 220 V 230 V 240 V 6 A

216385 M22-CK01

Overview Specifications Resources

216385 M22-CK01

Contact element, Cage Clamp, Front fixing, 1 NC, 24 V 3 A, 220 V 230 V 240 V 6 A

Alternate Catalog No.	M22-CK01Q
EL-Nummer (Norway)	4355767

Contact element, Standard/Approval: UL/CSA, IEC, Construction size: NZM1/2/3/4, Connection technique: Cage Clamp, Fixing: Front fixing, Description: Cage Clamp is a registered trademark of Wago Kontakttechnik GmbH/Minden, Germany, Contacts N/C = Normally closed: 1 NC, Contacts Notes: = safety function, by positive opening to IEC/EN 60947-5-1, Actuator travel and actuation force as per DIN EN 60947-5-1, K.5.4.1: mm 4.8, Maximum travel: mm 5.7, Mnimum force for positive opening: N 15, Degree of Protection: IP20, Connection to SmartWire-DT: no, Connection type: Single contact, Description of HIA trip-indicating auxiliary contact: General trip indication '+', when tripped by shunt release, overload release, short-circuit release or by the residual-current release due to residual-current., Can be used with NZM1, 2, 3 circuit-breaker: a trip-indicating auxiliary contact can be clipped into the circuit-breaker., Can be used with NZM4 circuit-breaker: up to two standard auxiliary contacts can be clipped into the circuit-breaker., Any combinations of the auxiliary contact types are possible., Not in combination with switch-disconnector PN…, Marking on switch: HIA, Labeling in FI-Block: HIAFI., If the trip-indicating auxiliary switch in the fault current block is used, the NC contacts operates as a N/O contact and the NC contact operates as an N/O contact., Description standard auxiliary contact HIN: Switching with the main contacts Used for indicating and interlocking tasks., Can be used with NZM1 circuit-breaker: a standard auxiliary contact can be clipped into the circuit-breaker., Can be used with NZM2 size circuit-breaker: a standard auxiliary contact can be clipped into the circuit-breaker., Can be used with NZM3, 4 circuit-breaker: up to three standard auxiliary contacts can be clipped into the circuit-breaker., Any combinations of the auxiliary contact types are possible., Marking on switch: HIN.

- Delivery program
- Technical data
- Design verification as per IEC/EN 61439
- Technical data ETIM 7.0
- Approvals

Delivery program

Product range
Accessories
Basic function accessories
Contact elements
Accessories
Auxiliary contact
Accessories

- Dimensions

Standard auxiliary contact, trip-indicating auxiliary switch
Standard/Approval
UL/CSA, IEC
Construction size
NZM1/2/3/4
Description
Cage Clamp is a registered trademark of Wago Kontakttechnik GmbH/Minden, Germany
Connection technique
Cage Clamp
Fixing
Front fixing
Degree of Protection
IP20
Connection to SmartWire-DT
no
For use with
NZM1(-4), 2(-4), 3(-4), 4(-4)
PN1(-4), 2(-4), 3(-4)
N(S)1(-4), 2(-4), 3(-4), 4(-4)
Approval
Contacts
N/C = Normally closed
1 NC□
Notes
□ = safety function, by positive opening to IEC/EN 60947-5-1
Actuator travel and actuation force as per DIN EN 60947-5-1, K.5.4.1
[mm]
4.8
Maximum travel [mm]
5.7
Minimum force for positive opening [N]
15
Contact sequence

Contact travel diagram, stroke in connection with front element
Contact diagram

Configuration

Connection type
Single contact
Description of HIA trip-indicating auxiliary contact
General trip indication '+', when tripped by shunt release, overload release, short-circuit release or by the residual-current release due to residual-current.
Can be used with NZM1, 2, 3 circuit-breaker: a trip-indicating auxiliary contact can be clipped into the circuit-breaker.
Can be used with NZM4 circuit-breaker: up to two standard auxiliary contacts can be clipped into the circuit-breaker.
Any combinations of the auxiliary contact types are possible.
Not in combination with switch-disconnector PN…
Marking on switch: HIA
Labeling in FI-Block: HIAFI.
If the trip-indicating auxiliary switch in the fault current block is used, the NC contacts operates as a N/O contact and the NC contact operates as an N/O contact.
Description standard auxiliary contact HIN
Switching with the main contacts Used for indicating and interlocking tasks.
Can be used with NZM1 circuit-breaker: a standard auxiliary contact can be clipped into the circuit-breaker.
Can be used with NZM2 size circuit-breaker: a standard auxiliary contact can be clipped into the circuit-breaker.
Can be used with NZM3, 4 circuit-breaker: up to three standard auxiliary contacts can be clipped into the circuit-breaker.
Any combinations of the auxiliary contact types are possible.
Marking on switch: HIN.
On combination with remote operator NZM-XR... the right mounting location of standard auxiliary contact HIN can be fitted only with individual contacts.
Connection technique
Cage Clamp

Notes
The following can be clipped into the switches:

- NZM1: a standard auxiliary contact
- NZM2: up to two M22-(C)K… standard auxiliary contacts
- NZM3: up to three M22-(C)K… standard auxiliary contacts
- NZM4: up to three M22-(C)K… standard auxiliary contacts

Any combinations of the auxiliary contact types are possible.

Marking on switch: HIN

In combination with remote operator NZM-XR… only single contacts can be fitted to some installation locations of the standard auxiliary contact.

NZM2: Only single contact can be fitted in left installation location of standard auxiliary contact.

NZM3: Only single contact can be fitted in installation locations of standard auxiliary contact.

NZM4: Only single contact can be fitted in right installation location of standard auxiliary contact.

Technical data

General
Standards
IEC 60947-5-1
Lifespan, mechanical [Operations]
> 5 x 10^6
Operating frequency [Operations/h]
 3600
Actuating force
 5 n
Degree of Protection
IP20
Climatic proofing
Damp heat, constant, to IEC 60068-2-78
Damp heat, cyclic, to IEC 60068-2-30
Ambient temperatureOpen
-25 - +70 °C
Mechanical shock resistance to IEC 60068-2-27 Shock duration 11 ms, half-sinusoidal
> 30 g
Terminal capacitiesSolid
0.75 - 2.5 mm^2
Terminal capacitiesStranded
0.5 - 2.5 mm^2
Terminal capacitiesFlexible with ferrule
0.5 - 1.5 mm^2
Contacts
Rated impulse withstand voltage [U_{imp}]
6000 V AC
Rated insulation voltage [U_i]
500 V
Overvoltage category/pollution degree
III/3
Control circuit reliabilityat 24 V DC/5 mA [H_F]
< 10^{-7} (i.e. 1 failure to 10^7 operations) Fault probability
Control circuit reliabilityat 5 V DC/1 mA [H_F]
< 5 x 10^{-6} (i.e. 1 failure in 5 x 10^6 operations) Fault probability
Max. short-circuit protective deviceFuseless
PKZM0-10/FAZ-B6/1 Type
Max. short-circuit protective deviceFuse [gG/gL]
10 A
Switching capacity
Rated operational current [I_e]AC-15115 V [I_e]
6 A
Rated operational current [I_e]AC-15220 V 230 V 240 V [I_e]
6 A
Rated operational current [I_e]AC-15380 V 400 V 415 V [I_e]
4 A
Rated operational current [I_e]AC-15500 V [I_e]
2 A
Rated operational current [I_e]DC-13 24 V [I_e]
3 A

Rated operational current [I_e] DC-13 42 V [I_e]
1.7 A
Rated operational current [I_e] DC-13 60 V [I_e]
1.2 A
Rated operational current [I_e] DC-13 110 V [I_e]
0.8 A
Rated operational current [I_e] DC-13 220 V [I_e]
0.3 A
Lifespan, electrical AC-15 230 V/0.5 A [Operations]
1.6×10^6
Lifespan, electrical AC-15 230 V/1.0 A [Operations]
1×10^6
Lifespan, electrical AC-15 230 V/3.0 A [Operations]
0.7×10^6
Lifespan, electrical DV-13 12 V/2.8 A [Operations]
1.2×10^6
Auxiliary contacts
Rated operational voltage [U_e] Rated operational voltage [Ue]
500 V AC
Rated operational voltage [U_e] Rated operational voltage, max. [Ue]
220 V DC
Conventional thermal current [$I_{th} = I_e$]
4 CSA
Rated operational current [I_e] **Different rated operational currents** when used as auxiliary contact for NZM circuit-breaker

M22-(C)K10(01) M22-CK11(02)(20) XHIV

bei AC = 50/60 Hz

Bemessungsbetriebsstrom												
		AC-15	115 V		Ie		A	4		4		4
			230 V		Ie		A	4		4		4
			400 V		Ie		A	2		-		2
			500 V		Ie		A	1		-		1
		DC-13	24 V		Ie		A	3		3		3
			42 V		Ie		A	1.7		1		1.5
			60 V		Ie		A	1.2		0.8		0.8
			110 V		Ie		A	0.6		0.5		0.5
			220 V		Ie		A	0.3		0.2		0.2

Rated conditional short-circuit current [I_q]
1 kA
Short-circuit protection max. fuse
10 A gG/gL
Short-circuit protection Max. miniature circuit-breaker
FAZ-B6/B1 A
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 **Off** switching **not** forward.

Terminal capacities Solid or flexible conductor, with ferrule
1 x (0,5 - 1,5)
2 x (0,5 - 0,75) mm^2
Other technical data (sheet catalogue)
Maximum equipment and position of the internal accessories

Design verification as per IEC/EN 61439

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

Static heat dissipation, non-current-dependent [P_{vs}]
0 W
Heat dissipation capacity [P_{diss}]
0 W
Operating ambient temperature min.
-25 °C
Operating ambient temperature max.
+70 °C
IEC/EN 61439 design verification
10.2 Strength of materials and parts10.2.2 Corrosion resistance
Meets the product standard's requirements.
10.2 Strength of materials and parts10.2.3.1 Verification of thermal stability of enclosures
Meets the product standard's requirements.
10.2 Strength of materials and parts10.2.3.2 Verification of resistance of insulating materials to normal heat
Meets the product standard's requirements.
10.2 Strength of materials and parts10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects
Meets the product standard's requirements.
10.2 Strength of materials and parts10.2.4 Resistance to ultra-violet (UV) radiation
Meets the product standard's requirements.
10.2 Strength of materials and parts10.2.5 Lifting
Does not apply, since the entire switchgear needs to be evaluated.
10.2 Strength of materials and parts10.2.6 Mechanical impact
Does not apply, since the entire switchgear needs to be evaluated.
10.2 Strength of materials and parts10.2.7 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 properties10.9.2 Power-frequency electric strength
Is the panel builder's responsibility.
10.9 Insulation properties10.9.3 Impulse withstand voltage
Is the panel builder's responsibility.
10.9 Insulation properties10.9.4 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
0
Number of contacts as normally closed contact
1
Number of fault-signal switches
0
Rated operation current Ie at AC-15, 230 V
6 A

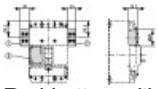
Type of electric connection
Spring clamp connection
Model
Top mounting and integrable
Mounting method
Front fastening
Lamp holder
None

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

A = 39



Pushbutton with M22-(C)K…
Pushbutton with M22-(C) LED… + M22-XLED…

CAD data

- Product-specific CAD data
  (Web)
- 3D Preview
  (Web)

DWG files

- DA-CD-kontaktelement_cage_front
  File
  (Web)

edz files

- DA-CE-ETN.M22-CK01
  File
  (Web)

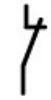
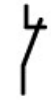
Step files

- DA-CS-kontaktelement_cage_front
  File
  (Web)

Additional product information

- DGUV Test Mark Customer Information
  (PDF)
- Maximum equipment and position of the internal accessories
  (Web)

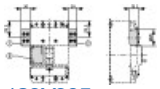
Wiring diagram

- 116S041
  Line drawing
  Break contact
  1.X1
- 
  1.X2
  123S136
  Line drawing
  Auxiliary contacts
  4.X1
- 
  4.X2
  123S137
  Line drawing
  Auxiliary contacts

Contact travel diagram

- 116U023
  Coordinate visualization
  Contact element contact travel diagram

Dimensions single product

- 116X101
  Line drawing
  Actuator with M22-...
- 
  123X305
  Line drawing
  Releases
  - NZM1-XA(HIV), NZM1-XA(HIV)(20), NZM1-XHIV
  - NZM1-XA(HIV)(L), NZM1-XU(V)(HIV)(L)(20), NZM1-XHIV(L)
  - NZM1-XHIVR

Flow diagram

- 116Q003
  Line drawing
  Assignment of the fixing adapter

3D drawing

- 116I251
  Line drawing
  Contact elements

Instruction Leaflet

- RMQ-Titan M22 (IL047018ZU)
  (PDF, 07/2021, Int)
- RMQ-Titan System (IL04716002Z)
  Asset
  former AWA1160-1745, IL04716001E
  (PDF, 09/2020, multilingual)

Standards

- 

000Z425
Logo
Certification: DGUV ET16107

Product photo

- 
1160PIC-1382
Photo
Contact element

Declaration of Conformity

EU

- E-stop operating devices RMQ Titan & acc. M22/M30(S)-PV(LT)30... (DA-DC-00003323)
Asset
(PDF)
- Emergency-stop operating devices RMQ Titan & accessories M22-..., M30-... (DA-DC-00003622)
Asset
(PDF)
- RMQ Titan (Operating and signalling devices) M22.../M30.../C22.../C30… (DA-DC-00003657)
Asset
(PDF)
- DA-DC-dguv_test_zeichen_infoblatt_kunden
Asset
(PDF)

UK

- RMQ Titan (Operating and signalling devices) M22.../M30.../C22.../C30… (DA-DC-00003960)
Asset
(PDF)

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