DATASHEET - M22-CK20



Contact element, Cage Clamp, Front fixing, 2 N/O, 24 V 3 A, 220 V 230 V 240 V 4 A





Part no. M22-CK20 Catalog No. 107898 Alternate Catalog M22-CK20Q No. 4355494 **EL-Nummer** (Norway)

Delivery program

Delivery program	
Product range	Accessories
Basic function accessories	Contact elements
Accessories	Auxiliary contact
Accessories	Standard auxiliary contact, trip-indicating auxiliary switch
Standard/Approval	UL/CSA, IEC
Construction size	NZM1/2/3/4
Description	When using emergency switching off actuators M22-PV max. 2 contact elements = 4 NC / N/O contacts 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	ET 16107 Sicherheit geprüft tested safety
Contacts	
N/O = Normally open	2 N/O
Contact sequence	$\begin{array}{c} 1.3 \\ 1.4 \\ 1.4 \end{array}$
Contact travel diagram, stroke in connection with front element	
Contact diagram	0 3.6 5.5
Connection type	Double 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

hereing frequency of persistency of	General			
Kukuaing force n 5 1 Degree of Protection amp heat, constant, to ICC 60068-2-30 Bamp heat, constant, to ICC 60068-2-30 Aubient temperature amp heat, constant, to ICC 60068-2-30 Bamp heat, constant, to ICC 60068-2-30 Aubient temperature removed to the second temperature Solid Solid Open removed temperature Solid RmP Solid Solid man2 Sol-15 Solid man2 Solid Solid man2 Solid man2 Solid S	Standards			IEC 60947-5-1
Depend Protection Page Page Page Depend Protection Page Page Peat constant, to IEC 60068-2-30 Pamphaet, cyclic, to IEC 60068-2-30 Pamphaet, cyclic, to IEC 60068-2-30 Open Page Page Page Open Page Page Page Solid Page Page Page Forbuse with strue down of target Page Page Page Solid constant, strue down of target Page Page Page Solid constant, strue down of target Page Page Page Solid constant, strue down of target Page Page Page Solid constant, strue down of target Page Page Page Solid constant, strue down of target Page Page Page Solid c	Operating frequency	Operations/h		≦ 3600
Inatic proofing Impleat. constant, to IEC 60088-2-38 Impleat, constant, to IEC 60088-2-38 Impleat, constant, to IEC 60088-2-38 Impleat, constant, to IEC 60088-2-38 Impleat, constant, to IEC 6008-2-38 Impleat, constant, to IEC 6008-	Actuating force		n	≦ 10
Andient emperature Pamp heat, cyclic, to IEC 60068-2:30 Ambient temperature Pamp heat, cyclic, to IEC 60068-2:30 Open Solid Open Solid Solid Man2 Solid ma ²	Degree of Protection			IP20
OpenInternal capacitiesInternal capacitiesI	Climatic proofing			
Arrive capacitiesMathematical capacitiesMathematical capacitiesMathematical capacitiesSolidMathematical capacities5-15StandedMathematical capacities5-15Fexible with feruleMathematical capacities5-15Fexible with feruleMathematical capacities5-15StandedMathematical capacities5-15StandedMathematical capacities5-15Standed insulation voltageMathematical capacities400Nervoltage category/pollution degreeMathematical capacities10Standed insulation voltageMathematical capacities10Nervoltage category/pollution degreeMathematical capacities10Standed insulation voltageMathematical capacities10Nervoltage category/pollution degreeMathematical capacities10Standed insulation voltageMathematical capacities10Nervoltage category/pollution degreeMathematical capacities10At 24 V DC/s MAMathematical capacities10At 24 V DC/s MAMathematical capacities10At short-circuit protective deviceMathematical capacities10FuselesMathematical capacities1010FuselesMathematical capacities10North-circuit protective device1010Mathematical capacitiesMathematical capacities10Mathematical capacitiesMathematical capacities10Mathematical capacitiesMathematical capacities10Ma	Ambient temperature			
Number Number Solid nm fm Stranded nm 5 - 1.5 Fexible with ferrule nm 0 - 1.5 Forbact nm 0 - 1.5 Solid Nm Nm Solid Nm Solid Solid Solid Nm Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid	Open		°C	-25 - +70
Stranded Imm Im	Terminal capacities		mm ²	
Fexible with ferrule Image of the second s	Solid		mm ²	0.5 - 1.5
Contacts VAC Made inpulse withstand voltage Jimp VAC 400 Rated inpulse withstand voltage Ui V 250 250 Dvervoltage category/pollution degree III/3 III/3 III/3 control circuit reliability Feat For probability 10 ³ at 24 V DC/5 mA HF Fault probability 5 × 10 ⁻⁶ (i.e. 1 failure to 10 ⁷ operations) at 5 V DC/1 mA HF Fault probability 5 × 10 ⁻⁶ (i.e. 1 failure in 5 × 10 ⁶ operations) Max. short-circuit protective device Fuse Fuse Nu PKZM0-10/FAZ-B6/1 Fuse category gG/gL A 10 A Witching capacity Ie A A	Stranded		mm ²	0.5 - 1.5
Name Nam Name Name	Flexible with ferrule		mm ²	0.5 - 1.5
Rated insulation voltage Vi Vi Solution degree Deveroltage category/pollution degree III/3 Control circuit reliability III/3 at 24 V DC/5 mA HF Salt probabil probabil probabil Solution to 10 ⁷ operations) at 5 V DC/1 mA HF Salt probabil Solution to 10 ⁷ operations) Max.short-circuit protective device Face Solution Fuse Solution Ye McXMO-10/FAZ-B6/1 Fuse g/g/gL A 10 Switching capacity Ie A Solution	Contacts			
Derivoltage category/pollution degree III/3 Control circuit reliability III/3 at 24 V DC/5 mA Face Fault probability at 5 V DC/1 mA Face Fault probability Max. short-circuit protective device Face Fault probability Fuseless Type PKZM0-10/FAZ-B6/1 Fuse g6/gL A 10 Switching capacity Ie A	Rated impulse withstand voltage	U _{imp}	V AC	4000
Control circuit reliability Image: Control circuit reliability at 24 V DC/5 mA HF at 5 V DC/1 mA HF Aux. short-circuit protective device Fault probability Fuseless Type Fuse gG/gL Agade operational current Ie	Rated insulation voltage	Ui	V	250
at 24 V DC/5 mAHFFault probabilityFoult probabilityfoult 	Overvoltage category/pollution degree			111/3
at 5 V DC/1 mAHFFault probability5 x 10 ⁻⁶ (i.e. 1 failure in 5 x 10 ⁶ operations)Max. short-circuit protective device	Control circuit reliability			
Max. short-circuit protective device Type Fuse gG/gL Age	at 24 V DC/5 mA	H _F		< 10 ⁻⁷ (i.e. 1 failure to 10 ⁷ operations) Y
Fuseless Type PKZM0-10/FAZ-B6/1 Fuse gG/gL A 10 Switching capacity Ie A	at 5 V DC/1 mA	H _F		< 5 x 10 ⁻⁶ (i.e. 1 failure in 5 x 10 ⁶ operations) Y
Fuse gG/gL A 10 Switching capacity Ie A	Max. short-circuit protective device			
Rated operational current le A	Fuseless		Туре	PKZM0-10/FAZ-B6/1
Rated operational current Ie A	Fuse	gG/gL	А	10
	Switching capacity			
AC-15	Rated operational current	le	А	
	AC-15			

115 V	l _e	А	4					
220 V 230 V 240 V	l _e	А	4					
DC-13								
24 V	l _e	A	3					
42 V	l _e	A	1					
60 V	le	A	0.8					
110 V	l _e	A	0.5					
220 V	le	A	0.3					
uxiliary contacts								
ated operational voltage	U _e	V						
Rated operational voltage	Ue	V AC	230					
Rated operational voltage, max.	Ue	V DC	220					
onventional thermal current	$I_{th} = I_e$	CSA	4					
ated operational current	I _e	A						
Different rated operational currents when used as auxiliary contact for NZM circuit-breaker				bei		M22- (C)K10(M22- 01)CK11(02 (20)	XHIV 2)
			Bemessungsbetriebsstro AC-1 9 15 V	AC = 50/60 Hz	A	4	4	4
			230	le	А	4	4	4
			V 400	le	А	2	-	2
			V 500	le	А	1	-	1
			V DC-1 3 4 V	le	А	3	3	3
			42 V 60 V	le le	A A	1.7 1.2	1 0.8	1.5 0.8
			110	le	A	0.6	0.5	0.5
			V 220	le	А	0.3	0.2	0.2
			V					
ort-circuit protection								
max. fuse		A gG/gL						
Max. miniature circuit-breaker		A	FAZ-B6/B1					
erating times			Early-make time of the H	W comp	arad to th	0 main 001	to ata duri	na with make a
			break switching.	inv comp				ng with make a
			(switch times with manu	al operat	tion):			
			NZM1, PN1, N(S)1: ca. 20	0 ms				
			NZM2, PN2, N(S)2: ca. 20	0 ms				
			NZM3, PN3, N(S)3: ca. 20	0 ms				
			NZM4, N(S)4: approx. 90		HIV switc	h early Off	switching I	not forward.
erminal capacities		mm ²					-	
Solid or flexible conductor, with ferrule		mm ²	1 x (0,5 - 1,5)					
		IIIM	2 x (0,5 - 0,75)					
		AWG	1 x (20 - 18) 2 x (20 - 18)					
ther technical data (sheet catalogue)			Maximum equipment and	d nositio	n of the ir	ternal acc	essories	

Technical data for design verification			
Rated operational current for specified heat dissipation	In	А	4
Heat dissipation per pole, current-dependent	P _{vid}	W	0.05
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

10.0 Characteristic and a set	
IO.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.
IO.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.
I0.6 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.
IO.11 Short-circuit rating	Is the panel builder's responsibility. The specifications for the switchgear must observed.
I0.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switchgear must observed.
I0.13 Mechanical function	The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 7.0

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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		2		
Number of contacts as normally closed contact		0		
Number of fault-signal switches		0		
Rated operation current le at AC-15, 230 V	А	6		
Type of electric connection		Spring clamp connection		
Nodel		Top mounting and integrable		
Nounting method		Front fastening		
amp holder		None		

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: -

