DATASHEET - NZMN2-S26-CNA



Circuit-breaker, 3p, 26A

NZMN2-S26-CNA Part no. Catalog No. 103044



Similar to illustration

Delivery program

Delivery program			
Product range			Circuit-breaker
Protective function			Short-circuit protection
Standard/Approval			UL/CSA
Installation type			Fixed
Release system			Thermomagnetic release
Description			This circuit-breaker is only allowed to be used for UL/CSA applications. Motor protection in conjunction with contactor and overload relay With short-circuit release Without overload release Ir
Number of poles			3 pole
Standard equipment			Screw connection
Rated current = rated uninterrupted current	$I_n = I_u$	Α	26
Setting range			
Short-circuit releases			
Non-delayed	$I_i = I_n x \dots$		8 - 13

Technical data

General		
Standards		UL/CSA
Protection against direct contact		Finger and back of hand proof to VDE 0106 Part 100
Climatic proofing		Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature		
Ambient temperature, storage	°C	- 40 - + 70
Operation	°C	-25 - +70
Mechanical shock resistance (10 ms half-sinusoidal shock) according to IEC 60068-2-27	g	20 (half-sinusoidal shock 20 ms)
Safe isolation to EN 61140		
Between auxiliary contacts and main contacts	V AC	500
between the auxiliary contacts	V AC	300
Weight	kg	2.345
Mounting position		
Mounting position		Vertical and 90° in all directions With XFI earth-fault release: - NZM1, N1, NZM2, N2: vertical and 90° in all directions with plug-in unit - NZM1, N1, NZM2, N2: vertical, 90° right/left with withdrawable unit: - NZM3, N3: vertical, 90° right/left - NZM4, N4: vertical with remote operator: - NZM2, N(S)2, NZM3, N(S)3, NZM4, N(S)4: vertical and 90° in all directions
Direction of incoming supply		as required

D (:			
Degree of protection			In the energing controls area, ID20 /hosis downs of
Device			In the operating controls area: IP20 (basic degree of protection)
Enclosures			With insulating surround: IP40 With door coupling rotary handle: IP66
Terminations			Tunnel terminal: IP10 Phase isolator and strip terminal: IP00
Other technical data (sheet catalogue)			Weight Temperature dependency, Derating
Circuit-breakers			Effective power loss
Rated surge voltage invariability	U _{imp}		
Main contacts	- mp	V	8000
Auxiliary contacts		V	6000
Rated operational voltage	U _e	V AC	690
Overvoltage category/pollution degree	· ·		III/3
Rated insulation voltage	Ui	V	1000
Switching capacity	- 1		
Rated short-time withstand current			
t = 0.3 s	I _{cw}	kA	1.9
t = 1 s	I _{cw}	kA	1.9
Lifespan, mechanical(of which max. 50 % trip by shunt/undervoltage release)	Operations		20000
Lifespan, electrical			
AC-1			
400 V 50/60 Hz	Operations		10000
690 V 50/60 Hz	Operations		7500
AC3			
400 V 50/60 Hz	Operations		6500
415 V 50/60 Hz	Operations		6500
690 V 50/60 Hz	Operations		5000
Max. operating frequency		Ops/h	120
Total break time at short-circuit		ms	< 10
Terminal capacity		ms	
Terminal capacity Standard equipment		ms	< 10 Screw connection
Terminal capacity Standard equipment Round copper conductor		ms	
Terminal capacity Standard equipment Round copper conductor Box terminal			Screw connection
Terminal capacity Standard equipment Round copper conductor Box terminal Solid		mm ²	Screw connection 1 x (12 6)
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded			Screw connection
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal		mm ²	Screw connection 1 x (12 6) 1 x (4 350)
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded		mm ²	Screw connection 1 x (12 6)
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal Solid Stranded		mm² mm²	Screw connection 1 x (12 6) 1 x (4 350) 1 x 6
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal Solid		mm ²	Screw connection 1 x (12 6) 1 x (4 350)
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal Solid Stranded		mm² mm²	Screw connection 1 x (12 6) 1 x (4 350) 1 x 6
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal Solid Stranded Stranded Stranded		mm² mm²	Screw connection 1 x (12 6) 1 x (4 350) 1 x 6
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal Solid Stranded Stranded Stranded Bolt terminal and rear-side connection		mm² mm²	Screw connection 1 x (12 6) 1 x (4 350) 1 x 6
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal Solid Stranded Stranded Stranded Direct on the switch		mm² mm² mm²	Screw connection 1 x (12 6) 1 x (4 350) 1 x 6 1 x (4 350)
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal Solid Stranded Stranded Stranded Stranded Stranded Stranded Stranded Stranded Stranded Solid Stranded Stranded Stranded Solid		mm² mm² mm² mm²	Screw connection 1 x (12 6) 1 x (4 350) 1 x 6 1 x (4 350)
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal Solid Stranded Stranded Stranded Stranded Stranded Stranded Bolt terminal and rear-side connection Direct on the switch Solid Stranded		mm² mm² mm² mm²	Screw connection 1 x (12 6) 1 x (4 350) 1 x 6 1 x (4 350)
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal Solid Stranded Stranded Stranded Stranded Stranded Al conductors, Cu cable		mm² mm² mm² mm² mm²	Screw connection 1 x (12 6) 1 x (4 350) 1 x 6 1 x (4 350)
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal Solid Stranded Stranded Stranded Stranded Al conductors, Cu cable Tunnel terminal		mm² mm² mm² mm²	Screw connection 1 x (12 6) 1 x (4 350) 1 x 6 1 x (4 350) 1 x (4 350)
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal Solid Stranded Stranded Stranded Stranded Bolt terminal and rear-side connection Direct on the switch Solid Stranded Al conductors, Cu cable Tunnel terminal Solid	min.	mm² mm² mm² mm² mm²	Screw connection 1 x (12 6) 1 x (4 350) 1 x 6 1 x (4 350) 1 x (4 350)
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal Solid Stranded Stranded Stranded Bolt terminal and rear-side connection Direct on the switch Solid Stranded Al conductors, Cu cable Tunnel terminal Solid Bolt terminal and rear-side connection	min. max.	mm² mm² mm² mm² mm² mm²	Screw connection 1 x (12 6) 1 x (4 350) 1 x 6 1 x (4 350) 1 x (4 370) 1 x (11 6) 1 x (4 370)
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal Solid Stranded Stranded Stranded Bolt terminal and rear-side connection Direct on the switch Solid Stranded Al conductors, Cu cable Tunnel terminal Solid Bolt terminal and rear-side connection Flat copper strip, with holes		mm² mm² mm² mm² mm² mm² mm²	Screw connection 1 x (12 6) 1 x (4 350) 1 x 6 1 x (4 350) 1 x (4 350) 1 x (11 6) 1 x (4 3/0)
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal Solid Stranded Stranded Bolt terminal and rear-side connection Direct on the switch Solid Stranded Al conductors, Cu cable Tunnel terminal Solid Bolt terminal and rear-side connection Flat copper strip, with holes Flat copper strip, with holes		mm² mm² mm² mm² mm² mm² mm²	Screw connection 1 x (12 6) 1 x (4 350) 1 x 6 1 x (4 350) 1 x (4 350) 1 x (11 6) 1 x (4 3/0)
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal Solid Stranded Stranded Bolt terminal and rear-side connection Direct on the switch Solid Stranded Al conductors, Cu cable Tunnel terminal Solid Bolt terminal and rear-side connection Flat copper strip, with holes Flat copper strip, with holes Cu strip (number of segments x width x segment thickness)		mm² mm² mm² mm² mm² mm² mm²	Screw connection 1 x (12 6) 1 x (4 350) 1 x 6 1 x (4 350) 1 x (4 350) 1 x (11 6) 1 x (4 3/0)
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal Solid Stranded Stranded Bolt terminal and rear-side connection Direct on the switch Solid Stranded Al conductors, Cu cable Tunnel terminal Solid Bolt terminal and rear-side connection Flat copper strip, with holes Flat copper strip, with holes Cu strip (number of segments x width x segment thickness)	max.	mm² mm² mm² mm² mm² mm² mma²	Screw connection 1 x (12 6) 1 x (4 350) 1 x (4 350) 1 x (11 6) 1 x (4 3/0) 1 x 16 2 x 16 x 0.8 10 x 16 x 0.8
Terminal capacity Standard equipment Round copper conductor Box terminal Solid Stranded Tunnel terminal Solid Stranded Stranded Bolt terminal and rear-side connection Direct on the switch Solid Stranded Al conductors, Cu cable Tunnel terminal Solid Bolt terminal and rear-side connection Flat copper strip, with holes Flat copper strip, with holes Cu strip (number of segments x width x segment thickness)	max.	mm² mm² mm² mm² mm² mm² mm² mm mm	Screw connection 1 x (12 6) 1 x (4 350) 1 x (4 350) 1 x (11 6) 1 x (4 3/0) 1 x 16 2 x 16 x 0.8 10 x 16 x 0.8 2 x 9 x 0.8

Flat copper strip, with holes	min.	mm	2 x 16 x 0.8
Flat copper strip, with holes	max.	mm	10 x 16 x 0.8
Copper busbar (width x thickness)	mm		
Bolt terminal and rear-side connection			
Screw connection			M8
Direct on the switch			
	min.	mm	16 x 5
	max.	mm	20 x 5
Control cables			
		mm^2	1 x (18 14) 2 x (18 16)

Design verification as per IEC/EN 61439

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Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	26
Equipment heat dissipation, current-dependent	P_{vid}	W	1.58
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 switch gear must be observed. $\label{eq:constraint}$
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switch gear must be observed. $\label{eq:constraint}$
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) / Power circuit-breaker for trafo/generator/installation protection (EC000228)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (ecl@ss10.0.1-27-37-04-09 [AJZ716013])

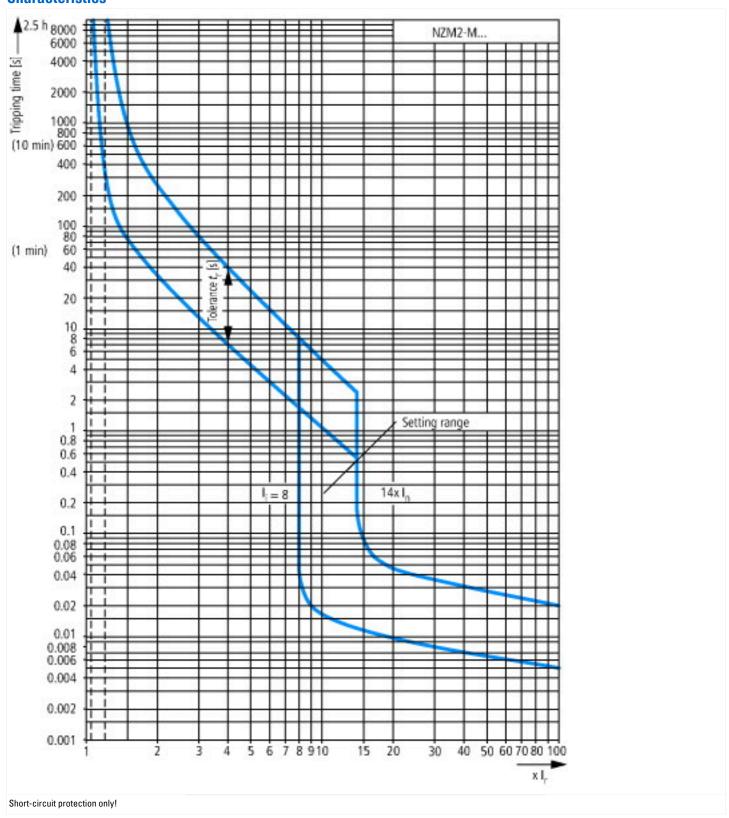
Rated permanent current lu	А	26
Rated voltage	V	690 - 690
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	50
Overload release current setting	Α	0 - 0
Adjustment range short-term delayed short-circuit release	Α	0 - 0
Adjustment range undelayed short-circuit release	Α	8 - 13

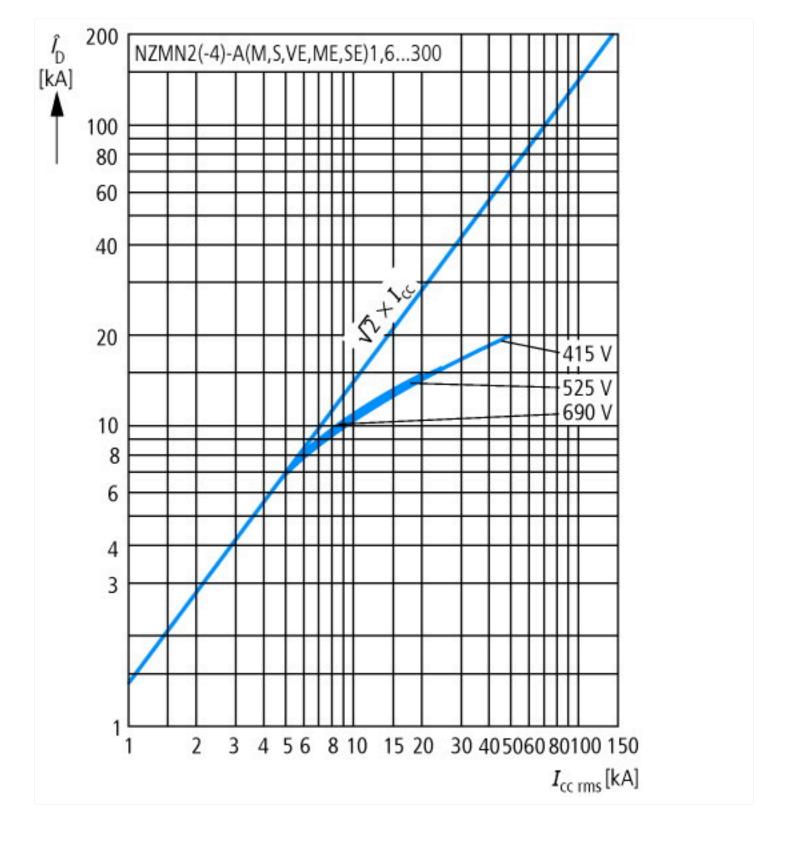
Integrated earth fault protection	No
Type of electrical connection of main circuit	Screw connection
Device construction	Built-in device fixed built-in technique
Suitable for DIN rail (top hat rail) mounting	No
DIN rail (top hat rail) mounting optional	Yes
Number of auxiliary contacts as normally closed contact	0
Number of auxiliary contacts as normally open contact	0
Number of auxiliary contacts as change-over contact	0
With switched-off indicator	No
With under voltage release	No
Number of poles	3
Position of connection for main current circuit	Front side
Type of control element	Rocker lever
Complete device with protection unit	Yes
Motor drive integrated	No
Motor drive optional	Yes
Degree of protection (IP)	IP20

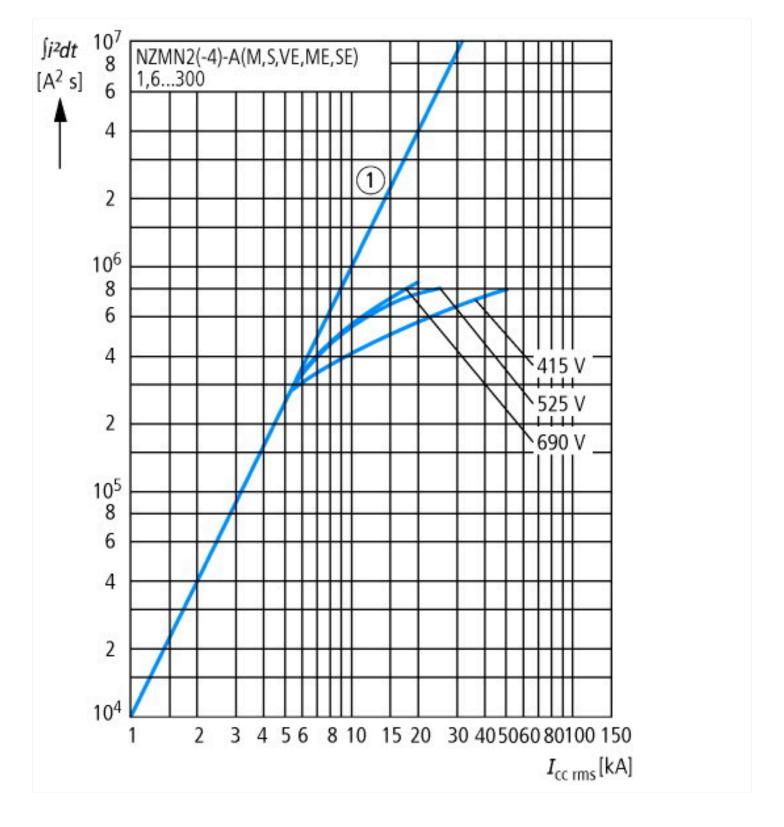
Approvals

Product Standards	UL 489; CSA-C22.2 No. 5-09
UL File No.	E31593
UL Category Control No.	DKPU2
CSA File No.	022086
CSA Class No.	1432-01
North America Certification	UL recognized, CSA certified
Conditions of Acceptability	Only used in motor circuits in conjunction with suitable contactor and overload relay. SCCR value applies for complete combination starter only, consisting of instantaneous trip circuit breaker, contactor and overload relay.
Specially designed for North America	Yes
Suitable for	Branch circuits, feeder circuits
Current Limiting Circuit-Breaker	No
Max. Voltage Rating	600Y/347 V, 480 V
Degree of Protection	UL/CSA Type: -

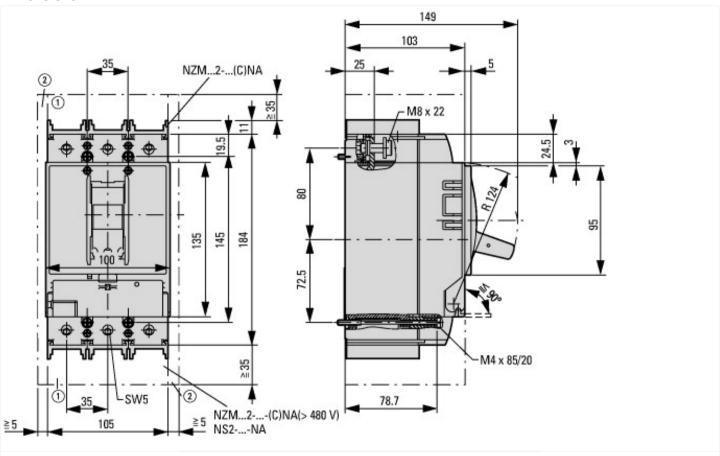
Characteristics



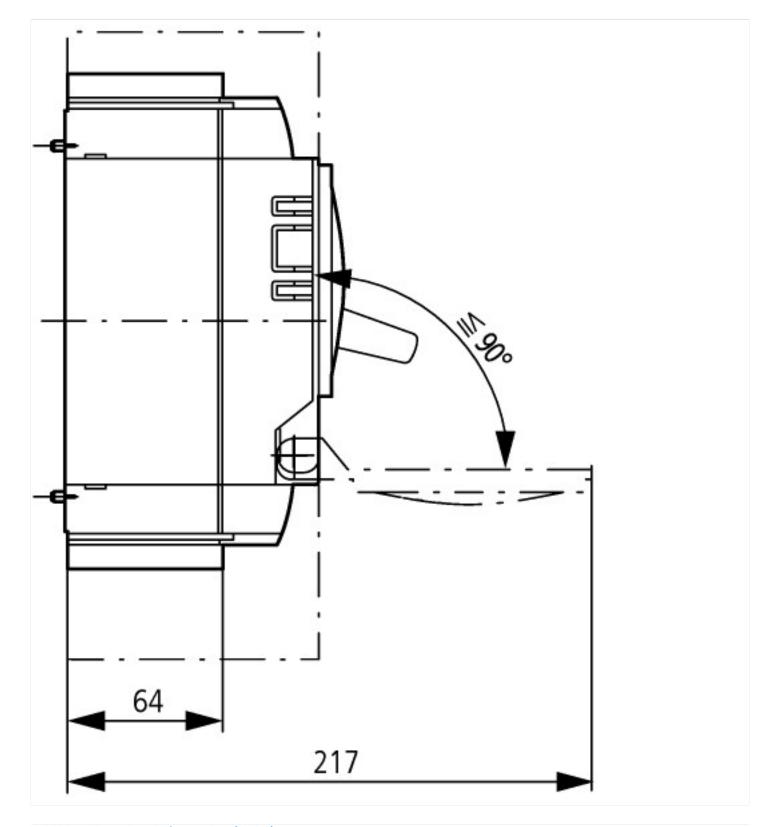




Dimensions



Blow out area, minimum clearance to adjacent parts
 Minimum clearance to adjacent parts



Additional product information (links)

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IL01206006Z (AWA1230-1916) Circuit-Breaker, basic unit		
IL01206006Z (AWA1230-1916) Circuit-Breaker, basic unit	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL01206006Z2015_11.pdf	
Weight	http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=17.171	
Temperature dependency, Derating	http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=17.172	
Effective power loss	http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=17.174	
additional technical information for NZM power switch	ftp://ftp.moeller.net/DOCUMENTATION/PDF/nzm_technic_de_en.pdf	