DATASHEET - NZMS3-4-VX630/VAR-AVE

Part no. Catalog No.



NZM3 PXR20 circuit breaker, 630A, 4p, variable, withdrawable unit

NZMS3-4-VX630/VAR-AVE

191536

FAT•N Powering Business Worldwide"

Similar to illustration

Delivery program

Product range			Circuit-breaker		
Protective function			Systems, cable, selectivity and generator protection		
Standard/Approval			IEC		
Installation type			Withdrawable		
Release system			Electronic release		
Construction size			NZM3		
Description			LSI overload protection and delayed and non-delayed short-circuit protective device R.m.s. value measurement and "thermal memory" USB interface for configuration and test function with Power Xpert Protection Manager software Optionally communication-capable with interface module and internal Modbus RTU module or CAM		
Number of poles			4 pole		
Standard equipment			Screw connection		
Switching capacity					
400/415 V 50 Hz	I _{cu}	kA	70		
Rated current = rated uninterrupted current					
Rated current = rated uninterrupted current	$I_n = I_u$	Α	630		
Neutral conductor	% of phase conductor	%	0 - 60 - 100		
Setting range					
Overload trip					
द	l _r	A	252 - 630		
Short-circuit releases					
Non-delayed	I _i = I _n x		2-8		
Delayed	$I_{sd} = I_r \times \dots$		1.5 – 7		

Technical data

General		
Standards		IEC/EN 60947
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
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)4: vertical and 90° in all directions
Direction of incoming supply			as required
Degree of protection			
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)			Temperature dependency, Derating
Circuit-breakers	11	٥	can
Rated current = rated uninterrupted current	$I_n = I_u$	A	630
Rated surge voltage invariability	U _{imp}	V	2000
Main contacts		V V	8000
Auxiliary contacts Rated operational voltage	Ue	V AC	6000 690
Overvoltage category/pollution degree	0 _e	VAC	11/3
Rated insulation voltage	Ui	V	690
Use in unearthed supply systems	0	v	≦ 690
Switching capacity		v	= 000
Rated short-circuit making capacity	I _{cm}		
240 V	I _{cm}	kA	220
400/415 V	I _{cm}	kA	154
440 V 50/60 Hz	I _{cm}	kA	143
525 V 50/60 Hz	I _{cm}	kA	80
690 V 50/60 H	lc	kA	50
Rated short-circuit breaking capacity I _{cn}	I _{cn}		
Icu to IEC/EN 60947 test cycle 0-t-C0	lcu	kA	
240 V 50/60 Hz	l _{cu}	kA	100
400/415 V 50/60 Hz	l _{cu}	kA	70
440 V 50/60 Hz	I _{cu}	kA	65
525 V 50/60 Hz	l _{cu}	kA	36
690 V 50/60 Hz	I _{cu}	kA	25
Ics to IEC/EN 60947 test cycle 0-t-C0-t-C0	lcs	kA	
240 V 50/60 Hz	I _{cs}	kA	100
400/415 V 50/60 Hz	I _{cs}	kA	70
440 V 50/60 Hz	I _{cs}	kA	65
525 V 50/60 Hz	I _{cs}	kA	18
690 V 50/60 Hz	I _{cs}	kA	6 Maximum back-up fuse, if the expected short-circuit currents at the installation
Rated short-time withstand current			location exceed the switching capacity of the circuit-breaker.
t = 0.3 s	I _{cw}	kA	3.3
t=1s	I _{cw}	kA	3.3
Utilization category to IEC/EN 60947-2			A
Lifespan, mechanical(of which max. 50 % trip by shunt/undervoltage release)	Operations		15000
	oporations		

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max.	Box terminal			
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Connection width extension max. mm 2 x (10 x 50)				
Connection width extension max. mm 2 x (10 x 50)		max.		
			mm	
Control cables	Connection width extension	max.	mm	2 x (10 x 50)
	Control cables			

mm² 1 x (0.75 - 2.5) 2 x (0.75 - 1.5)

Design verification as per IEC/EN 61439

Design vermeation as per reo/en 01405			
Technical data for design verification			
Rated operational current for specified heat dissipation	l _n	А	630
Equipment heat dissipation, current-dependent	P _{vid}	W	119.07
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 7.0

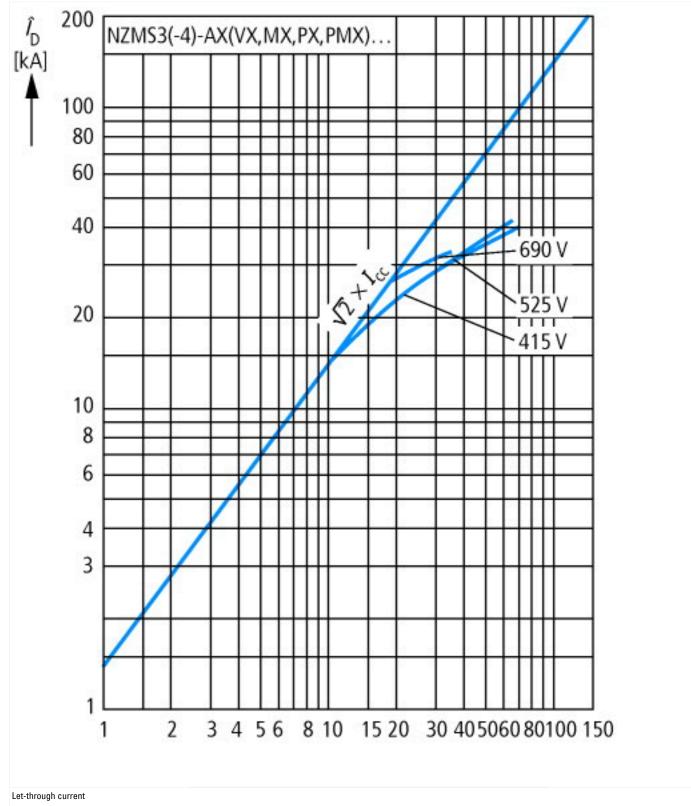
Low-voltage industrial components (EG000017) / Power circuit-breaker for trafo/generator/installation protection (EC000228)

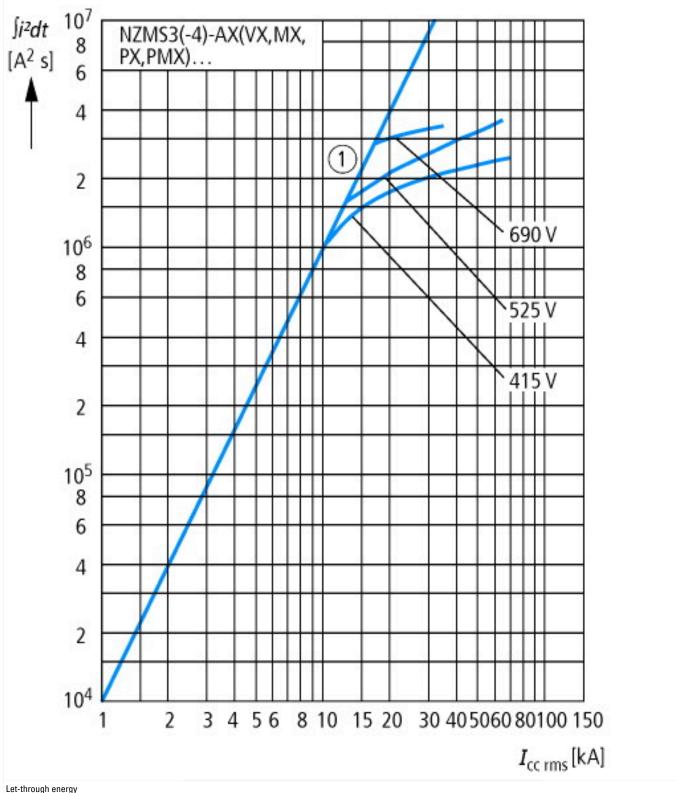
Electric engineering, automation, process control engineering / Low-voltage switch technology / Circuit breaker (LV < 1 kV) / Circuit breaker for power transformer, generator and system protection (ecl@ss10.0.1-27-37-04-09 [AJZ716013])

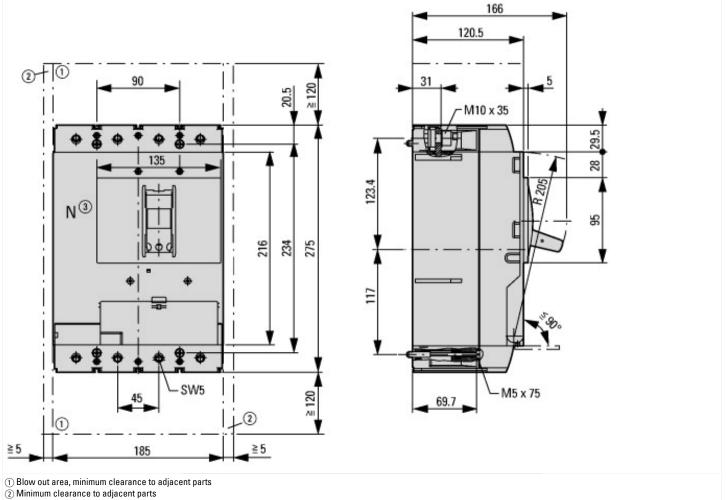
Rated permanent current lu	А	630
Rated voltage	V	690 - 690
Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	kA	70
Overload release current setting	А	252 - 630
Adjustment range short-term delayed short-circuit release	А	1.5 - 7
Adjustment range undelayed short-circuit release	А	2 - 8
Integrated earth fault protection		No
Type of electrical connection of main circuit		Other
Device construction		Built-in device slide-in technique (withdrawable)
Suitable for DIN rail (top hat rail) mounting		No
DIN rail (top hat rail) mounting optional		No
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

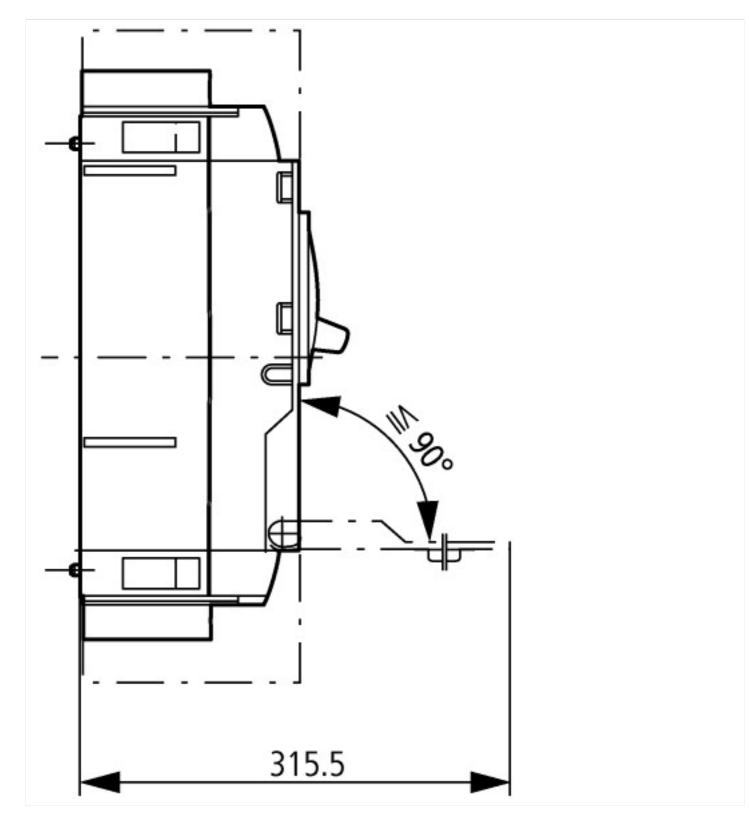
With under voltage release	No
Number of poles	4
Position of connection for main current circuit	Front side
Type of control element	Rocker lever
Complete device with protection unit	Yes
Motor drive integrated	No
Motor drive optional	Yes
Degree of protection (IP)	IP20

Characteristics









Additional product information (links)

IL012100ZU NZM3-PXR circuit-breaker, basic device , NZM3-PXR Circuit-Breaker, basic unit

IL012100ZU NZM3-PXR circuit-breaker, basic device , NZM3-PXR Circuit-Breaker, basic unit	https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL012100ZU2020_10.pdf
Temperature dependency, Derating	http://ecat.moeller.net/flip-cat/?edition=HPLEN&startpage=17.172
additional technical information for NZM power switch	https://es-assets.eaton.com/DOCUMENTATION/PDF/nzm_technic_de_en.pdf