DATASHEET - NZMS1-4-A160

Circuit-breaker 4 pole, 160A

F				6	
	Powel	ring Bus	iness	World	wide™

Part no. NZMS1-4-A160 Catalog No. 109957

Similar to illustration

Delivery program			
Switching capacity			
400/415 V 50 Hz	l _{cu}	kA	70
Rated current = rated uninterrupted current			
Rated current = rated uninterrupted current	$I_n = I_u$	Α	160
Neutral conductor	% of phase conductor	%	100
Setting range			
Overload trip			
с¢Г	l _r	A	125 - 160
Main pole	I _r	А	125 - 160
Short-circuit releases			
Non-delayed	I _i = I _n x		1280 A fixed

Technical data

General				
Ambient temperature				
Ambient temperature, storage		°C	- 40 - + 70	
Operation		°C	-25 - +70	
Circuit-breakers				
Rated current = rated uninterrupted current	$I_n = I_u$	А	160	
Switching capacity				
Rated short-circuit breaking capacity \mathbf{I}_{cn}	I _{cn}			
Icu to IEC/EN 60947 test cycle 0-t-C0	lcu	kA		
400/415 V 50/60 Hz	l _{cu}	kA	70	
Lifespan, electrical				
AC-1				
400 V 50/60 Hz	Operations		7500	
415 V 50/60 Hz	Operations		7500	
690 V 50/60 Hz	Operations		5000	

Design verification as per IEC/EN 61439

Technical data for design verification			
Equipment heat dissipation, current-dependent	P _{vid}	W	36.1
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])

Areade voltage V 60 600 Bated voltage KA 7 Addustment range capity (cu at 400 V, 50 Hz) KA 25 150 Adjustment range short-terr delayed short-circuit release KA 0 0 Adjustment range undelayed short-circuit release KA 0 0 Adjustment range undelayed short-circuit release KA 0 0 Davie o e electrical connection of main circuit KA Mainterim No Davie o enstruction KA Mainterim Mainterim Sutable for DIN rail (top hat rail) mounting optional KA Yes No Number of auxiliary contacts as normally closed contact KA Yes No Number of auxiliary contacts as normally closed contact KA Yes No Number of auxiliary contacts as normally closed contact KA Yes No Number of poles KA KA No No Number of poles KA KA KA No Number of poles KA KA KA	protection (ect@ss10.0.1-27-37-04-09 [AJZ710015])			
Add short-circuit breaking capacity lou at 400 V, 50 Hz Add short-circuit release Add short-circuit release Deveload release current setting A 25 - 160 Adjustment range short-term delayed short-circuit release A 0 Adjustment range undelayed short-circuit release A 0 Adjustment range undelayed short-circuit release A 0 Adjustment range undelayed short-circuit release A 0 No A 0 Subte for DIN rail (top hat rail) mounting optional C No Number of auxiliary contacts as normally closed contact M No Number of auxiliary contacts as normally closed contact M No Number of auxiliary contacts as normally closed contact M No Number of auxiliary contacts as normally closed contact M No Number of poles M No Number of poles No No Number of connection for main current circuit M No Number of poles No No Stop of control element F No Complet	Rated permanent current lu		A	160
Autor or release current sating A 25 - 160 Adjustment range short-term delayed short-circuit release A 0 Adjustment range undelayed short-circuit release A 280 - 1280 Attig statue art nage undelayed short-circuit release A No Statue art nage undelayed short-circuit release M No Device construction M M No Device construction M No No Divisit (top hat rail) mounting optional M No No Number of auxiliary contacts as normally closed contact M No No Number of auxiliary contacts as change-over contact M M No Number of poles M No No No Number of poles M M No No No Number of poles M M No No No Number of poles M M No No No Norder vierue mathematic urrent circuit M No No No No	Rated voltage	,	V	690 - 690
Adjustment range short-terr delayed short-circuit release Adjustment range undelayed short-circuit release Adjust release	Rated short-circuit breaking capacity Icu at 400 V, 50 Hz	I	kA	70
Adjustment range undelayed short-circuit release A 280 - 1280 Adjustment range undelayed short-circuit release No Spee of electrical connection of main circuit Frame clamp Device construction Full view of sized built-in technique Suitable for DIN rail (top hat rail) mounting optional Mo Number of auxiliary contacts as normally closed contact Mo Number of auxiliary contacts as change-over contact Mo With switched-off indicator Mo Number of poles Mo Postion of connection framin current circuit Mo Spee of control element Mo Spee of control	Overload release current setting		A	125 - 160
Integrated earth fault protection No Spee of electrical connection of main circuit Frame clamp Device construction Built-in device fixed built-in technique Device construction Built-in device fixed built-in technique Suitable for DIN rail (top hat rail) mounting Mo DIN rail (top hat rail) mounting optional Mo Number of auxiliary contacts as normally closed contact Mo Number of auxiliary contacts as change-over contact Mo Number of auxiliary contacts as change-over contact Mo Number of poles Mo No control element Mo Complet device with protection unit Mo Motor drive integrated Mo Motor drive integrated	Adjustment range short-term delayed short-circuit release		A	0 - 0
Type of electrical connection of main circuit Frame clamp Device construction Built-in device fixed built-in technique Suitable for DIN rail (top hat rail) mounting Image: Construction DIN rail (top hat rail) mounting optional Image: Construction Number of auxiliary contacts as normally closed contact Image: Construction Number of auxiliary contacts as normally copen contact Image: Construction Number of auxiliary contacts as change-over contact Image: Construction Number of auxiliary contacts as change-over contact Image: Construction Number of auxiliary contacts as change-over contact Image: Construction Number of auxiliary contacts as change-over contact Image: Construction Number of auxiliary contacts as change-over contact Image: Construction Number of auxiliary contacts as change-over contact Image: Construction Number of auxiliary contacts as change-over contact Image: Construction Number of auxiliary contacts as change-over contact Image: Construction Number of auxiliary contacts as change-over contact Image: Construction Construction Number of poles Image: Construction Construction Construction Construction Number of auxiliary contacts	Adjustment range undelayed short-circuit release		A	1280 - 1280
Device construction Image: Construction Built- in device fixed built-in technique Suitable for DIN rail (top hat rail) mounting Image: Construction No DIN rail (top hat rail) mounting optional Image: Construction Ves Number of auxiliary contacts as normally closed contact Image: Construction Image: Construction Number of auxiliary contacts as normally open contact Image: Construction Image: Construction Number of auxiliary contacts as change-over contact Image: Construction Image: Construction Number of auxiliary contacts as change-over contact Image: Construction Image: Construction Number of poles Image: Construction Image: Construction Image: Construction Number of poles Image: Construction unit Image: Construction unit Image: Construction unit Notor drive integrated Image: Construction unit Image: Construction unit Image: Construction unit Notor drive optional Image: Construction unit Image: Construction unit Image: Construction unit	Integrated earth fault protection			No
Suitable for DIN rail (top hat rail) mounting Model No DIN rail (top hat rail) mounting optional Yes Second Number of auxiliary contacts as normally closed contact Jo Jo Number of auxiliary contacts as normally open contact Jo Jo Number of auxiliary contacts as change-over contact Jo Jo Number of auxiliary contacts as change-over contact Jo Jo Number of auxiliary contacts as change-over contact Jo Jo Number of auxiliary contacts as change-over contact Jo Jo Number of auxiliary contacts as change-over contact Jo Jo Number of auxiliary contacts as change-over contact Jo Jo Number of auxiliary contacts as change-over contact Jo Jo Number of poles Jo Jo Jo Position of connection for main current circuit Jo Font side Jo Stop of control element Jo So Jo Jo Notor drive integrated Jo Jo Jo Jo Jo	Type of electrical connection of main circuit			Frame clamp
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 normally open contact 0 Number of auxiliary contacts as normally open contact 0 Number of auxiliary contacts as change-over contact 0 Number of auxiliary contacts as change-over contact No Nith under voltage release No Number of poles 4 Position of connection formain current circuit Front side Type of control element Koker lever Complete device with protection unit Yes Notor drive integrated No Motor drive integrated No	Device construction			Built-in device fixed built-in technique
Number of auxiliary contacts as normally closed contact Image: Contact as a normal contact as normal contact as a normal contact as a normal contact as a norma	Suitable for DIN rail (top hat rail) mounting			No
Number of auxiliary contacts as normally open contact 0 Number of auxiliary contacts as change-over contact 0 Nith switched-off indicator No Nith under voltage release No Number of poles 4 Position of connection for main current circuit Front side Rype of control element Rocker lever Complete device with protection unit Yes Notor drive integrated No Notor drive optional No	DIN rail (top hat rail) mounting optional			Yes
Number of auxiliary contacts as change-over contact O With switched-off indicator No With under voltage release No Number of poles 4 Position of connection for main current circuit Font side Type of control element Rocker lever Complete device with protection unit Yes Motor drive integrated No No No	Number of auxiliary contacts as normally closed contact			0
With switched-off indicator No With under voltage release No Number of poles A Position of connection for main current circuit Front side Fype of control element Rocker lever Complete device with protection unit Yes Notor drive integrated No Notor drive optional No	Number of auxiliary contacts as normally open contact			0
With under voltage releaseNoNumber of poles4Position of connection for main current circuitFont sideType of control elementRocker leverComplete device with protection unitYesNoNoMotor drive integratedNoNoNo	Number of auxiliary contacts as change-over contact			0
Number of poles 4 Position of connection for main current circuit Front side Fype of control element Rocker lever Complete device with protection unit Yes Motor drive integrated No Notor drive optional Socker lever	With switched-off indicator			No
Position of connection for main current circuit Formatic	With under voltage release			No
Type of control element Rocker lever Complete device with protection unit Yes Motor drive integrated No Motor drive optional No	Number of poles			4
Complete device with protection unit Yes Motor drive integrated No Motor drive optional No	Position of connection for main current circuit			Front side
Motor drive optional No	Type of control element			Rocker lever
Motor drive optional No	Complete device with protection unit			Yes
	Motor drive integrated			No
Degree of protection (IP)	Motor drive optional			No
	Degree of protection (IP)			IP20

Additional product information (links)

additional technical information for NZM power switch

https://es-assets.eaton.com/DOCUMENTATION/PDF/nzm_technic_de_en.pdf