

Part no. Article no. N3-4-500-S1-DC 142268



Similar to illustration

Delivery program

benvery program			
Product range			Switch-disconnectors
Protective function			Disconnectors/main switches Photovoltaic applications
Product range			DC switch-disconnectors
Application field			Utility buildings Open areas
Part no.			NDC
Standard/Approval			IEC
Rated operational voltage			1000
Installation type			Fixed
Construction size Description			N3 IEC/EN 60947-3 CCC China Compulsory Certificate Main switch characteristics including positive drive to IEC/EN 60204 and VDE 0113. Isolating characteristics to IEC/EN 60947-3 and VDE 0660. N switch-disconnectors can, in addition, be combined with NZMXU, NZMXA shunt releases and auxiliary contacts as well as with NZMXR remote operator. For DC switching, all 4 contacts must be connected in series. Refer to the information on jumper kit accessories. Supplied as standard: Screw connection; box terminal optional. When working with ungrounded systems (e.g., IT), the installation must ensure that a double ground fault will be impossible. Switch can not be combined with plug-in/withdrawable units and/or connection on
Connection options			N4-4S15-DC feeder unit and outgoer from the bottom only.
Number of poles			4-pole basic device, usable in a 1-pole or 2-pole configuration depending on the type of connection
Standard equipment			Screw connection
Switch positions			l, +, 0
Rated current = rated uninterrupted current	$I_n = I_u$	А	500
Short-circuit protective device max. fuse gR-characteristic		A gR	2 x 250
Remotely control / trip			Remote operation with shunt releases / remote operator

Technical data			
Switch-disconnectors			
Rated operational voltage, max.	Ue	V DC	1000
Rated uninterrupted current with terminal jumpers			
at 40°			500
at 65°			500
			Values for rated uninterrupted current at 65 °C include jumpers.
Utilization actorony			DC-22A
Utilization category			DC-ZZA
Rated operational current	le	A	
DC 22-A	le	A	500
Overvoltage category/pollution degree			111/3
Rated insulation voltage	Ui	V	1250
Ambient temperature			
Ambient temperature, storage		°C	- 40 - + 70
Operation		°C	-25 - +70
Rated short-time withstand current			
t = 0.1 s		kA	6.6
t=1s	I _{cw}	kA	6.6
Rated conditional short-circuit current			
1000 V		kA	15
With back-up fuse		A gR	2 x 250
Lifespan, mechanical		Ŭ	
Max. operating frequency		Ops/h	60
Lifespan, mechanical	Operations		15000
			Lifespan, mechanical: of which max. 50 % trip by shunt/undervoltage release
Ferminal capacity			
Standard equipment			Screw connection
Round copper conductor			
Box terminal			
Solid		2	2 x 16
		mm ²	
Stranded		mm ²	1 x (35 - 240) 2 x (25 - 120)
Tunnel terminal			
Stranded		mm ²	
			1 (22 - 22)
Stranded		mm ²	1 x (25 - 185)
Double hole fitting		mm ²	1 x (50 - 240)
			2 x (50 - 240)
Bolt terminals			
Direct on the switch			
Solid		mm ²	1 x 16 2 x 16
Stranded		mm ²	1 x (25 - 240)
		iiim .	2 x (25 - 240)
Al conductors, Cu cable			
Solid		mm ²	1 x 16
Stranded			
		mm ²	
Stranded		mm ²	1 x (25 - 185)
		mm ²	1 x (50 - 240)
Double hole fitting			2 x (50 - 240)
Double hole fitting Bolt terminal and rear-side connection			2 x (50 - 240)
Bolt terminal and rear-side connection	min.	mm	6 x 16 x 0.8
Bolt terminal and rear-side connection Flat copper strip, with holes		mm	6 x 16 x 0.8
Bolt terminal and rear-side connection Flat copper strip, with holes Flat copper strip, with holes	min. max.	mm	6 x 16 x 0.8 10 x 32 x 1.0 + 5 x 32 x 1.0
Bolt terminal and rear-side connection Flat copper strip, with holes		mm	6 x 16 x 0.8

DC

Rated operating frequency

Box terminal			
	min.	mm	6 x 16 x 0,8
	max.	mm	10 x 24 x 1,0 + 5 x 24 x 1,0 (2x) 8 x 24 x 1,0
Bolt terminal and rear-side connection			
Flat copper strip, with holes	min.	mm	6 x 16 x 0.8
Flat copper strip, with holes	max.	mm	10 x 32 x 1.0 + 5 x 32 x 1.0
Connection width extension		mm	(2x) 10 x 50 x 1,0
Copper busbar (width x thickness)	mm		
Bolt terminal and rear-side connection			
Screw connection			M10
Direct on the switch			
	min.	mm	20 x 5
	max.	mm	30 x 10 + 30 x 5
Connection width extension		mm	
Connection width extension	max.	mm	2 x (10 x 50)

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation		А	500
	l _n		
Equipment heat dissipation, current-dependent	P _{vid}	W	150
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 6.0

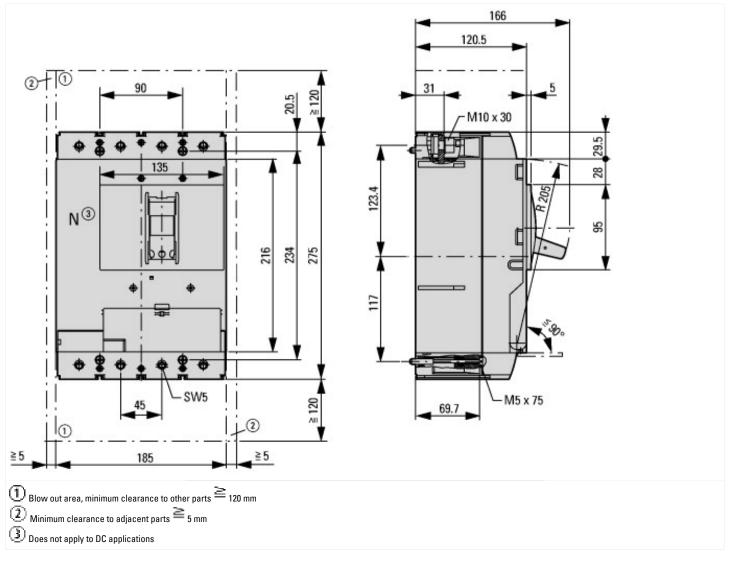
Low-voltage industrial components (EG000017) / Switch disconnector (EC000216)

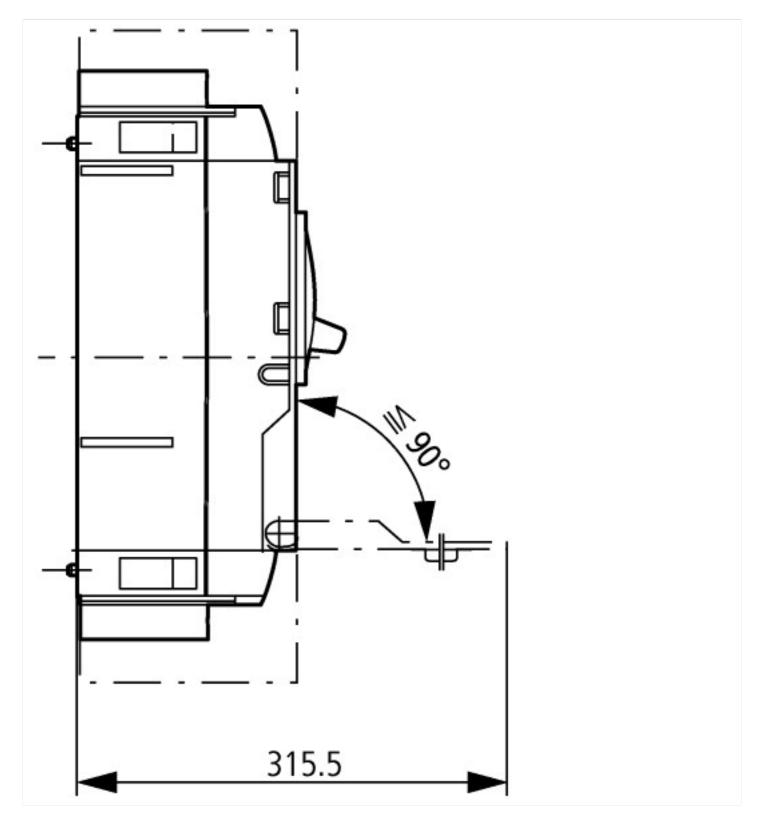
Electric engineering, automation, process control engineering / Low-voltage switch technology / Off-load switch, circuit breaker, control switch / Switch disconnector (ecl@ss8.1-27-37-14-03 [AKF060010])

Version as main switch

Yes

Version as emergency step installationImage: step installationImage: step installationVersion as reversing switchVNoMax rated operation voltage Ue ACV00Rated operation voltage Ue ACV00Rated operation voltage Ue ACV00Rated operation voltage Ue ACV0Rated operation voltage Ue ACV0Rated operation yower at AC-21, 400 VV0Rated operation yower at AC-23, 400 VV0Rated operation yower at AC-23, 400 VV0Rated operation yower at AC-23, 400 VV0Switching power at AC-23, 4			
Varian as energency stop installation Image: Second Seco	Version as maintenance-/service switch		Yes
Version server were sing witch Image: single s	Version as safety switch		No
Ax rate operation voltage Ue AC Image: Construction voltage	Version as emergency stop installation		Yes
Rate operation voltage V 000 1000 Rated operation voltage A 50 Rated operation power at AC-21, 400 V A 0 Rated operation power at AC-23, 400 V KM 0 Rated operation power at AC-23, 400 V KM 50 Rated operation power at AC-23, 400 V KM 6 Switching power at 400 V KM 0 Conditioned rated short-tircut current lq KM 0 Number of power at AC-23, 400 V KM 0 Conditioned rated short-tircut current lq KM 0 Number of auxiliary contacts as normally closed contact KM 0 Number of auxiliary contacts as normally closed contact KM 0 Number of auxiliary contacts as normally copen contact KM 0 Number of auxiliary contacts as change-over contact KM 0 Notardrive optional KM N Notar dive informounting 4-b0le KM N Subble for from numing 4-b0le KM N Subble for first mounting center KM N N <	Version as reversing switch		No
Retig permanent current lu A 50 Retig permanent current tu AC-21, 400 V V 0 Rated permanent current tu V 0 Rated portation power at AC-23, 400 V V 0 Switching power at 400 V V 0 Conditioned rated short-circuit current tq V 0 Number of auxiliary contacts as normally closed contact V 0 Number of auxiliary contacts as normally closed contact V 0 Number of auxiliary contacts as normally closed contact V 0 Number of auxiliary contacts as normally closed contact V 0 Number of auxiliary contacts as normally closed contact V V Number of auxiliary contacts as normally closed contact V N Number of auxiliary contacts as normally closed contact V N Nota crinterinterinterinterinterinterinterinte	Max. rated operation voltage Ue AC	V	0
Rate operation power at AC-3, 400 V Image: provide AC-3, 400 V <th< td=""><td>Rated operating voltage</td><td>V</td><td>1000 - 1000</td></th<>	Rated operating voltage	V	1000 - 1000
Rete operation power at AC-3,400 V Ket Ket Conditioned network is an organ by a context Ket Solution power at AC-33,400 V Solution power at AC-34,400	Rated permanent current lu	А	500
Rate door-time withstand urront low Rate	Rated permanent current at AC-21, 400 V	А	0
Retad operation power at AC-23, 400 V Image: Note of the second sec	Rated operation power at AC-3, 400 V	kW	0
Witching now at 400 V Image: Model of the section of the	Rated short-time withstand current Icw	kA	6.6
Conditioned rated short-circuit current lq Image: A particulation of auxiliary contacts as normally closed contact Image: A particulation of auxiliary contacts as normally closed contact Image: A particulation of auxiliary contacts as normally closed contact Image: A particulation of auxiliary contacts as normally closed contact Image: A particulation of auxiliary contacts as normally closed contact Image: A particulation of auxiliary contacts as normally closed contact Image: A particulation of auxiliary contacts as normally closed contact Image: A particulation of auxiliary contacts as normally closed contact Image: A particulation of auxiliary contacts as normally closed contact Image: A particulation of auxiliary contacts as normally closed contact Image: A particulation of auxiliary contacts as normally closed contact Image: A particulation of auxiliary contacts as normally closed contact Image: A particulation of auxiliary closed contact	Rated operation power at AC-23, 400 V	kW	0
Number of poles4Number of auxiliary contacts as normally closed contact0Number of auxiliary contacts as normally open contact0Number of auxiliary contact0 <td>Switching power at 400 V</td> <td>kW</td> <td>0</td>	Switching power at 400 V	kW	0
Number of auxiliary contacts as normally open contact Image of auxiliary contact Image of auxiliary	Conditioned rated short-circuit current Iq	kA	0
Number of auxiliary contacts as normally open contact Image: Provide state	Number of poles		4
Number of auxiliary contacts as change-over contact Perform Munder of auxiliary contacts as change-over contact Version Motor drive optional Ves Motor drive integrated Ves Voltage release optional Suitable for ground mounting Device construction Built- in device fixed built-in technique Suitable for front mounting 4-hole Ves Suitable for front mounting center No Suitable for intermediate mounting Ves Suitable for intermediate mounting <td>Number of auxiliary contacts as normally closed contact</td> <td></td> <td>0</td>	Number of auxiliary contacts as normally closed contact		0
Motor drive optional Moder drive integrated Yes Voltage release optional Yes Device construction Built-in device fixed built-in technique Suitable for ground mounting Yes Suitable for front mounting 4-hole Yes Suitable for front mounting center Yes Suitable for front mounting center Yes Suitable for intermediate mounting Yes <td>Number of auxiliary contacts as normally open contact</td> <td></td> <td>0</td>	Number of auxiliary contacts as normally open contact		0
Moor drive integrated No Voltage release optional Ves Device construction Built-in device fixed built-in technique Suitable for ground mounting Yes Suitable for front mounting 4-hole Yes Suitable for front mounting center No Suitable for front mounting center Yes Suitable for front mounting center No Suitable for intermediate mounting Yes Suitable	Number of auxiliary contacts as change-over contact		0
Voltage release optional Kes Device construction Buit- in device fixed built-in technique Suitable for ground mounting Ves Suitable for front mounting 4-hole Ves Suitable for front mounting center No Suitable for distribution board installation Ves Suitable for intermediate mounting Ves <	Motor drive optional		Yes
Device construction Built-in device fixed built-in technique Suitable for ground mounting Yes Suitable for front mounting 4-hole No Suitable for front mounting center No Suitable for distribution board installation Yes Suitable for intermediate mounting Yes Colour control element Yes Type of control element Yes Interlockable Yes Interlockable Yes Suitable for intermediate mounting Yes Type of control element Yes Interlockable Yes Interlockable Yes Yes Yes Yes Yes	Motor drive integrated		No
Suitable for ground mounting Keise in the relation of the relati	Voltage release optional		Yes
Suitable for front mounting 4-hole No Suitable for front mounting center No Suitable for distribution board installation No Suitable for intermediate mounting No Suitable for intermediate mounting Second Colour control element Second Type of control element Second Interlockable Second Type of element Second Suitable for intermediate noticitie Second Suitable for intermediate mounting Second Second Second Second Second Second Second	Device construction		Built-in device fixed built-in technique
Suitable for front mounting center Mo Suitable for distribution board installation Yes Suitable for intermediate mounting Yes Colour control element Yes Type of control element Yes Interlockable Socker lever Type of electrical connection of main circuit Socker lever Suitable for intermediate mounting Yes	Suitable for ground mounting		Yes
Suitable for distribution board installation Mathematical and the second seco	Suitable for front mounting 4-hole		No
Suitable for intermediate mounting Image: space of the space of th	Suitable for front mounting center		No
Colour control element Market Black Type of control element Rocker lever Interlockable Yes Type of electrical connection of main circuit Solow	Suitable for distribution board installation		Yes
Type of control element Mode Rocker lever Interlockable Mode Yes Type of electrical connection of main circuit Mode Screw connection	Suitable for intermediate mounting		Yes
Interlockable Yes Type of electrical connection of main circuit Main	Colour control element		Black
Type of electrical connection of main circuit Screw connection	Type of control element		Rocker lever
	Interlockable		Yes
Degree of protection (IP), front side IP20	Type of electrical connection of main circuit		Screw connection
	Degree of protection (IP), front side		IP20





Additional product information (links)

CurveSelect characteristics program	http://www.eaton.eu/DE/Europe/Electrical/CustomerSupport/ConfigurationTools/CharacteristicsProgram/ index.htm
Eaton configurator	http://www.eaton.eu/DE/Europe/Electrical/CustomerSupport/ConfigurationTools/ConfiguratorCircuitBreaker/index.htm
Additional technical data: Photovoltaics catalog (starting on page 35)	http://www.moeller.net/binary/pdf_kat/br01601001z_en.pdf