



NDN220A

MCB 2P 10kA D-20A 2M

Technical properties

Architecture

Neutral position	without neutral
Number of protected poles	2
Number of poles	2 P
Type of pole	2 P
Curve	D

Functions

Concurrently switching N-neutral	No
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Configuration

Number of modules	2
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Connectivity

Top connection alignment for modular devices	Aligned terminal
Bottom connection alignment for modular devices	Aligned terminal

Main electrical features

Rated short circuit breaking capacity I_{cn} AC according IEC60898-1	10 kA
Rated operational voltage U_e	415 V
Type of supply voltage	AC

Voltage

Rated insulation voltage	500 V
Max operating voltage	440 V
Rated impulse withstand voltage	6000 V
Minimum threshold voltage (U_e min)	12 V

Electric current

Rated current	20 A
Rated service breaking capacity I_{cs} AC according IEC 60898-1	7.5 kA
min/maxi threshold value of the AC thermal operation	1.13 / 1.45 I_n
Magnetic regulating current	10 / 14.4 I_n
min/maxi threshold value of the DC magnetic operation	15 / 30 I_n
min/maxi threshold value of the DC thermal operation	1.13 / 1.45 I_n

Rating current -10°C according to IEC 60947	26.75 A
Rating current -15°C according to IEC 60947	27.24 A
Rating current -20°C according to IEC 60947	27.72 A
Rating current -25°C according to IEC 60947	28.19 A
Rating current -5°C according to IEC 60947	26.26 A
Rating current 0°C according to IEC 60947	25.75 A
Rating current 10°C according to IEC 60947	24.71 A
Rating current 15°C according to IEC 60947	24.17 A
Rating current 20°C according to IEC 60947	23.62 A
Rating current 25°C according to IEC 60947	23.06 A
Rating current 30°C according to IEC 60947	22.48 A
Rating current 35°C according to IEC 60947	21.88 A
Rating current 40°C according to IEC 60947	21.28 A
Rating current 45°C according to IEC 60947	20.65 A
Rating current 5°C according to IEC 60947	25.24 A
Rating current 50°C according to IEC 60947	20 A
Rating current 55°C according to IEC 60947	19.33 A
Rating current 60°C according to IEC 60947	18.64 A
Rating current 65°C according to IEC 60947	17.92 A
Rating current 70°C according to IEC 60947	17.17 A
Rated short circuit breaking capacity I _{cn} under 230V AC according IEC60898-1	10 kA
Rated short circuit breaking capacity I _{cn} under 400V AC according IEC60898-1	10 kA
Rated ultimate short-circuit breaking capacity I _{cu} under 230V AC IEC 60947-2	30 kA
Rated ultimate short-circuit breaking capacity I _{cu} under 240V AC IEC 60947-2	30 kA
Rated ultimate short-circuit breaking capacity I _{cu} under 400V AC IEC 60947-2	15 kA
Rated ultimate short-circuit breaking capacity I _{cu} under 415V AC IEC 60947-2	15 kA
Rated short circuit breaking capacity I _{cn} under 240V AC according IEC 60898-1	10 kA
Rated short circuit breaking capacity I _{cn} under 415V AC according IEC 60898-1	10 kA
Rated ultimate short-circuit breaking capacity I _{cu} under 220V AC IEC 60947-2	30 kA
Rated ultimate short-circuit breaking capacity I _{cu} under 380V AC IEC 60947-2	15 kA
Electric current / temperature	
Rating current -25°C	25.08 A
Rating current -20°C	24.66 A
Rating current -15°C	24.24 A
Rating current -10°C	23.8 A
Rating current -5°C	23.36 A
Rating current 0°C	22.91 A
Rating current 5°C	22.45 A

Subject to technical modifications

Rating current 10°C	21.98 A
Rating current 25°C	20.51 A
Rating current 30°C	20 A
Rating current 35°C	19.47 A
Rating current 40°C	18.93 A
Rating current 45°C	18.37 A
Rating current 50°C	17.8 A
Rating current 55°C	17.2 A
Rating current 60°C	16.58 A
Rating current 65°C	15.94 A
Rating current 70°C	15.28 A

Current correction factors

Correction factor of rating current for 2 devices placed side-by-side	1
Correction factor of rating current for 3 devices placed side-by-side	0.95
Correction factor of rating current for 4 and 5 devices placed side-by-side	0.9
Correction factor of rating current for 6 devices placed side-by-side	0.85
Correction factor of magnetic tripping with 100 Hz	1.1
Correction factor of magnetic tripping with 200 Hz	1.2
Correction factor of magnetic tripping with 400 Hz	1.5
Correction factor of magnetic tripping with 60 Hz	1.1

Dimensions

Depth of installed product	70 mm
Height of installed product	83 mm
Width of installed product	35 mm

Frequency

Frequency	50 to 60 Hz
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Power

Maximum power loss per pole according to the product standard	4.5 W
Total power loss under IN	5.29 W
Power loss per pole at In	2.68 W

Endurance

Electric endurance in number of cycles	4000
Number of mechanical operations	20000

Installation, mounting

Type of top connection for modular devices	with screw
Tightening torque	2,8Nm
Type of top rail clip for modular devices	NA
Type of bottom rail clip for modular devices	plastic

Subject to technical modifications

Type of Bottom Connection for modular devices	Blconnect
Top removability for modular devices	Yes
Bottom removability for modular devices	Yes
Suitable for flush-mounting	Yes
Connection	
Connection cross-section at output with screw, for flexible conductor	1 / 25 mm ²
Connection cross-section at output with screw, for massive conductor	1 / 35 mm ²
Connection cross-section for rigid conductor, upstream terminals with screws	1 / 35 mm ²
Connection cross-section of the access with screws, with flexible conductor	1 / 25 mm ²
Downstream cage clamp delivery status	opened
Upstream cage clamp delivery status	opened
Equipment	
Can be accessorized	Yes
Standards	
Standard text	EN 60898-1 ; AS/NZS 60898-1
European directive WEEE	concerned
Safety	
Protection index IP	IP20
Use conditions	
Operating temperature	-25...70 °C
Degree of pollution according to IEC 60664 / IEC 60947-2	2
Altitude	2000 m
Storage/transport temperature	-25...80 °C
temperatur	
Temperature of calibration	30 °C