



MCB 4P 20kA C-40A 4M

NRN440

Architecture

Neutral position	without neutral
Number of protected poles	4
Number of poles	4 P
Type of pole	4 P
Fixing mode	Din-Rail
Curve	C

Compatibility

Compatible with DIN rail mounting	yes
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Controls and indicators

With fault indicator	no
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Connectivity

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

Main electrical features

Type of supply voltage	AC
Rated operational voltage Ue	415 V

Voltage

Rated insulation voltage	500 V
Max operating voltage	415 V
Rated impulse withstand voltage	6000 V

Electric current

Rated ultimate short-circuit breaking capacity Icu under 400V AC IEC 60947-2	20 kA
Rated short circuit breaking capacity Icn under 230V AC according IEC60898-1	10 kA
Rated short circuit breaking capacity Icn under 400V AC according IEC60898-1	10 kA
Rated short circuit breaking capacity Icn under 240V AC according IEC 60898-1	10 kA

Technical Properties

Rated short circuit breaking capacity I <sub>cn</sub> under 380V AC according IEC 60898-1	10 kA
Rated short circuit breaking capacity I <sub>cn</sub> under 415V AC according IEC 60898-1	10 kA
Rated service breaking capacity I <sub>cs</sub> AC according IEC 60898-1	7,5 kA
Rated service breaking capacity I <sub>cs</sub> under 220V AC according IEC 60947-2	15 kA
Rated service breaking capacity I <sub>cs</sub> under 230V AC according IEC 60947-2	15 kA
Rated service breaking capacity I <sub>cs</sub> under 240V AC according IEC 60947-2	15 kA
Rated service breaking capacity I <sub>cs</sub> under 380V AC according IEC 60947-2	7,5 kA
Rated service breaking capacity I <sub>cs</sub> under 400V AC according IEC 60947-2	7,5 kA
Rated service breaking capacity I <sub>cs</sub> under 415V AC according IEC 60947-2	7,5 kA
Breaking capacity on 1 pole with 400 V NF 60947-2	3 kA
Breaking capacity on 1 pole with 415 V NF 60947-2	3 kA
Rated service breaking capacity I <sub>cs</sub> under 220V AC according IEC 60898-1	7,5 kA
Rated service breaking capacity I <sub>cs</sub> under 230V AC according IEC 60898-1	7,5 kA
Rated service breaking capacity I <sub>cs</sub> under 240V AC according IEC 60898-1	7,5 kA
Rated service breaking capacity I <sub>cs</sub> under 380V AC according IEC 60898-1	7,5 kA
Rated service breaking capacity I <sub>cs</sub> under 400V AC according IEC 60898-1	7,5 kA
Rated service breaking capacity I <sub>cs</sub> under 415V AC according IEC 60898-1	7,5 kA
Rated ultimate short-circuit breaking capacity I <sub>cu</sub> under 220V AC IEC 60947-2	40 kA
Rated ultimate short-circuit breaking capacity I <sub>cu</sub> under 230V AC IEC 60947-2	40 kA
Rated ultimate short-circuit breaking capacity I <sub>cu</sub> under 240V AC IEC 60947-2	40 kA
Rated ultimate short-circuit breaking capacity I <sub>cu</sub> under 380V AC IEC 60947-2	20 kA
Rated ultimate short-circuit breaking capacity I <sub>cu</sub> under 415V AC IEC 60947-2	20 kA
Magnetic regulating current at 40° C	5/10 In
min/maxi threshold value of the DC magnetic operation	5/15 In
min/maxi threshold value of the AC thermal operation	1,13/1,45 In
min/maxi threshold value of the DC thermal operation	1,13/1,45 In

**Electric current / temperature**

Rating current 0°C according to IEC 60947-2	55,54 A
Rating current 10°C according to IEC 60947-2	52,58 A
Rating current -10°C according to IEC 60947-2	58,11 A
Rating current 150°C according to IEC 60947-2	51,11 A
Rating current -15°C according to IEC 60947-2	59,97 A
Rating current 20°C according to IEC 60947-2	49,63 A
Rating current -20°C according to IEC 60947-2	61,45 A
Rating current 25°C according to IEC 60947-2	48,15 A
Rating current -25°C according to IEC 60947-2	62,93 A
Rating current 30°C according to IEC 60947-2	47,82 A

#### Technical Properties

Rating current 35°C according to IEC 60947-2	45,2 A
Rating current 40°C according to IEC 60947-2	43,72 A
Rating current 45°C according to IEC 60947-2	42,24 A
Rating current 5°C according to IEC 60947-2	54,06 A
Rating current -5°C according to IEC 60947-2	57,02 A
Rating current 50°C according to IEC 60947-2	40 A
Rating current 55°C according to IEC 60947-2	39,29 A
Rating current 60°C according to IEC 60947-2	37,81 A
Rating current 65°C according to IEC 60947-2	36,33 A
Rating current 70°C according to IEC 60947-2	34,85 A

#### Current correction factors

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
Correction factor of rating current for 2 devices placed 1 side-by-side	
Correction factor of rating current for 3 devices placed 0,95 side-by-side	
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 0,85 side-by-side	

#### Power

Power loss per pole at I <sub>n</sub>	4,28 W
Maximum power loss per pole according to the product standard	7,5 W
Total power loss under I <sub>N</sub>	15 W

#### Tripping

Time of response when opening	7 ms
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#### Endurance

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

#### Dimensions

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

#### Installation, mounting

Type of top connection for modular devices	with screw
Tightening torque	2,8Nm
Type of bottom rail clip for modular devices	plastic
Type of top rail clip for modular devices	NA
Type of Bottom Connection for modular devices	Blconnect
Bottom removability for modular devices	yes
Top removability for modular devices	yes
Suitable for flush-mounting	yes

#### Connection

Upstream cage clamp delivery status	opened
Downstream cage clamp delivery status	opened
Connection cross-section at output with screw, for flexible conductor	1/25 mm <sup>2</sup>
Connection cross-section of the access with screws, with flexible conductor	1/25 mm <sup>2</sup>
Connection cross-section at output with screw, for massive conductor	1/35 mm <sup>2</sup>
Connection cross-section for rigid conductor, upstream terminals with screws	1/35 mm <sup>2</sup>

#### Equipment

Can be accessorized	yes
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#### Standards

Standard text	IEC 60947-2
European directive WEEE	concerned

#### Safety

Protection index IP	IP20
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#### Use conditions

Degree of pollution according to IEC 60664 / IEC 60947-2	2
Class of energy limitation I <sup>2</sup> t	3
Altitude	2000 m
Storage temperature	-25 to 80 °C
Air humidity protection	for all climates

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Temperature of calibration	50 °C
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