NBN150A

MCB 1P 10kA/15kA B-50A 1M

Product Datasheet

Architecture

Neutral position	without neutral
Number of protected poles	1
Number of poles	1 P
Type of pole	1 P
Fixing mode	Din-Rail
Curve	B

Functions

Concurrently switching N-neutral	no

Compatibility

Compatible with DIN rail mounting	yes

Controls and indicators

With fault indicator	no

Connectivity

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

Main electrical features

Rated short circuit breaking capacity Icn AC according IEC60898-1	10 kA
Rated operational voltage Ue	230 / 400 V
Type of supply voltage	AC

Voltage

Rated insulation voltage	500 V
Rated impulse withstand voltage	6000 V
Minimum threshold voltage (Ue min)	12 V

Electric current

Rated current	50 A
Rated service breaking capacity Ics AC according IEC 60898-1	7,5 kA
min/maxi threshold value of the AC thermal operation	1,13 / 1,45 In
Magnetic regulating currrent	3 / 5 In
min/maxi threshold value of the DC magnetic operation	4 / 7 In
min/maxi threshold value of the DC thermal operation	1,13 / 1,45 In
Rating current -10°C according to IEC 60947	71,01 A
Rating current -15°C according to IEC 60947	72,49 A
Rating current -20°C according to IEC 60947	73,93 A
Rating current -25°C according to IEC 60947	75,35 A
Rating current -5°C according to IEC 60947	69,5 A
Rating current 0°C according to IEC 60947	67,96 A
Rating current 10°C according to IEC 60947	64,77 A
Rating current 150°C according to IEC 60947	63,11 A
Rating current 20°C according to IEC 60947	61,41 A
Rating current 25°C according to IEC 60947	59,66 A
Rating current 30°C according to IEC 60947	57,86 A
Rating current 35°C according to IEC 60947	56 A
Rating current 40°C according to IEC 60947	54,07 A
Rating current 45°C according to IEC 60947	52,08 A
Rating current 5°C according to IEC 60947	66,38 A
Rating current 50°C according to IEC 60947	50 A
Rating current 55°C according to IEC 60947	47,83 A
Rating current 60°C according to IEC 60947	45,57 A
Rating current 65°C according to IEC 60947	43,18 A
Rating current 70°C according to IEC 60947	40,65 A
Rated service breaking capacity Ics under 220V AC according IEC 60947-2	7,5 kA
Rated service breaking capacity Ics under 230V AC according IEC 60947-2	7,5 kA
Rated service breaking capacity Ics under 240V AC according IEC 60947-2	7,5 kA
Rated short circuit breaking capacity Icn under 230V AC according IEC60898-1	10 kA
Rated ultimate short-circuit breaking capacity Icu under 230V AC IEC 60947-2	15 kA
Rated ultimate short-circuit breaking capacity Icu under 240V AC IEC 60947-2	15 kA
Rated short circuit breaking capacity Icn under 240V AC according IEC 60898-1	10 kA
Rated service breaking capacity Ics under 220V AC according IEC 60898-1	7,5 kA
Rated service breaking capacity Ics under 230V AC according IEC 60898-1	7,5 kA
Rated service breaking capacity Ics under 240V AC according IEC 60898-1	7,5 kA
Rated ultimate short-circuit breaking capacity Icu under 220V AC IEC 60947-2	15 kA

Electric current / temperature

Rating current -25°C	65,12 A
Rating current -20°C	63,89 A
Rating current -15°C	62,64 A
Rating current -10°C	61,37 A
Rating current -5°C	60,15 A
Rating current 0°C	58,92 A
Rating current 5°C	57,69 A
Rating current 10°C	56,47 A
Rating current 25°C	52,84 A
Rating current 30°C	50 A
Rating current 35°C	49,4 A
Rating current 40°C	48,22 A
Rating current 45°C	46,72 A
Rating current 50°C	46,96 A
Rating current 55°C	42,77 A
Rating current 60°C	40,33 A
Rating current 65°C	37,57 A
Rating current 70°C	34,49 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

Frequency

Frequency	50 to 60 Hz

Power

Maximum power loss per pole according to the product standard	9 W
Total power loss under IN	4,7 W
Power loss per pole at In	4,7 W

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	17,5 mm

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
Type of Bottom Connection for modular devices	BIconnect
Top removability for modular devices	yes
Bottom removability for modular devices	yes
Suitable for flush-mounting	yes
360° product mounting position	yes

Connection

Connection cross-section at output with screw, for flexible conductor	1 / 25 mm²
Connection cross-section at output with screw, for massive conductor	1 / 35 mm²
Connection cross-section for rigid conductor, upstream terminals with screws	1 / 35 mm²
Connection cross-section of the access with screws, with flexible conductor	1 / 25 mm²
Downstream cage clamp delivery status	opened
Upstream cage clamp delivery status	opened

Equipment

Can be accessorized	yes
With transparent product label holder	yes

Standards

Standard text	EN 60898-1, IEC 60947-2
European directive WEEE	concerned
Product categories described in the W3E directive 2012/19/EU	Category 5

Safety

Protection index IP	IP20

Use conditions

Operating temperature	-25…70 °C
Degree of pollution according to IEC 60664 / IEC 60947-2	2
Class of energy limitation I²t	3
Altitude	2000 m
Storage/transport temperature	-25…80 °C

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Temperature of calibration	50 °C