



NDN110A



## MCB 1P 10kA/15kA D-10A 1M

### Technical characteristics

#### Architecture

|                           |                 |
|---------------------------|-----------------|
| Neutral position          | without neutral |
| Number of protected poles | 1               |
| Number of poles           | 1 P             |
| Type of pole              | 1 P             |
| Curve                     | D               |

#### Functions

|                                  |    |
|----------------------------------|----|
| Concurrently switching N-neutral | No |
|----------------------------------|----|

#### Configuration

|                   |   |
|-------------------|---|
| Number of modules | 1 |
|-------------------|---|

#### 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 $U_e$  | 230 / 400 V |
| Type of supply voltage   | AC          |

#### Voltage

|  |        |
|--|--------|
| Rated insulation voltage               | 500 V  |
| Rated impulse withstand voltage        | 6000 V |
| Minimum threshold voltage ( $U_e$ min) | 12 V   |

#### Electric current

|   |                   |
|---|-------------------|
| Rated current   | 10 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 $-10^\circ\text{C}$ according to IEC 60947         | 13.92 A           |

|   |         |
|---|---------|
| Rating current -15°C according to IEC 60947   | 14.2 A  |
| Rating current -20°C according to IEC 60947   | 14.47 A |
| Rating current -25°C according to IEC 60947   | 14.74 A |
| Rating current -5°C according to IEC 60947  | 13.64 A |
| Rating current 0°C according to IEC 60947   | 13.35 A |
| Rating current 10°C according to IEC 60947  | 12.75 A |
| Rating current 15°C according to IEC 60947  | 12.44 A |
| Rating current 20°C according to IEC 60947  | 12.12 A |
| Rating current 25°C according to IEC 60947  | 11.79 A |
| Rating current 30°C according to IEC 60947  | 11.46 A |
| Rating current 35°C according to IEC 60947  | 11.11 A |
| Rating current 40°C according to IEC 60947  | 10.75 A |
| Rating current 45°C according to IEC 60947  | 10.38 A |
| Rating current 5°C according to IEC 60947   | 13.05 A |
| Rating current 50°C according to IEC 60947  | 10 A    |
| Rating current 55°C according to IEC 60947  | 9.6 A   |
| Rating current 60°C according to IEC 60947  | 9.19 A  |
| Rating current 65°C according to IEC 60947  | 8.75 A  |
| Rating current 70°C according to IEC 60947  | 8.29 A  |
| Rated short circuit breaking capacity I <sub>cn</sub> under 230V AC according IEC60898-1  | 10 kA   |
| Rated ultimate short-circuit breaking capacity I <sub>cu</sub> under 230V AC IEC 60947-2  | 15 kA   |
| Rated ultimate short-circuit breaking capacity I <sub>cu</sub> under 240V AC IEC 60947-2  | 15 kA   |
| Rated short circuit breaking capacity I <sub>cn</sub> under 240V AC according IEC 60898-1 | 10 kA   |
| Rated ultimate short-circuit breaking capacity I <sub>cu</sub> under 220V AC IEC 60947-2  | 15 kA   |
| <b>Electric current / temperature</b>   |         |
| Rating current -25°C  | 12.86 A |
| Rating current -20°C  | 12.63 A |
| Rating current -15°C  | 12.39 A |
| Rating current -10°C  | 12.15 A |
| Rating current -5°C   | 11.9 A  |
| Rating current 0°C  | 11.65 A |
| Rating current 5°C  | 11.39 A |
| Rating current 10°C   | 11.13 A |
| Rating current 25°C   | 10.29 A |
| Rating current 30°C   | 10 A    |
| Rating current 35°C   | 9.7 A   |
| Rating current 40°C   | 9.39 A  |
| Rating current 45°C   | 9.06 A  |
| Rating current 50°C   | 8.73 A  |
| Rating current 55°C   | 8.38 A  |
| Rating current 60°C   | 8.02 A  |

|                     |        |
|---------------------|--------|
| Rating current 65°C | 7.64 A |
| Rating current 70°C | 7.24 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  | 17.5 mm |

#### Frequency

|           |             |
|-----------|-------------|
| Frequency | 50 to 60 Hz |
|-----------|-------------|

#### Power

|   |        |
|---|--------|
| Maximum power loss per pole according to the product standard | 3 W    |
| Total power loss under IN                                     | 1.87 W |
| Power loss per pole at In                                     | 1.87 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    |
| 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 <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> |
| Connection cross-section of the access with screws, with flexible conductor  | 1 / 25 mm <sup>2</sup> |
| Downstream cage clamp delivery status  | opened                 |
| Upstream cage clamp delivery status  | opened                 |

#### Equipment

|                     |     |
|---------------------|-----|
| Can be accessorized | Yes |
|---------------------|-----|

#### Standards

|               |                          |
|---------------|--------------------------|
| Standard text | EN 60898-1 ; IEC 60947-2 |
|---------------|--------------------------|

#### Safety

|              |    |
|--------------|----|
| Halogen free | No |
|--------------|----|

#### 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 | 50 °C |
|----------------------------|-------|