



NDN416A

MCB 4P 10kA/15kA D-16A 4M

Technical properties

Architecture

| | |
|---------------------------|-----------------|
| Neutral position | without neutral |
| Number of protected poles | 4 |
| Number of poles | 4 P |
| Type of pole | 4 P |
| Curve | D |

Functions

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

Configuration

| | |
|-------------------|---|
| Number of modules | 4 |
|-------------------|---|

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 | 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 | 16 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 | 21.74 A |

| | |
|---|---------|
| Rating current -15°C according to IEC 60947 | 22.15 A |
| Rating current -20°C according to IEC 60947 | 22.55 A |
| Rating current -25°C according to IEC 60947 | 22.95 A |
| Rating current -5°C according to IEC 60947 | 21.32 A |
| Rating current 0°C according to IEC 60947 | 20.89 A |
| Rating current 10°C according to IEC 60947 | 20.01 A |
| Rating current 15°C according to IEC 60947 | 19.55 A |
| Rating current 20°C according to IEC 60947 | 19.09 A |
| Rating current 25°C according to IEC 60947 | 18.61 A |
| Rating current 30°C according to IEC 60947 | 18.12 A |
| Rating current 35°C according to IEC 60947 | 17.61 A |
| Rating current 40°C according to IEC 60947 | 17.09 A |
| Rating current 45°C according to IEC 60947 | 16.55 A |
| Rating current 5°C according to IEC 60947 | 20.46 A |
| Rating current 50°C according to IEC 60947 | 16 A |
| Rating current 55°C according to IEC 60947 | 15.3 A |
| Rating current 60°C according to IEC 60947 | 14.56 A |
| Rating current 65°C according to IEC 60947 | 13.78 A |
| Rating current 70°C according to IEC 60947 | 12.96 A |
| 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 ultimate short-circuit breaking capacity Icu under 230V AC IEC 60947-2 | 30 kA |
| Rated ultimate short-circuit breaking capacity Icu under 240V AC IEC 60947-2 | 30 kA |
| Rated ultimate short-circuit breaking capacity Icu under 400V AC IEC 60947-2 | 15 kA |
| Rated ultimate short-circuit breaking capacity Icu under 415V AC IEC 60947-2 | 15 kA |
| Rated short circuit breaking capacity Icn under 240V AC according IEC 60898-1 | 10 kA |
| Rated short circuit breaking capacity Icn under 415V AC according IEC 60898-1 | 10 kA |
| Rated ultimate short-circuit breaking capacity Icu under 220V AC IEC 60947-2 | 30 kA |
| Rated ultimate short-circuit breaking capacity Icu under 380V AC IEC 60947-2 | 15 kA |
| Electric current / temperature | |
| Rating current -25°C | 20.27 A |
| Rating current -20°C | 19.92 A |
| Rating current -15°C | 19.56 A |
| Rating current -10°C | 19.2 A |
| Rating current -5°C | 18.83 A |
| Rating current 0°C | 18.45 A |
| Rating current 5°C | 18.07 A |
| Rating current 10°C | 17.67 A |

| | |
|---------------------|---------|
| Rating current 25°C | 16.43 A |
| Rating current 30°C | 16 A |
| Rating current 35°C | 15.48 A |
| Rating current 40°C | 14.94 A |
| Rating current 45°C | 14.38 A |
| Rating current 50°C | 13.8 A |
| Rating current 55°C | 13.19 A |
| Rating current 60°C | 12.56 A |
| Rating current 65°C | 11.89 A |
| Rating current 70°C | 11.18 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 | 70 mm |

Frequency

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

Power

| | |
|---|---------|
| Maximum power loss per pole according to the product standard | 3.5 W |
| Total power loss under IN | 11.08 W |
| Power loss per pole at In | 2.79 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 | BIconnect |
| 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 ; IEC 60947-2 |
| European directive WEEE | concerned |
| Safety | |
| Protection index IP | IP20 |
| 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 |