



NRN332



## MCB 3P 20kA C-32A 3M

### Technical characteristics

#### Architecture

|                           |                 |
|---------------------------|-----------------|
| Neutral position          | without neutral |
| Number of protected poles | 3               |
| Number of poles           | 3 P             |
| Type of pole              | 3 P             |
| Curve                     | C               |

#### Functions

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

#### Configuration

|                   |   |
|-------------------|---|
| Number of modules | 3 |
|-------------------|---|

#### 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           | 415 V  |
| Rated impulse withstand voltage | 6000 V |

#### Electric current

|   |                   |
|---|-------------------|
| Rated current   | 32 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                                       | 5 / 10 $I_n$      |
| min/maxi threshold value of the DC magnetic operation             | 5 / 15 $I_n$      |
| min/maxi threshold value of the DC thermal operation              | 1.13 / 1.45 $I_n$ |
| Rating current -10°C according to IEC 60947                       | 41.08 A           |

|   |         |
|---|---------|
| Rating current -15°C according to IEC 60947                                   | 41.74 A |
| Rating current -20°C according to IEC 60947                                   | 42.4 A  |
| Rating current -25°C according to IEC 60947                                   | 43.05 A |
| Rating current -5°C according to IEC 60947                                    | 40.4 A  |
| Rating current 0°C according to IEC 60947                                     | 39.71 A |
| Rating current 10°C according to IEC 60947                                    | 38.29 A |
| Rating current 15°C according to IEC 60947                                    | 37.56 A |
| Rating current 20°C according to IEC 60947                                    | 36.82 A |
| Rating current 25°C according to IEC 60947                                    | 36.06 A |
| Rating current 30°C according to IEC 60947                                    | 35.29 A |
| Rating current 35°C according to IEC 60947                                    | 34.49 A |
| Rating current 40°C according to IEC 60947                                    | 33.68 A |
| Rating current 45°C according to IEC 60947                                    | 32.85 A |
| Rating current 5°C according to IEC 60947                                     | 39.01 A |
| Rating current 50°C according to IEC 60947                                    | 32 A    |
| Rating current 55°C according to IEC 60947                                    | 31.09 A |
| Rating current 60°C according to IEC 60947                                    | 30.16 A |
| Rating current 65°C according to IEC 60947                                    | 29.19 A |
| Rating current 70°C according to IEC 60947                                    | 28.19 A |
| Breaking capacity on 1 pole for IT 400V NF 60947-2                            | 3 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 ultimate short-circuit breaking capacity Icu under 230V AC IEC 60947-2  | 40 kA   |
| Rated ultimate short-circuit breaking capacity Icu under 240V AC IEC 60947-2  | 40 kA   |
| Rated ultimate short-circuit breaking capacity Icu under 400V AC IEC 60947-2  | 20 kA   |
| Rated ultimate short-circuit breaking capacity Icu under 415V AC IEC 60947-2  | 20 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  | 40 kA   |
| Rated ultimate short-circuit breaking capacity Icu under 380V AC IEC 60947-2  | 20 kA   |
| <b>Current correction factors</b>   |         |
| 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   |

#### Dimensions

|                             |         |
|-----------------------------|---------|
| Depth of installed product  | 70 mm   |
| Height of installed product | 83 mm   |
| Width of installed product  | 52.5 mm |

#### Frequency

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

#### Power

|   |        |
|---|--------|
| Maximum power loss per pole according to the product standard | 6 W    |
| Total power loss under IN                                     | 12.3 W |
| Power loss per pole at In                                     | 4.22 W |

#### Tripping

|                               |      |
|-------------------------------|------|
| Time of response when opening | 7 ms |
|-------------------------------|------|

#### 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

Subject to technical modifications

Can be accessorized

Yes

### Standards

|               |             |
|---------------|-------------|
| Standard text | IEC 60947-2 |
|---------------|-------------|

### Safety

|               |    |
|---------------|----|
| REACH conform | No |
|---------------|----|

|              |     |
|--------------|-----|
| RoHS conform | Yes |
|--------------|-----|

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

### Use conditions

|                       |             |
|-----------------------|-------------|
| Operating temperature | -25...70 °C |
|-----------------------|-------------|

|   |   |
|---|---|
| Degree of pollution according to IEC 60664 /<br>IEC 60947-2 | 2 |
|---|---|

|   |   |
|---|---|
| Class of energy limitation I <sup>2</sup> t | 3 |
|---|---|

|          |        |
|----------|--------|
| Altitude | 2000 m |
|----------|--------|

|                         |                  |
|-------------------------|------------------|
| Air humidity protection | for all climates |
|-------------------------|------------------|

|                               |             |
|-------------------------------|-------------|
| Storage/transport temperature | -25...80 °C |
|-------------------------------|-------------|

### temperatur

|                            |       |
|----------------------------|-------|
| Temperature of calibration | 50 °C |
|----------------------------|-------|