

# Residual Current Circuit Breaker with Overload Protection N8LDE,6kA

- Residual Current Circuit Breaker with Overload Protection according to IEC/EN 61009-1
- Electronic type
- Rated short circuit breaking capacity 6kA
- 1+N-pole version
- Rated residual current 10, 30, 100, 300mA
- Rated current up to 32A
- 1-module width
- AC and A types



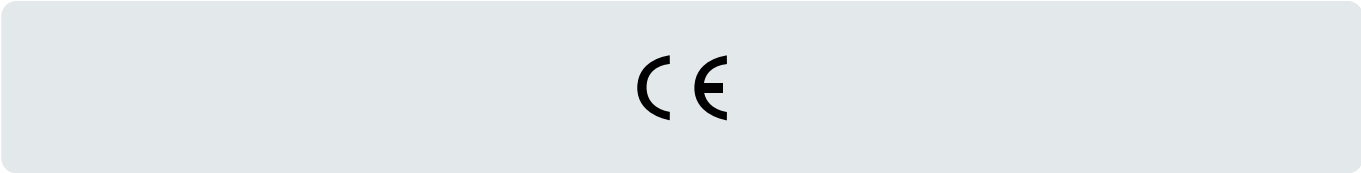
N8LDE residual current circuit breaker are based on combination of residual current device on the amplified signal of electronic components and circuit breaker with thermal overload release and magnetic short circuit current release.

They are common in domestic, commercial and industrial application.

## Type Key

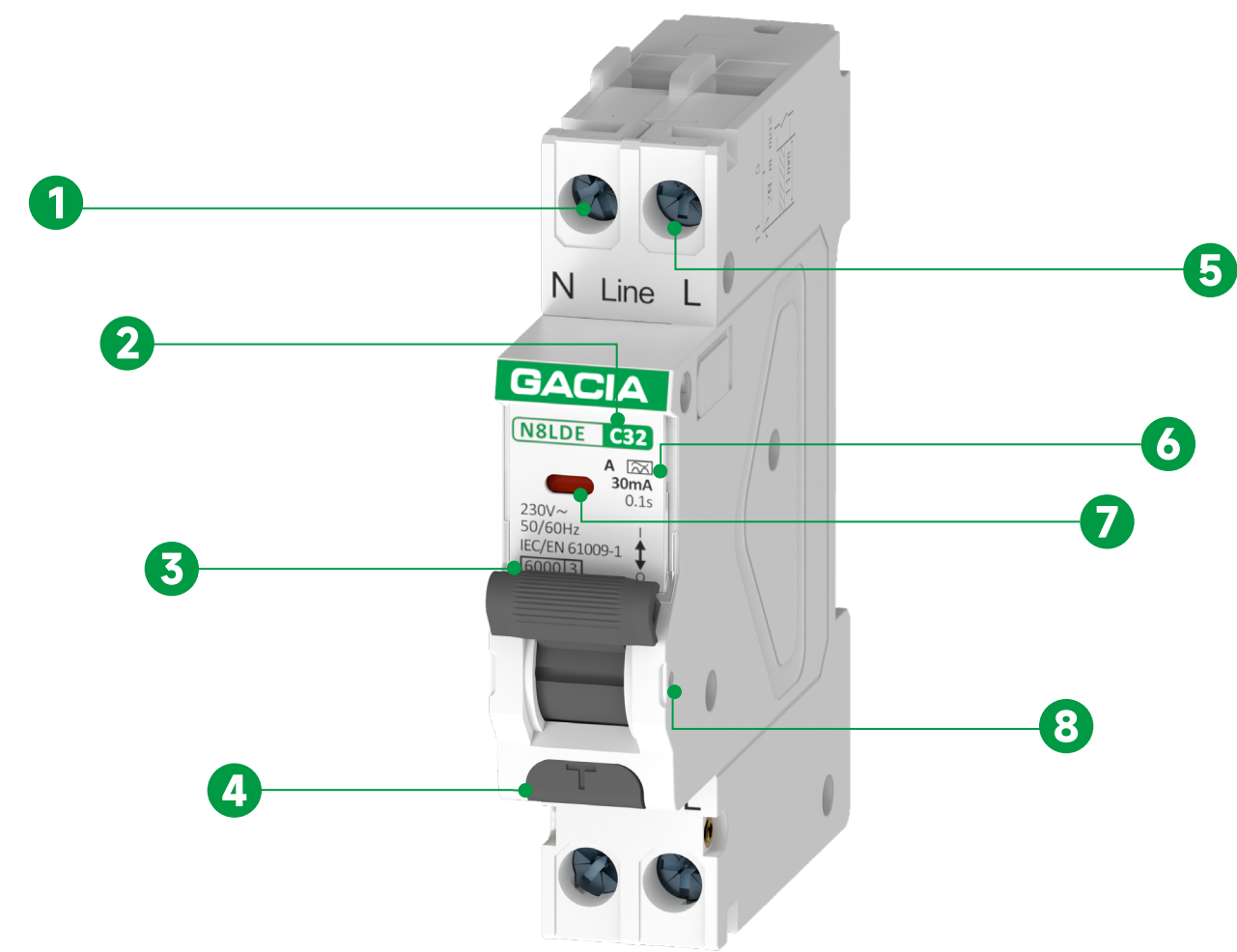
| N              | 8           | LD               | E              | 16A           | 30mA                   |
|----------------|-------------|------------------|----------------|---------------|------------------------|
| Product series | Design code | Product category | Structure code | Rated current | Rated residual current |
| N              | 8           | RCBO 1P+N        | Electronic     | 6-32A         | 10-300mA               |

## Certification Marks



Residual Current Circuit Breaker  
with Overload Protection  
**N8LDE,6kA**

Product Tips



- 1 Neutral line interface

2 Tripping characteristics B, C

3 Rated short circuit breaking capacity 6000A

4 Test button
- 5 Live line interface

6 Sensitivity to residual current A

7 Contacts position indication window

8 The position of handle Lock

Technical Data

| Electrical Features                |                |                                                                              |
|------------------------------------|----------------|------------------------------------------------------------------------------|
| International standard             |                | IEC/EN 61009-1                                                               |
| Poles                              |                | 1P+N                                                                         |
| Tripping characteristics of MCB    |                | B, C                                                                         |
| Rated current                      |                | 6-32A                                                                        |
| Rated residual current             | $I_{\Delta n}$ | 10, 30, 100, 300mA                                                           |
| Residual current protection type   |                | Electronic                                                                   |
| Rated breaking capacity            | $I_{cn}$       | 6kA                                                                          |
| Rated operational voltage          | $U_e$          | 230/400V AC                                                                  |
| Voltage range of the test button T |                | 195.5 - 253V AC                                                              |
| Sensitivity to residual current    |                | AC type- AC residual current<br>A type- residual AC and pulsating DC current |
| Rated frequency                    |                | 50/60Hz                                                                      |
| Rated insulated voltage            | $U_i$          | 400V AC                                                                      |
| Rated impulse withstand voltage    | $U_{imp}$      | 4kV                                                                          |
| Dielectric test voltage            |                | 2.5kV                                                                        |
| Mechanical service life            |                | 10000 operation cycles                                                       |
| Electrical service life            |                | 4000 operation cycles                                                        |
| Time characteristic of RCD         |                | Undelayed type                                                               |

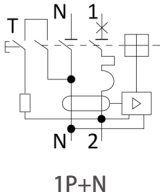
| Installation Parameters                              |                                |
|------------------------------------------------------|--------------------------------|
| Degree of protection (IP)                            | IP20, IP40 (when fitted)       |
| Operating ambient temperature                        | -25°C ~+70°C                   |
| Terminal connection type                             | Cable                          |
| Connectable conductor cross section                  | 1-10mm <sup>2</sup>            |
| Mounting                                             | IEC/EN 60715 top-hat rail 35mm |
| Fastening torque of terminals                        | 2.0N.m                         |
| Pollution degree                                     | 2                              |
| Reference temperature for setting of thermal element | 30°C                           |
| Altitude                                             | ≤ 2000m                        |
| Relative humidity                                    | ≤ 95%                          |
| Resistance to humidity and heat                      | Class 2                        |
| Installation class                                   | III                            |

| Dimensions |  |
|------------|--|
|            |  |

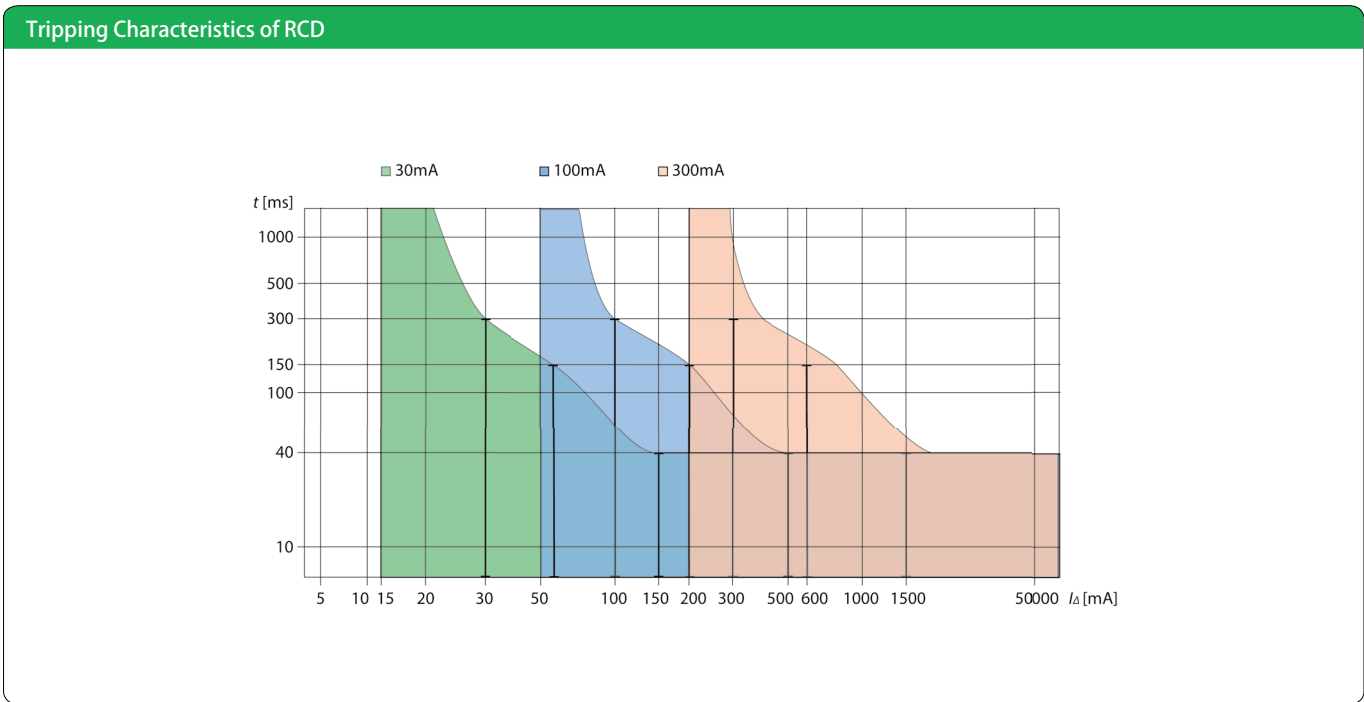
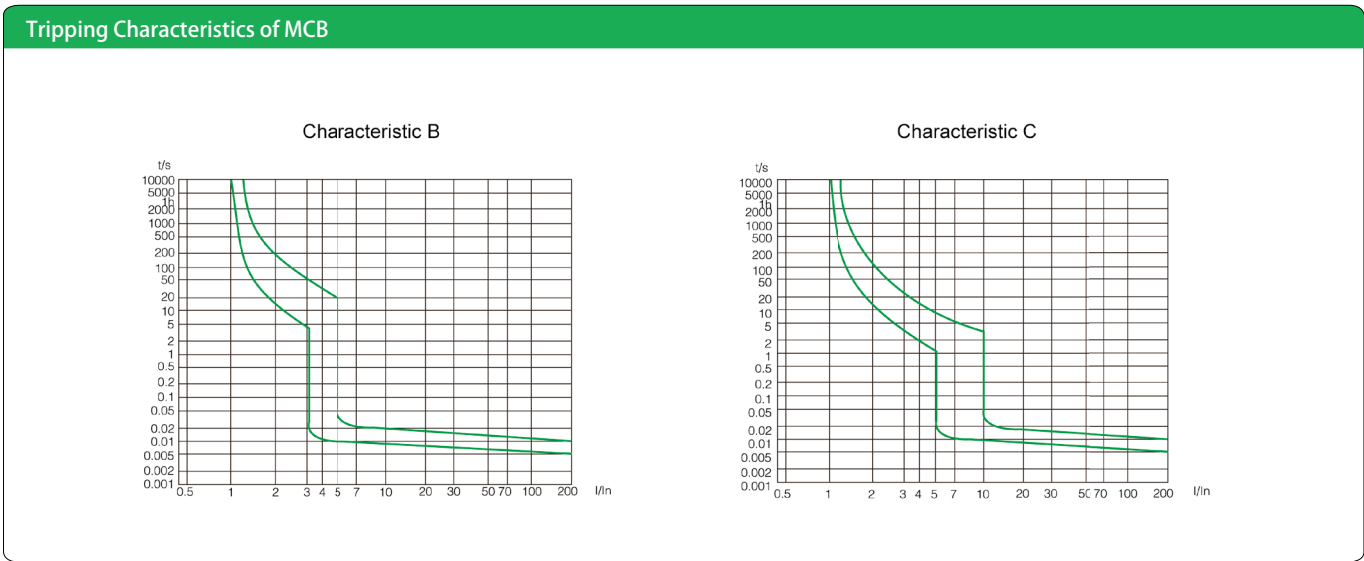
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Technical Data

Wiring Diagrams



1P+N



Technical Data

Dependence of Tripping Characteristics on Ambient Temperature

| T<br>[°C] | In (T) [A] |      |      |      |      |      |      |
|-----------|------------|------|------|------|------|------|------|
|           | 6 A        | 10 A | 13 A | 16 A | 20 A | 25 A | 32 A |
| -20       | 8          | 13.5 | 17   | 20   | 24.5 | 29.8 | 39.5 |
| -15       | 7.8        | 13.3 | 16.8 | 19.8 | 24.3 | 29.7 | 39.3 |
| -10       | 7.6        | 13   | 16.5 | 19.5 | 24   | 29.5 | 39   |
| -5        | 7.3        | 12.7 | 16.1 | 19.2 | 23.8 | 29.3 | 38.8 |
| 0         | 7.2        | 12.5 | 15.8 | 19.1 | 23.7 | 29.2 | 38.6 |
| 5         | 7          | 12.3 | 15.5 | 18.8 | 23.5 | 29   | 38.4 |
| 10        | 6.8        | 12.1 | 15.2 | 18.6 | 23.3 | 28.8 | 38.2 |
| 15        | 6.6        | 12   | 14.9 | 18.5 | 23.1 | 28.6 | 38   |
| 20        | 6.4        | 11.8 | 14.7 | 18.3 | 22.8 | 28.4 | 37.8 |
| 25        | 6.2        | 11.5 | 14.1 | 18   | 22.6 | 28.2 | 37.5 |
| 30        | 6          | 10   | 13   | 16   | 20   | 25   | 32   |
| 35        | 6          | 9.9  | 12.8 | 15.7 | 19.7 | 24.6 | 31.5 |
| 40        | 5.9        | 9.8  | 12.5 | 15.4 | 19.3 | 24.3 | 31.1 |
| 45        | 5.83       | 9.8  | 12.2 | 15.1 | 18.8 | 24   | 30.8 |
| 50        | 5.72       | 9.6  | 11.7 | 14.9 | 18.5 | 23.8 | 30.1 |
| 55        | 5.65       | 9.5  | 11.5 | 14.7 | 18.2 | 23.5 | 29.5 |
| 60        | 5.5        | 9    | 11.2 | 14.5 | 17.8 | 23   | 28.5 |
| 65        | 5.4        | 8.6  | 11   | 14   | 17.5 | 22   | 27.5 |
| 70        | 5.2        | 8    | 10.8 | 13.8 | 17.3 | 21.5 | 27   |