

# Product datasheet

Specifications



## Circuit breaker ComPacT NSX100N, 50kA at 415VAC, MicroLogic 4.2 Vigi trip unit 100A, 4 poles 4d

C10N44V100

⚠ Discontinued on: 1 Dec 2024

⚠ To be discontinued

### Main

|                                |   |
|--------------------------------|---|
| Range                          | ComPacT   |
| Product name                   | ComPacT NSX   |
| Device short name              | NSX100N   |
| Product or component type      | Earth leakage circuit breaker   |
| Device application             | Distribution  |
| Poles description              | 4P  |
| Protected poles description    | 4D<br>3D + N/2<br>3D  |
| Neutral position               | Left  |
| [In] rated current             | 100 A at 40 °C  |
| [Ue] rated operational voltage | 440 V AC 50/60 Hz   |
| Network type                   | AC  |
| Network frequency              | 50/60 Hz  |
| Suitability for isolation      | Yes conforming to EN/IEC 60947-2  |
| Utilisation category           | Category A  |
| Breaking capacity              | 90 kA Icu at 220/240 V AC 50/60 Hz conforming to IEC 60947-2<br>50 kA Icu at 380/415 V AC 50/60 Hz conforming to IEC 60947-2<br>50 kA Icu at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>36 kA Icu at 500 V AC 50/60 Hz conforming to IEC 60947-2<br>35 kA Icu at 525 V AC 50/60 Hz conforming to IEC 60947-2<br>10 kA Icu at 660/690 V AC 50/60 Hz conforming to IEC 60947-2<br>85 kA Icu at 240 V AC 50/60 Hz conforming to UL 60947-4-1<br>50 kA Icu at 480 V AC 50/60 Hz conforming to UL 60947-4-1<br>10 kA Icu at 600 V AC 50/60 Hz conforming to UL 60947-4-1 |
| Breaking capacity code         | N 50 kA 415 V AC  |
| Trip unit name                 | MicroLogic 4.2  |
| Trip unit technology           | Electronic  |
| Trip unit protection functions | LSolR   |
| Control type                   | Toggle  |
| Circuit breaker mounting mode  | Fixed   |

### Complementary

|  |                   |
|--|-------------------|
| [Ui] rated insulation voltage          | 500 V AC 50/60 Hz |
| [Uimp] rated impulse withstand voltage | 8 kV              |

Excluding VAT, FCA Jabal Ali & are subject to change – check with your local distributor.

|  |  |
|--|--|
| <b>[Ics] rated service breaking capacity</b>                       | 90 kA at 220/240 V AC 50/60 Hz conforming to IEC 60947-2<br>50 kA at 380/415 V AC 50/60 Hz conforming to IEC 60947-2<br>50 kA at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>36 kA at 500 V AC 50/60 Hz conforming to IEC 60947-2<br>35 kA at 525 V AC 50/60 Hz conforming to IEC 60947-2<br>10 kA at 660/690 V AC 50/60 Hz conforming to IEC 60947-2 |
| <b>Mechanical durability</b>                                       | 50000 cycles   |
| <b>Electrical durability</b>                                       | 50000 cycles at 440 V In/2<br>30000 cycles at 440 V In<br>20000 cycles at 690 V In/2<br>10000 cycles at 690 V In   |
| <b>Power dissipation per pole</b>                                  | 5.8 W N<br>5.8 W L1 and L3<br>4.9 W L2   |
| <b>Mounting support</b>  | Backplate  |
| <b>Mounting position</b>   | Horizontal and vertical<br>Flat on the back  |
| <b>Upside connection</b>   | Front  |
| <b>Downside connection</b>   | Front  |
| <b>Connection pitch</b>  | 35 mm  |
| <b>Protection type</b>   | L : for overload protection (long time)<br>So : for short time short-circuit protection with fixed delay<br>I : for instantaneous short-circuit protection<br>R : for earth-leakage protection   |
| <b>Trip unit rating</b>  | 100 A at 40 °C   |
| <b>Long-time pick-up adjustment type Ir (thermal protection)</b>   | Adjustable 9 settings  |
| <b>[Ir] long-time protection pick-up adjustment range</b>          | 40...100 A   |
| <b>Long-time protection delay adjustment type tr</b>               | Fixed  |
| <b>[tr] long-time delay adjustment range</b>                       | 400 s at 1.5 x Ir<br>16 s at 6 x Ir<br>11 s at 7.2 x Ir  |
| <b>Neutral protection setting</b>                                  | 0.5 x Ir (3D + N/2)<br>1 x Ir (4D)<br>No protection (3D)   |
| <b>Thermal memory</b>  | 20 minutes before and after tripping   |
| <b>Short-time protection pick-up adjustment type Isd</b>           | Adjustable   |
| <b>[Isd] Short-time protection pick-up adjustment range</b>        | 1.5...10 x Ir  |
| <b>Short-time protection delay adjustment type tsd</b>             | Fixed  |
| <b>Instantaneous protection pick-up adjustment type Ii</b>         | Fixed  |
| <b>[Ii] instantaneous protection pick-up adjustment range</b>      | 1500 A   |
| <b>Earth-leakage protection</b>                                    | Integrated   |
| <b>Earth-leakage protection class</b>                              | Class A  |
| <b>Earth-leakage protection sensitivity adjustment type IΔn</b>    | Adjustable   |
| <b>[IΔn] earth-leakage protection sensitivity adjustment range</b> | 30 mA<br>100 mA<br>300 mA<br>500 mA<br>1 A<br>3 A<br>5 A   |
| <b>Operating mode</b>  | OFF using the IΔn rotary switch  |

|  |   |
|--|---|
| Earth-leakage protection time delay adjustment type $\Delta t$ | Adjustable  |
| [ $\Delta t$ ] residual earth-leakage time delay adjustment    | 0 ms<br>60 ms<br>150 ms<br>500 ms<br>1 s  |
| Zone selective interlocking ZSI                                | Without   |
| Number of slots  | 5 slot(s)   |
| Local signalling   | Flashing LED (green) for ready to operate<br>LED 105 % I <sub>r</sub> (red) for overload<br>LED 90 % I <sub>r</sub> (orange) for overload |
| Width (W)  | 140 mm  |
| Height (H)   | 161 mm  |
| Depth (D)  | 86 mm   |
| Net weight   | 2.4 kg  |

## Environment

|                                       |  |
|---------------------------------------|--|
| Standards                             | EN/IEC 60947-2   |
| Overvoltage category                  | IV   |
| Electrical shock protection class     | Class II on front face                                       |
| Pollution degree                      | 3 conforming to IEC 60664-1                                  |
| IP degree of protection               | IP40 conforming to IEC 60529                                 |
| IK degree of protection               | IK07 conforming to IEC 62262                                 |
| Ambient air temperature for operation | -25...70 °C  |
| Ambient air temperature for storage   | -50...85 °C  |
| Relative humidity                     | 0...95 %   |
| Operating altitude                    | 0...2000 m without derating<br>2000 m...5000 m with derating |

## Packing Units

|                              |           |
|------------------------------|-----------|
| Unit Type of Package 1       | PCE       |
| Number of Units in Package 1 | 1         |
| Package 1 Height             | 14.000 cm |
| Package 1 Width              | 14.500 cm |
| Package 1 Length             | 19.000 cm |
| Package 1 Weight             | 2.529 kg  |
| Unit Type of Package 2       | S03       |
| Number of Units in Package 2 | 4         |
| Package 2 Height             | 30.000 cm |
| Package 2 Width              | 30.000 cm |
| Package 2 Length             | 40.000 cm |
| Package 2 Weight             | 10.486 kg |

## Contractual warranty





## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)



### Environmental footprint

|  |   |
|--|---|
| Total lifecycle Carbon footprint                       | 115 kg CO2 eq.                                |
| Carbon footprint of the manufacturing phase [A1 to A3] | 21 kg CO2 eq.                                 |
| Carbon footprint of the distribution phase [A4]        | 0.3 kg CO2 eq.                                |
| Carbon footprint of the installation phase [A5]        | 0.2 kg CO2 eq.                                |
| Carbon footprint of the use phase [B2, B3, B4, B6]     | 89 kg CO2 eq.                                 |
| Carbon footprint of the end-of-life phase [C1 to C4]   | 4 kg CO2 eq.                                  |
| Environmental Disclosure                               | <a href="#">Product Environmental Profile</a> |

### Use Better



### Materials and Substances

|  |   |
|--|---|
| Packaging made with recycled cardboard | Yes                                       |
| Packaging without single use plastic   | Yes                                       |
| SCIP Number                            | 1cc6e020-e2e4-4d89-9339-61a460082111      |
| Halogen-free status                    | Product contains halogen above thresholds |
| PVC free                               | Yes                                       |
| Silicone-free                          | No  |

### Use Longer



### Lifetime extension

|              |    |
|--------------|----|
| Repair       | No |
| Updatability | No |

### Use Again



### Repack and remanufacture

|                                 |   |
|---------------------------------|---|
| Recyclability potential, in %   | 55  |
| End of life manual availability | <a href="#">End of Life Information</a>   |
| Take-back                       | No  |
| WEEE Label                      |  The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

Offer Marketing Illustration

Product benefits / Features

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Offer Marketing Illustration

Product benefits / Features

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**ComPacT NSX**  
Range Accessories

Wireless auxiliary contact

Short terminal shield

Interphase barriers

Long terminal shield

Rotary handles

Standard auxiliary contact

MN undervoltage release

MX shunt release

Standard motor mechanism module

The image displays a collection of accessories for the ComPacT NSX circuit breaker range. At the top left, a green circular graphic partially overlaps a photograph of the main circuit breaker unit. Below this, the title 'ComPacT NSX Range Accessories' is presented in a bold, sans-serif font. The accessories are arranged in a 3x3 grid, each accompanied by a small product photograph and a descriptive label. The labels are: 'Wireless auxiliary contact' (a small green and white component), 'Short terminal shield' (a black rectangular shield), 'Interphase barriers' (a black vertical barrier), 'Long terminal shield' (a larger black rectangular shield), 'Rotary handles' (two black rotary handles with green accents), 'Standard auxiliary contact' (a white rectangular component with two terminals), 'MN undervoltage release' (a black component with a white label), 'MX shunt release' (a yellow and black component with a white label), and 'Standard motor mechanism module' (a black rectangular module with a handle).

Offer Marketing Illustration

Product benefits / Features

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## ComPacT NSX Moulded Case Circuit Breaker



### Protection begins with prevention

Designed to prevent an electrical fire through integrated earth leakage protection with preventive maintenance thanks to its Everlink power connections.



### Maximize power availability

By providing corrective, preventive, and predictive maintenance for asset management thanks to our advanced MicroLogic trip units.



### Connectivity

Designed to connect to EcoStruxure Power, an IoT-connected architecture for improving every aspect of your power distribution system.



Offer Marketing Illustration

Product benefits / Features

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### ComPacT NSX

#### Technical Benefits

- Nominal current: 16 to 630 A and 9 breaking capacities for the 2 sizes of circuit breakers
- 1, 2, 3, and 4 pole versions available
- Large range of electronic and thermal-magnetic protections
- Plug and ready wiring system and communicating accessories
- Integrated earth leakage protection via MicroLogic Vigi (earth leakage circuit breaker - ELCB)
- Advanced trip unit with integrated power metering: I, U, P, E, THD, f, CosPhi

Technical Illustration

Assembly's dimensions

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