

# C16N44V160

Circuit breaker, ComPacT NSX160N,  
50kA/415VAC, 4 poles, MicroLogic Vigi 4.2 trip  
unit 160A



## Main

|                                                      |                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                                                | ComPacT new generation                                                                                                                                                                                                                                                                                                                                                           |
| Product name                                         | ComPacT NSX new generation                                                                                                                                                                                                                                                                                                                                                       |
| Device short name                                    | NSX160N                                                                                                                                                                                                                                                                                                                                                                          |
| 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                                   | 160 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                                                                                                                                                                                                                                                                                                                                                                       |
| [Icu] rated ultimate short-circuit 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 |
| Performance level                                    | 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                                                                                                                                                                                                                                                                                                                                                                            |

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## Complementary

|                                                             |                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [Ui] rated insulation voltage                               | 500 V AC 50/60 Hz                                                                                                                                                                                                                                                                                                                                        |
| [Uimp] rated impulse withstand voltage                      | 8 kV                                                                                                                                                                                                                                                                                                                                                     |
| [Ics] rated service short-circuit breaking capacity         | 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 |
| Mechanical durability                                       | 40000 cycles                                                                                                                                                                                                                                                                                                                                             |
| Electrical durability                                       | 40000 Cycles at 440 V In/2<br>20000 Cycles at 440 V In<br>15000 Cycles at 690 V In/2<br>7500 cycles at 690 V In                                                                                                                                                                                                                                          |
| Power dissipation per pole                                  | 12.29 W N<br>12.29 W L1 and L3<br>9.98 W L2                                                                                                                                                                                                                                                                                                              |
| Mounting support                                            | Backplate                                                                                                                                                                                                                                                                                                                                                |
| Mounting position                                           | Horizontal and vertical<br>Flat on the back                                                                                                                                                                                                                                                                                                              |
| Upside connection                                           | Front                                                                                                                                                                                                                                                                                                                                                    |
| Downside connection                                         | Front                                                                                                                                                                                                                                                                                                                                                    |
| Connection pitch                                            | 35 mm                                                                                                                                                                                                                                                                                                                                                    |
| Protection type                                             | 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                                                                                                                                                           |
| Trip unit rating                                            | 160 A at 40 °C                                                                                                                                                                                                                                                                                                                                           |
| Long-time pick-up adjustment type Ir (thermal protection)   | Adjustable 9 settings                                                                                                                                                                                                                                                                                                                                    |
| [Ir] long-time protection pick-up adjustment range          | 63...160 A                                                                                                                                                                                                                                                                                                                                               |
| Long-time protection delay adjustment type tr               | Fixed                                                                                                                                                                                                                                                                                                                                                    |
| [tr] long-time protection delay adjustment range            | 400 S at 1.5 x Ir<br>16 S at 6 x Ir<br>11 s at 7.2 x Ir                                                                                                                                                                                                                                                                                                  |
| Neutral protection settings                                 | 0.5 x Ir (3D + N/2)<br>1 x Ir (4D)<br>No protection (3D)                                                                                                                                                                                                                                                                                                 |
| Thermal memory                                              | 20 minutes before and after tripping                                                                                                                                                                                                                                                                                                                     |
| Short-time protection pick-up adjustment type Isd           | Adjustable                                                                                                                                                                                                                                                                                                                                               |
| [Isd] Short-time protection pick-up adjustment range        | 1.5...10 x Ir                                                                                                                                                                                                                                                                                                                                            |
| Short-time protection delay adjustment type tsd             | Fixed                                                                                                                                                                                                                                                                                                                                                    |
| Instantaneous protection pick-up adjustment type Ii         | Fixed                                                                                                                                                                                                                                                                                                                                                    |
| [Ii] instantaneous protection pick-up adjustment range      | 2400 A                                                                                                                                                                                                                                                                                                                                                   |
| Earth-leakage protection                                    | Integrated                                                                                                                                                                                                                                                                                                                                               |
| Earth-leakage protection class                              | Class A                                                                                                                                                                                                                                                                                                                                                  |
| Earth-leakage protection sensitivity adjustment type IΔn    | Adjustable                                                                                                                                                                                                                                                                                                                                               |
| [IΔn] earth-leakage protection sensitivity adjustment range | 30 MA<br>100 MA<br>300 MA<br>500 MA<br>1 A<br>3 A<br>5 A                                                                                                                                                                                                                                                                                                 |
| Earth-leakage protection specific mode                      | OFF using the IΔn rotary switch                                                                                                                                                                                                                                                                                                                          |
| Earth-leakage protection time delay adjustment type Δt      | Adjustable                                                                                                                                                                                                                                                                                                                                               |
| [Δt] Earth-leakage protection time delay adjustment range   | 0 Ms<br>60 Ms<br>150 Ms<br>500 Ms<br>1 s                                                                                                                                                                                                                                                                                                                 |

|                                            |                                                                                                                   |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Zone selective interlocking ZSI            | Without                                                                                                           |
| Number of slots for electrical auxiliaries | 5 slot(s)                                                                                                         |
| Local signalling                           | Flashing LED (green) for ready to operate<br>LED 105 % Ir (red) for overload<br>LED 90 % Ir (orange) for overload |
| Width (W)                                  | 140 mm                                                                                                            |
| Height (H)                                 | 161 mm                                                                                                            |
| Depth (D)                                  | 86 mm                                                                                                             |
| Net weight                                 | 2.6 kg                                                                                                            |

## Environment

|                                       |                                                              |
|---------------------------------------|--------------------------------------------------------------|
| Standards                             | EN/IEC 60947                                                 |
| Product certifications                | CCC[RETURN]EAC[RETURN]Marine                                 |
| Overvoltage category                  | Class II                                                     |
| Electrical shock protection class     | Class II                                                     |
| 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             | 14.0 cm   |
| Package 1 Width              | 15.0 cm   |
| Package 1 Length             | 19.3 cm   |
| Package 1 Weight             | 2.594 kg  |
| Unit Type of Package 2       | S03       |
| Number of Units in Package 2 | 4         |
| Package 2 Height             | 30.0 cm   |
| Package 2 Width              | 30.0 cm   |
| Package 2 Length             | 40.0 cm   |
| Package 2 Weight             | 10.756 kg |

## Offer Sustainability

|                            |                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                             |
| REACH Regulation           |  <a href="#">REACH Declaration</a>             |
| EU RoHS Directive          | Compliant with Exemptions                                                                                                         |
| Mercury free               | Yes                                                                                                                               |
| China RoHS Regulation      |  <a href="#">China RoHS Declaration</a>        |
| RoHS exemption information |  <a href="#">Yes</a>                           |
| Environmental Disclosure   |  <a href="#">Product Environmental Profile</a> |
| Circularity Profile        |  <a href="#">End Of Life Information</a>       |