

# C16N47E160

Circuit breaker, ComPacT NSX160N,  
50kA/415VAC, 4 poles, MicroLogic Vigi 7.2E  
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 + OSN<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 7.2 E                                                                                                                                                                                                                                                                                                                                                                 |
| Trip unit technology                                 | Electronic                                                                                                                                                                                                                                                                                                                                                                       |
| Trip unit protection functions                       | LSIR                                                                                                                                                                                                                                                                                                                                                                             |
| 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                                  | 12.3 W N<br>12.3 W L1 and L3<br>10 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>S : for short time short-circuit protection<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               | Adjustable                                                                                                                                                                                                                                                                                                                                               |
| [tr] long-time protection delay adjustment range            | 15...400 S at 1.5 x Ir<br>0.5...16 S at 6 x Ir<br>0.35...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             | Adjustable                                                                                                                                                                                                                                                                                                                                               |
| [tsd] Short-time protection delay adjustment range          | 0...0.4 S I <sup>2</sup> t=off<br>0.1...0.4 s I <sup>2</sup> t=on                                                                                                                                                                                                                                                                                        |
| Instantaneous protection pick-up adjustment type Ii         | Adjustable                                                                                                                                                                                                                                                                                                                                               |
| [Ii] instantaneous protection pick-up adjustment range      | 1.5...15 x In                                                                                                                                                                                                                                                                                                                                            |
| 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                                                                                                              |
| Display type                                              | LCD display                                                                                                                                                                                                                    |
| Type of measurement                                       | Energy meter                                                                                                                                                                                                                   |
| Communication of data                                     | Time-stamped histories and event tables<br>Maintenance indicators<br>Instantaneous and demand values<br>Maximeters/Minimeters<br>Protection and alarm settings<br>Power quality<br>Energy metering<br>Demand current and power |
| Width (W)                                                 | 140 mm                                                                                                                                                                                                                         |
| Height (H)                                                | 161 mm                                                                                                                                                                                                                         |
| Depth (D)                                                 | 86 mm                                                                                                                                                                                                                          |
| Net weight                                                | 2.6 kg                                                                                                                                                                                                                         |

## Environment

|                                       |                                                              |
|---------------------------------------|--------------------------------------------------------------|
| Standards                             | EN/IEC 60947-2                                               |
| 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   | -40...85 °C                                                  |
| Relative humidity                     | 0...95 %                                                     |
| Operating altitude                    | 0...2000 m without derating<br>2000 m...5000 m with derating |

## Offer Sustainability

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