

# Service Entrance Suppressor(F), 320 kA



The nVent ERICO SES320 F Series of Surge Protective Devices (SPD) is an enhanced version of our nVent ERICO SES320B Series. The SES320 F Surge-Filter is robust and features a 320 kA per phase surge rating, increasing both survivability and overall life cycle. With the addition of a filter, bothersome high frequency transients on the power distribution system are attenuated, therefore protecting sensitive equipment. The F Series is a cUL 1449 Listed SPD for Type 2 locations. Typical applications for the nVent ERICO SES320 F Series service entrances, distribution, branch panels, MCC, lighting panels, HVAC, A/V systems, IT equipment, and more.

## CERTIFICATIONS



## FEATURES

Compact design can be directly mounted to panel or installed in a small space

Front-facing design eases installation and performance monitoring

320 kA 8/20  $\mu$ s maximum surge rating per phase

Up to 60 dB attenuation (10 kHz to 100 MHz)

Ground reference monitoring triggers an alarm when N-PE mode exceeds 20 volts

Optional Flush Mounting Plate

10-year limited warranty

## SPECIFICATIONS

| Catalog Number              | SES320F12 0240D | SES320F12 0V | SES320F20 8Y | SES320F24 0D | SES320F24 0V | SES320F48 0D | SES320F48 0Y | SES320F12 0240SP |
|-----------------------------|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------|
| Nominal System Voltage (Un) | 120/240 V       | 120 V        | 120/208 V    | 240 V        | 240 V        | 480 V        | 277/480 V    | 120/240 V        |

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|------------------------------------------|---------------------|---------------------|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|
| Max Continuous Operating Voltage (Uc)    | 180/275 V           | 180 V               | 150/300 V           | 275 V                 | 350 V               | 550 V               | 350/700 V           | 180/360 V           |
| Distribution System                      | 3PhΔ 4W+G           | 1Ph 2W+G            | 3Ph Y 4W+G          | 3Ph Corner Gnd Δ 2W+G | 1Ph 2W+G            | 3PhΔ 3W+G           | 3Ph Y 4W+G          | 1Ph 3W+G            |
| Filtering                                | -40 dB @ 100 kHz    | -40 dB @ 100 kHz    | -40 dB @ 100 kHz    | -40 dB @ 100 kHz      | -40 dB @ 100 kHz    | -40 dB @ 100 kHz    | -40 dB @ 100 kHz    | -40 dB @ 100 kHz    |
| Frequency                                | 0 - 600 Hz          | 0 - 600 Hz          | 0 - 600 Hz          | 0 - 600 Hz            | 0 - 600 Hz          | 0 - 600 Hz          | 0 - 600 Hz          | 0 - 600 Hz          |
| Short Circuit Current Rating (SCCR)      | 200kA               | 200kA               | 200kA               | 200kA                 | 200kA               | 200kA               | 200kA               | 200kA               |
| Voltage Protection Rating (VPR), L-G     | 800V                | 800V                | 700V                | 900V                  | 1200V               | 1800V               | 1200V               | 800V                |
| Voltage Protection Rating (VPR), L-L     | 1200V<br>1500V      |                     | 1000V               | 1200V                 |                     | 1800V               | 2000V               | 1200V               |
| Voltage Protection Rating (VPR), L-N     | 800V<br>1000V       | 700V                | 600V                |                       | 1200V               |                     | 1200V               | 700V                |
| Voltage Protection Rating (VPR), N-G     | 700V                | 600V                | 700V                |                       | 1000V               |                     | 1000V               | 600V                |
| Nominal Discharge Current (In), Per Mode | 20kA 8/20 μs        | 20kA 8/20 μs        | 20kA 8/20 μs        | 20kA 8/20 μs          | 20kA 8/20 μs        | 20kA 8/20 μs        | 20kA 8/20 μs        | 20kA 8/20 μs        |
| Max Discharge Current (Imax), Per Phase  | 320kA 8/20 μs       | 320kA 8/20 μs       | 320kA 8/20 μs       | 320kA 8/20 μs         | 320kA 8/20 μs       | 320kA 8/20 μs       | 320kA 8/20 μs       | 320kA 8/20 μs       |
| Protection Modes                         | All modes protected | All modes protected | All modes protected | All modes protected   | All modes protected | All modes protected | All modes protected | All modes protected |

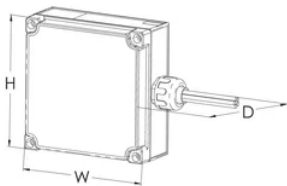
| Catalog Number                    | SES320F12 0240D                                                                         | SES320F12 0V                                                                            | SES320F20 8Y                                                                            | SES320F24 0D                                                                            | SES320F24 0V                                                                            | SES320F48 0D                                                                            | SES320F48 0Y                                                                            | SES320F12 0240SP                                                                        |
|-----------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Status Indication                 | 1 green LED per line<br>Dual color status LED, flashing red for faults<br>Audible alarm | 1 green LED per line<br>Dual color status LED, flashing red for faults<br>Audible alarm | 1 green LED per line<br>Dual color status LED, flashing red for faults<br>Audible alarm | 1 green LED per line<br>Dual color status LED, flashing red for faults<br>Audible alarm | 1 green LED per line<br>Dual color status LED, flashing red for faults<br>Audible alarm | 1 green LED per line<br>Dual color status LED, flashing red for faults<br>Audible alarm | 1 green LED per line<br>Dual color status LED, flashing red for faults<br>Audible alarm | 1 green LED per line<br>Dual color status LED, flashing red for faults<br>Audible alarm |
| Remote Contact Switching Capacity | 2 A @ 240 V                                                                             | 2 A @ 240 V                                                                             | 2 A @ 240 V                                                                             | 2 A @ 240 V                                                                             | 2 A @ 240 V                                                                             | 2 A @ 240 V                                                                             | 2 A @ 240 V                                                                             | 2 A @ 240 V                                                                             |
| Remote Contacts                   | Yes                                                                                     | Yes                                                                                     | Yes                                                                                     | Yes                                                                                     | Yes                                                                                     | Yes                                                                                     | Yes                                                                                     | Yes                                                                                     |
| Lead Length                       | 914.4mm                                                                                 | 914.4mm                                                                                 | 914.4mm                                                                                 | 914.4mm                                                                                 | 914.4mm                                                                                 | 914.4mm                                                                                 | 914.4mm                                                                                 | 914.4mm                                                                                 |
| Temperature                       | -40 to 85 °C                                                                            | -40 to 85 °C                                                                            | -40 to 85 °C                                                                            | -40 to 85 °C                                                                            | -40 to 85 °C                                                                            | -40 to 85 °C                                                                            | -40 to 85 °C                                                                            | -40 to 85 °C                                                                            |
| Enclosure Material                | Polycarbonate                                                                           | Polycarbonate                                                                           | Polycarbonate                                                                           | Polycarbonate                                                                           | Polycarbonate                                                                           | Polycarbonate                                                                           | Polycarbonate                                                                           | Polycarbonate                                                                           |
| Enclosure Rating                  | NEMA®-4X<br>UL® 50E<br>Type 4                                                           | NEMA®-4X<br>UL® 50E<br>Type 4                                                           | NEMA®-4X<br>UL® 50E<br>Type 4                                                           | NEMA®-4X<br>UL® 50E<br>Type 4                                                           | NEMA®-4X<br>UL® 50E<br>Type 4                                                           | NEMA®-4X<br>UL® 50E<br>Type 4                                                           | NEMA®-4X<br>UL® 50E<br>Type 4                                                           | NEMA®-4X<br>UL® 50E<br>Type 4                                                           |
| Mounting                          | 3/4" straight nipple                                                                    | 3/4" straight nipple                                                                    | 3/4" straight nipple                                                                    | 3/4" straight nipple                                                                    | 3/4" straight nipple                                                                    | 3/4" straight nipple                                                                    | 3/4" straight nipple                                                                    | 3/4" straight nipple                                                                    |
| Unit Weight                       | 0.63 kg                                                                                 | 0.63 kg                                                                                 | 0.63 kg                                                                                 | 0.63 kg                                                                                 | 0.63 kg                                                                                 | 0.63 kg                                                                                 | 0.63 kg                                                                                 | 0.63 kg                                                                                 |
| Certification Details             | CSA C22.2 No. 269.2<br>UL® 1283 Edition 7<br>UL® 1449 Edition 5<br>Type 2, 20 kA Mode   | CSA C22.2 No. 269.2<br>UL® 1283 Edition 7<br>UL® 1449 Edition 5<br>Type 2, 20 kA Mode   | CSA C22.2 No. 269.2<br>UL® 1283 Edition 7<br>UL® 1449 Edition 5<br>Type 2, 20 kA Mode   | CSA C22.2 No. 269.2<br>UL® 1283 Edition 7<br>UL® 1449 Edition 5<br>Type 2, 20 kA Mode   | CSA C22.2 No. 269.2<br>UL® 1283 Edition 7<br>UL® 1449 Edition 5<br>Type 2, 20 kA Mode   | CSA C22.2 No. 269.2<br>UL® 1283 Edition 7<br>UL® 1449 Edition 5<br>Type 2, 20 kA Mode   | CSA C22.2 No. 269.2<br>UL® 1283 Edition 7<br>UL® 1449 Edition 5<br>Type 2, 20 kA Mode   | CSA C22.2 No. 269.2<br>UL® 1283 Edition 7<br>UL® 1449 Edition 5<br>Type 2, 20 kA Mode   |

| Catalog Number | SES320F12 0240D                                                                                                                                               | SES320F12 0V                                                                                                                                                  | SES320F20 8Y                                                                                                                                                  | SES320F24 0D                                                                                                                                                  | SES320F24 0V                                                                                                                                                  | SES320F48 0D                                                                                                                                                  | SES320F48 0Y                                                                                                                                                  | SES320F12 0240SP                                                                                                                                              |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Complies With  | ANSI®/IEEE® C62.41.2-2002 Cat A, Cat B, Cat C<br>ANSI®/IEEE® C62.41.1-2002 Cat A, Cat B, Cat C<br>ANSI®/IEEE® C62.45-2002 Cat A, Cat B, Cat C<br>Mil-Std 220A | ANSI®/IEEE® C62.41.2-2002 Cat A, Cat B, Cat C<br>ANSI®/IEEE® C62.41.1-2002 Cat A, Cat B, Cat C<br>ANSI®/IEEE® C62.45-2002 Cat A, Cat B, Cat C<br>Mil-Std 220A | ANSI®/IEEE® C62.41.2-2002 Cat A, Cat B, Cat C<br>ANSI®/IEEE® C62.41.1-2002 Cat A, Cat B, Cat C<br>ANSI®/IEEE® C62.45-2002 Cat A, Cat B, Cat C<br>Mil-Std 220A | ANSI®/IEEE® C62.41.2-2002 Cat A, Cat B, Cat C<br>ANSI®/IEEE® C62.41.1-2002 Cat A, Cat B, Cat C<br>ANSI®/IEEE® C62.45-2002 Cat A, Cat B, Cat C<br>Mil-Std 220A | ANSI®/IEEE® C62.41.2-2002 Cat A, Cat B, Cat C<br>ANSI®/IEEE® C62.41.1-2002 Cat A, Cat B, Cat C<br>ANSI®/IEEE® C62.45-2002 Cat A, Cat B, Cat C<br>Mil-Std 220A | ANSI®/IEEE® C62.41.2-2002 Cat A, Cat B, Cat C<br>ANSI®/IEEE® C62.41.1-2002 Cat A, Cat B, Cat C<br>ANSI®/IEEE® C62.45-2002 Cat A, Cat B, Cat C<br>Mil-Std 220A | ANSI®/IEEE® C62.41.2-2002 Cat A, Cat B, Cat C<br>ANSI®/IEEE® C62.41.1-2002 Cat A, Cat B, Cat C<br>ANSI®/IEEE® C62.45-2002 Cat A, Cat B, Cat C<br>Mil-Std 220A | ANSI®/IEEE® C62.41.2-2002 Cat A, Cat B, Cat C<br>ANSI®/IEEE® C62.41.1-2002 Cat A, Cat B, Cat C<br>ANSI®/IEEE® C62.45-2002 Cat A, Cat B, Cat C<br>Mil-Std 220A |
| Depth (D)      | 76mm                                                                                                                                                          | 76mm                                                                                                                                                          | 76mm                                                                                                                                                          | 76mm                                                                                                                                                          | 76mm                                                                                                                                                          | 76mm                                                                                                                                                          | 76mm                                                                                                                                                          | 76mm                                                                                                                                                          |
| Height (H)     | 175 mm                                                                                                                                                        | 175 mm                                                                                                                                                        | 175 mm                                                                                                                                                        | 175 mm                                                                                                                                                        | 175 mm                                                                                                                                                        | 175 mm                                                                                                                                                        | 175 mm                                                                                                                                                        | 175 mm                                                                                                                                                        |
| Width (W)      | 213 mm                                                                                                                                                        | 213 mm                                                                                                                                                        | 213 mm                                                                                                                                                        | 213 mm                                                                                                                                                        | 213 mm                                                                                                                                                        | 213 mm                                                                                                                                                        | 213 mm                                                                                                                                                        | 213 mm                                                                                                                                                        |

## ADDITIONAL PRODUCT DETAILS

Optional Flush Plate available: SES320FP

## DIAGRAMS



## WARNING

nVent products shall be installed and used only as indicated in nVent's product instruction sheets and training materials. Instruction sheets are available at [www.nvent.com](http://www.nvent.com) and from your nVent customer service representative. Improper installation, misuse, misapplication or other failure to completely follow nVent's instructions and warnings may cause product malfunction, property damage, serious bodily injury and death and/or void your warranty.

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