

# Service Entrance Suppressor(B), 320 kA



The nVent ERICO SES320 B Series of Surge Protective Devices (SPD) provides economical protection against damaging transients and surge currents. The B Series is a cUL 1449 listed SPD for Type 1 and Type 2 locations allowing for installation either on the line or load of service panels without requiring circuit breakers. With a 320 kA per phase surge rating, the SES320 B is well suited for category C locations. Typical applications for the nVent ERICO SES320 B Series include service entrances, distribution, branch panels, MCC, lighting panels, HVAC, and more. Featuring a NEMA 4X enclosure rating, the B series is also appropriate for use in outdoor applications.

## CERTIFICATIONS



## FEATURES

- 320 kA 8/20  $\mu$ s maximum surge rating per phase
- Excellent clamping and low UL voltage protection ratings
- Features relay alarming for power/phase loss and status of SPD health
- Compact design can be directly mounted to panel or installed in a small space
- Ground reference monitoring triggers an alarm when N-PE mode exceeds 20 volts
- Optional Flush Mounting Plate
- 10-year limited warranty

## SPECIFICATIONS

| Catalog Number              | SES320B1<br>20240D | SES320B1<br>20V | SES320B2<br>08Y | SES320B2<br>40D | SES320B2<br>40V | SES320B4<br>80D | SES320B4<br>80Y | SES320B1<br>20240SP | SES320B6<br>00Y |
|-----------------------------|--------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------------|-----------------|
| Nominal System Voltage (Un) | 120/240 V          | 120 V           | 120/208 V       | 240 V           | 240 V           | 480 V           | 277/480 V       | 120/240 V           | 347/600 V       |

| Catalog Number                           | SES320B1<br>20240D  | SES320B1<br>20V     | SES320B2<br>08Y     | SES320B2<br>40D                                | SES320B2<br>40V     | SES320B4<br>80D     | SES320B4<br>80Y     | SES320B1<br>20240SP | SES320B6<br>00Y     |
|------------------------------------------|---------------------|---------------------|---------------------|------------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 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           | 440/880 V           |
| Distribution System                      | 3PhΔ<br>4W+G        | 1Ph 2W+G            | 3Ph Y<br>4W+G       | 3PhΔ<br>3W+G<br>3Ph<br>Corner<br>Gnd Δ<br>2W+G | 1Ph 2W+G            | 3PhΔ<br>3W+G        | 3Ph Y<br>4W+G       | 1Ph 3W+G            | 3Ph Y<br>4W+G       |
| 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          | 0 - 600 Hz          |
| Short Circuit Current Rating (SCCR)      | 200kA               | 200kA               | 200kA               | 200kA                                          | 200kA               | 200kA               | 200kA               | 200kA               | 200kA               |
| Voltage Protection Rating (VPR), L-G     | 800V                | 800V                | 700V                | 900V                                           | 1200V               | 1800V               | 1200V               | 800V                | 1500V               |
| Voltage Protection Rating (VPR), L-L     | 1200V<br>1500V      |                     | 1000V               | 1200V                                          |                     | 1800V               | 2000V               | 1200V               | 2500V               |
| Voltage Protection Rating (VPR), L-N     | 800V<br>1000V       | 700V                | 600V                |                                                | 1200V               |                     | 1200V               | 700V                | 1500V               |
| Voltage Protection Rating (VPR), N-G     | 700V                | 600V                | 700V                |                                                | 1000V               |                     | 1000V               | 600V                | 1500V               |
| Nominal Discharge Current (In), Per Mode | 20kA 8/20<br>μs     | 20kA 8/20<br>μs     | 20kA 8/20<br>μs     | 20kA 8/20<br>μs                                | 20kA 8/20<br>μs     | 20kA 8/20<br>μs     | 20kA 8/20<br>μs     | 20kA 8/20<br>μs     | 20kA 8/20<br>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 | All modes protected |

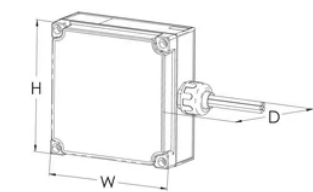
| Catalog Number                          | SES320B1 20240D                                                                         | SES320B1 20V                                                                            | SES320B2 08Y                                                                            | SES320B2 40D                                                                            | SES320B2 40V                                                                            | SES320B4 80D                                                                            | SES320B4 80Y                                                                            | SES320B1 20240SP                                                                        | SES320B6 00Y                                                                            |
|-----------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 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 | 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                                                                             | 2.0 A @ 240 V                                                                           |
| Remote Contacts                         | Yes                                                                                     | Yes                                                                                     | Yes                                                                                     | Yes                                                                                     | Yes                                                                                     | Yes                                                                                     | Yes                                                                                     | Yes                                                                                     | Yes                                                                                     |
| Max Discharge Current (Imax), Per Phase | 320kA<br>8/20 µs                                                                        | 320kA<br>8/20 µs                                                                        | 320kA<br>8/20 µs                                                                        | 320kA<br>8/20 µs                                                                        | 320kA<br>8/20 µs                                                                        | 320kA<br>8/20 µs                                                                        | 320kA<br>8/20 µs                                                                        | 320kA<br>8/20 µs                                                                        |                                                                                         |
| Lead Length                             | 914.4mm                                                                                 | 914.4mm                                                                                 | 914.4mm                                                                                 | 914.4mm                                                                                 | 914.4mm                                                                                 | 914.4mm                                                                                 | 914.4mm                                                                                 | 914.4mm                                                                                 | 914.4                                                                                   |
| Lead Size                               |                                                                                         |                                                                                         |                                                                                         |                                                                                         |                                                                                         |                                                                                         |                                                                                         |                                                                                         | 6 mm <sup>2</sup><br>Min                                                                |
| 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                                                                            | -40 to 85 °C                                                                            |
| Enclosure Material                      | Polycarbonate                                                                           | 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                                                           | 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                                                                    | 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                                                                                 | 0.63 kg                                                                                 |

| Catalog Number        | SES320B1 20240D                                                                                                                            | SES320B1 20V                                                                                                                               | SES320B2 08Y                                                                                                                               | SES320B2 40D                                                                                                                               | SES320B2 40V                                                                                                                               | SES320B4 80D                                                                                                                               | SES320B4 80Y                                                                                                                               | SES320B1 20240SP                                                                                                                           | SES320B6 00Y                                                                                                                               |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Certification Details | CSA C22.2 No. 269.1 UL® 1449 Edition 5 Type 1/2, 20 kA Mode                                                                                | CSA C22.2 No. 269.1 UL® 1449 Edition 5 Type 1/2, 20 kA Mode                                                                                | CSA C22.2 No. 269.1 UL® 1449 Edition 5 Type 1/2, 20 kA Mode                                                                                | CSA C22.2 No. 269.1 UL® 1449 Edition 5 Type 1/2, 20 kA Mode                                                                                | CSA C22.2 No. 269.1 UL® 1449 Edition 5 Type 1/2, 20 kA Mode                                                                                | CSA C22.2 No. 269.1 UL® 1449 Edition 5 Type 1/2, 20 kA Mode                                                                                | CSA C22.2 No. 269.1 UL® 1449 Edition 5 Type 1/2, 20 kA Mode                                                                                | CSA C22.2 No. 269.1 UL® 1449 Edition 5 Type 1/2, 20 kA Mode                                                                                | CSA C22.2 No. 269.1 UL® 1449 Edition 5 Type 1/2, 20 kA Mode                                                                                |
| Complies With         | ANSI®/IEE® C62.41.2-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.41.1-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.45-2002 Cat A, Cat B, Cat C | ANSI®/IEE® C62.41.2-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.41.1-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.45-2002 Cat A, Cat B, Cat C | ANSI®/IEE® C62.41.2-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.41.1-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.45-2002 Cat A, Cat B, Cat C | ANSI®/IEE® C62.41.2-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.41.1-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.45-2002 Cat A, Cat B, Cat C | ANSI®/IEE® C62.41.2-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.41.1-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.45-2002 Cat A, Cat B, Cat C | ANSI®/IEE® C62.41.2-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.41.1-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.45-2002 Cat A, Cat B, Cat C | ANSI®/IEE® C62.41.2-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.41.1-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.45-2002 Cat A, Cat B, Cat C | ANSI®/IEE® C62.41.2-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.41.1-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.45-2002 Cat A, Cat B, Cat C | ANSI®/IEE® C62.41.2-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.41.1-2002 Cat A, Cat B, Cat C<br>ANSI®/IEE® C62.45-2002 Cat A, Cat B, Cat C |
| Depth (D)             | 76mm                                                                                                                                       | 76mm                                                                                                                                       | 76mm                                                                                                                                       | 76mm                                                                                                                                       | 76mm                                                                                                                                       | 76mm                                                                                                                                       | 76mm                                                                                                                                       | 76mm                                                                                                                                       | 75.95mm                                                                                                                                    |
| Height (H)            | 175 mm                                                                                                                                     | 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                                                                                                                                     | 212.85 mm                                                                                                                                  |
| Certifications        | cUL, UL                                                                                                                                    | cUL, UL                                                                                                                                    | UL, cUL                                                                                                                                    | cUL, UL                                                                                                                                    | UL, cUL                                                                                                                                    | cUL, UL                                                                                                                                    | UL, cUL                                                                                                                                    | UL, cUL                                                                                                                                    |                                                                                                                                            |

## 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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