

# Power Block



nVent ERIFLEX Power Blocks are the main DIN mounted output/input devices for connection between primary and secondary switchboard, or main input/output connection for machine or industrial equipment (such as inverter, air conditioning machines, etc.). The high short circuit rated large cross section blocks offer time savings and reliability in every panel configuration. The complete Power Blocks range offers multiple connection types with up to four cables, nVent ERIFLEX Flexibar Advanced, or IBSB Advanced power braids.

## CERTIFICATIONS



## FEATURES

Can be connected with round cross section cable or flat connection system like nVent ERIFLEX Flexibar Advanced or IBSB Advanced Insulated Braided Conductor

Compact power block with high short circuit current rating

Tinned copper or aluminum block allows for copper or aluminum conductor direct connections, or using ferrule

Screw retaining cover is hinged and removable

Design allows for visual inspection of conductor and confirmation of connection

Modular snap-together blocks for building multi-pole power blocks

Easily clips onto DIN rail or mounts to panel with screws

Voltage detection and measurement connection

95% fill ratio

RoHS compliant

Conforms to EN 45545 obtaining an HL3 classification for chapter R23 and HL2 classification for chapter R22

Halogen free plastic housing excluding the blue protection cover

## SPECIFICATIONS

**Finish:** Tinned

| Table 1/2      |                |                   |                                         |                         |                                   |                                   |
|----------------|----------------|-------------------|-----------------------------------------|-------------------------|-----------------------------------|-----------------------------------|
| Catalog Number | Article Number | Type              | Typical Application Current Rating, IEC | Material                | Line Side Max Conductor Size, IEC | Load Side Max Conductor Size, IEC |
| SB125AL        | 561161         | Cable-Cable       | 180 A                                   | Aluminum, Thermoplastic | 35 mm <sup>2</sup>                | 35 mm <sup>2</sup>                |
| SB80           | 561150         | Cable-Cable       | 100 A                                   | Copper, Thermoplastic   | 16 mm <sup>2</sup>                | 16 mm <sup>2</sup>                |
| SB80AL         | 561160         | Cable-Cable       | 100 A                                   | Aluminum, Thermoplastic | 16 mm <sup>2</sup>                | 16 mm <sup>2</sup>                |
| SB125          | 561158         | Cable-Cable       | 170 A                                   | Copper, Thermoplastic   | 35 mm <sup>2</sup>                | 35 mm <sup>2</sup>                |
| SB160AL        | 561162         | Cable-Cable       | 230 A                                   | Aluminum, Thermoplastic | 70 mm <sup>2</sup>                | 70 mm <sup>2</sup>                |
| SB250AL        | 561163         | Cable-Cable       | 400 A                                   | Aluminum, Thermoplastic | 120 mm <sup>2</sup>               | 120 mm <sup>2</sup>               |
| SB160          | 561151         | Cable-Cable       | 250 A                                   | Copper, Thermoplastic   | 70 mm <sup>2</sup>                | 70 mm <sup>2</sup>                |
| SB400AL        | 561164         | Cable-Cable       | 500 A                                   | Aluminum, Thermoplastic | 240 mm <sup>2</sup>               | 240 mm <sup>2</sup>               |
| SBF250         | 561171         | Flexibar-Cable    | 250 A                                   | Copper, Thermoplastic   | 70 mm <sup>2</sup>                | 120 mm <sup>2</sup>               |
| SBF400AL       | 561165         | Flexibar-Cable    | 400 A                                   | Aluminum, Thermoplastic | 100 mm <sup>2</sup>               | 240 mm <sup>2</sup>               |
| SB250          | 561159         | Cable-Cable       | 400 A                                   | Copper, Thermoplastic   | 120 mm <sup>2</sup>               | 120 mm <sup>2</sup>               |
| SB2C400AL      | 561166         | Cable-2 Cables    | 400 A                                   | Aluminum, Thermoplastic | 240 mm <sup>2</sup>               | (2) 120 mm <sup>2</sup>           |
| SBF2C400AL     | 561167         | Flexibar-2 Cables | 400 A                                   | Aluminum, Thermoplastic | 100 mm <sup>2</sup>               | (2) 120 mm <sup>2</sup>           |
| SB2C250        | 561170         | Cable-2 Cables    | 400 A                                   | Copper, Thermoplastic   | 120 mm <sup>2</sup>               | (2) 120 mm <sup>2</sup>           |
| SBF2C250       | 561172         | Flexibar-2 Cables | 400 A                                   | Copper, Thermoplastic   | 70 mm <sup>2</sup>                | (2) 120 mm <sup>2</sup>           |

| CatalogNumber | Article Number | Type              | Typical Application Current Rating, IEC | Material                | Line Side Max ConductorSize, IEC | Load Side Max ConductorSize, IEC |
|---------------|----------------|-------------------|-----------------------------------------|-------------------------|----------------------------------|----------------------------------|
| SB400         | 561152         | Cable-Cable       | 500 A                                   | Copper, Thermoplastic   | 240 mm <sup>2</sup>              | 240 mm <sup>2</sup>              |
| SBF400        | 561153         | Flexibar-Cable    | 400 A                                   | Copper, Thermoplastic   | 100 mm <sup>2</sup>              | 240 mm <sup>2</sup>              |
| SB630AL       | 561168         | Cable-Cable       | 630 A                                   | Aluminum, Thermoplastic | 500 mm <sup>2</sup>              | 500 mm <sup>2</sup>              |
| SBF630AL      | 561169         | Flexibar-Cable    | 630 A                                   | Aluminum, Thermoplastic | 240 mm <sup>2</sup>              | 500 mm <sup>2</sup>              |
| SBF2C630AL    | 561173         | Flexibar-2 Cables | 800 A                                   | Aluminum, Thermoplastic | 240 mm <sup>2</sup>              | 240 mm <sup>2</sup>              |
| SB2C2C1000AL  | 561175         | 2 Cables-2 Cables | 1000 A                                  | Aluminum, Thermoplastic | (2) 300 mm <sup>2</sup>          | (2) 300 mm <sup>2</sup>          |
| SB2C400       | 561154         | Cable-2 Cables    | 400 A                                   | Copper, Thermoplastic   | 240 mm <sup>2</sup>              | (2) 120 mm <sup>2</sup>          |
| SB2C1000AL    | 561174         | Cable-2 Cables    | 1000 A                                  | Aluminum, Thermoplastic | 500 mm <sup>2</sup>              | (2) 300 mm <sup>2</sup>          |
| SBF2C400      | 561155         | Flexibar-2 Cables | 400 A                                   | Copper, Thermoplastic   | 100 mm <sup>2</sup>              | (2) 120 mm <sup>2</sup>          |
| SBF3C1000AL   | 561176         | Flexibar-3 Cables | 1000 A                                  | Aluminum, Thermoplastic | 500 mm <sup>2</sup>              | (3) 300 mm <sup>2</sup>          |
| SB630         | 561156         | Cable-Cable       | 630 A                                   | Copper, Thermoplastic   | 500 mm <sup>2</sup>              | 500 mm <sup>2</sup>              |
| SBF4C1600AL   | 561177         | Flexibar-4 Cables | 1600 A                                  | Aluminum, Thermoplastic | 800 mm <sup>2</sup>              | (4) 300 mm <sup>2</sup>          |
| SBF630        | 561157         | Flexibar-Cable    | 630 A                                   | Copper, Thermoplastic   | 240 mm <sup>2</sup>              | 500 mm <sup>2</sup>              |

Table 2/2

| Catalog Number | Article Number | Short Term Withstand Current (Icw) 1s | Certifications                |
|----------------|----------------|---------------------------------------|-------------------------------|
| SB125AL        | 561161         | 6kA                                   | CE, ERIFLEX SB, UR, RoHS, cUR |
| SB80           | 561150         | 3kA                                   | CE, ERIFLEX SB, UR, RoHS      |
| SB80AL         | 561160         | 3kA                                   | RoHS, UR, CE, ERIFLEX SB, cUR |

| Catalog Number | Article Number | Short Term Withstand Current (Icw) 1s | Certifications                                   |
|----------------|----------------|---------------------------------------|--------------------------------------------------|
| SB125          | 561158         | 6kA                                   | RoHS, UR, CE, ERIFLEX SB                         |
| SB160AL        | 561162         | 14.4kA                                | RoHS, UR, cUR, CE, ERIFLEX SB                    |
| SB250AL        | 561163         | 14.4kA                                | cUR, UR, CE, ERIFLEX SB, RoHS                    |
| SB160          | 561151         | 14.4kA                                | UR, CE, ERIFLEX SB, RoHS                         |
| SB400AL        | 561164         | 28.8kA                                | CE, ERIFLEX SB, UR, RoHS, cUR                    |
| SBF250         | 561171         | 14.4kA                                | UR, UL, RoHS, CE, ERIFLEX SB, cUL, QPQS7.E497276 |
| SBF400AL       | 561165         | 28.8kA                                | CE, ERIFLEX SB, UR, cUR, RoHS                    |
| SB250          | 561159         | 14.4kA                                | CE, ERIFLEX SB, UR, RoHS                         |
| SB2C400AL      | 561166         | 28.8kA                                | cUR, UR, CE, ERIFLEX SB, RoHS                    |
| SBF2C400AL     | 561167         | 28.8kA                                | cUR, CE, ERIFLEX SB, RoHS, UR                    |
| SB2C250        | 561170         | 14.4kA                                | UL, CE, ERIFLEX SB, cUL, QPQS7.E497276, RoHS     |
| SBF2C250       | 561172         | 14.4kA                                | CE, ERIFLEX SB, cUL, QPQS7.E497276, UL, RoHS     |
| SB400          | 561152         | 28.8kA                                | RoHS, UR, CE, ERIFLEX SB                         |
| SBF400         | 561153         | 28.8kA                                | UR, RoHS, CE, ERIFLEX SB                         |
| SB630AL        | 561168         | 60kA                                  | cUR, UR, RoHS, CE, ERIFLEX SB                    |
| SBF630AL       | 561169         | 60kA                                  | CE, ERIFLEX SB, UR, cUR, RoHS                    |
| SBF2C630AL     | 561173         | 60kA                                  | CE, ERIFLEX SB, cUL, QPQS7.E497276, UL, RoHS     |
| SB2C2C1000AL   | 561175         | 72kA                                  | RoHS, UL, CE, ERIFLEX SB, cUL, QPQS7.E497276     |

| Catalog Number | Article Number | Short Term Withstand Current (Icw) 1s | Certifications                               |
|----------------|----------------|---------------------------------------|----------------------------------------------|
| SB2C400        | 561154         | 28.8kA                                | CE, ERIFLEX SB, UR, RoHS                     |
| SB2C1000AL     | 561174         | 72kA                                  | CE, ERIFLEX SB, cUL, QPQS7.E497276, UL, RoHS |
| SBF2C400       | 561155         | 28.8kA                                | RoHS, CE, ERIFLEX SB, UR                     |
| SBF3C1000AL    | 561176         | 72kA                                  | RoHS, UL, CE, ERIFLEX SB, cUL, QPQS7.E497276 |
| SB630          | 561156         | 60kA                                  | RoHS, UR, CE, ERIFLEX SB                     |
| SBF4C1600AL    | 561177         | 96kA                                  | RoHS, UL, CE, ERIFLEX SB, cUL, QPQS7.E497276 |
| SBF630         | 561157         | 60kA                                  | UR, RoHS, CE, ERIFLEX SB                     |

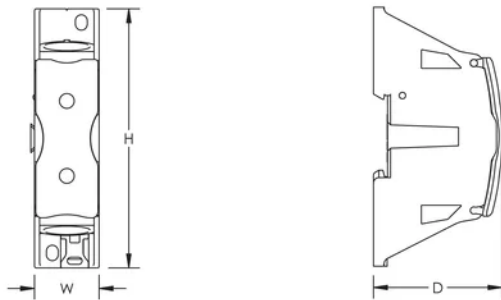
## ADDITIONAL PRODUCT DETAILS

SBF250 is UL® 1953 Listed when used with SB250SPCR. Max Working Voltage for UL 1953 applications is 1250 VAC/DC.

Blue protection cover is less than 7% of the overall product weight.

| Design Guideline for Distribution Blocks, Power Blocks and Power Terminals              |     |     |     |      |      |      |      |      |      |      |
|-----------------------------------------------------------------------------------------|-----|-----|-----|------|------|------|------|------|------|------|
| Derating according to Ambient* Temperature (°C) to maintain working temperature of 85°C |     |     |     |      |      |      |      |      |      |      |
| Ambient Temperature (°C)                                                                | 30° | 35° | 40° | 45°  | 50°  | 55°  | 60°  | 65°  | 70°  | 75°  |
| Derating Coefficient (d)                                                                | 1   | 1   | 1   | 0.94 | 0.88 | 0.82 | 0.75 | 0.67 | 0.58 | 0.47 |
| *environment around the terminal blocks inside the enclosure                            |     |     |     |      |      |      |      |      |      |      |

## 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.

**North America**

+1.800.753.9221  
Option 1 – Customer Care  
Option 2 – Technical  
Support

**Europe**

Netherlands:  
+31 800-0200135  
France:  
+33 800 901 793

**Europe**

Germany:  
800 1890272  
Other Countries:  
+31 13 5835404

**APAC**

Shanghai:  
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