

## SPD-series

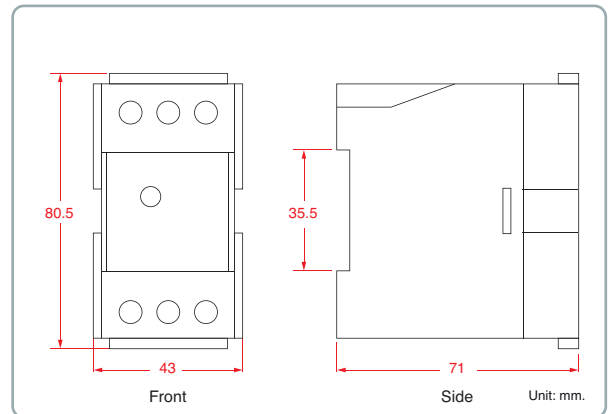
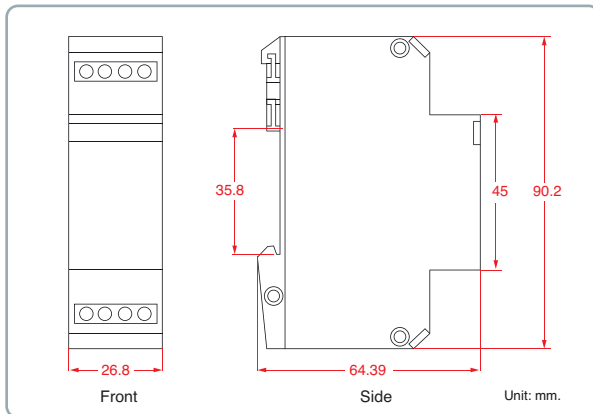
## DIN RAIL SURGE DIVERTER Solar Power Surge Protector



TVSS ⚡

- For 48 Vdc - 750 Vdc DC and Solar PV system
- Easy installation with DIN rail mount design allows compatibility with most common MDB or switchboards.
- DIN rail compatible
- Parallel installation with DC system
- No effect to load
- All TVSS protection mode; POS.-NEG., POS.-EARTH, NEG.-EARTH
- Remote auxiliary fuse with LED\*
- Thermally protected MOVs reduce risk of fire
- Response time is less than 25 nsec.
- Low let-through voltage
- Surge capability ( $I_{max}$ )(8/20  $\mu$ s): 15 kA, 25 kA, 40 kA
- High MCOV is 170 - 1,000 Vdc
- Accordance with ANSI/IEEE C62.33, ANSI/IEEE C62.42, ANSI/IEEE C62.41.2 and IEC 61643-1 standards

\* Use with external power supply which is not included with the product.



SPD-series Surge Diverters provide high energy surge diversion for protection against power surge caused by external sources as lightning strikes or switching circuit at DC power supply section. SPD-series is DIN rail mountable surge protector which compatible with most common main switchboard or distribution boards. SPD-series DIN rail surge protectors provide single mode, common and differential modes protection to any DC power systems such as stand-alone solar power system, PV grid-tie system, solar water pump system, telecommunications sites, etc.

## SPECIFICATIONS

| COMMON AND DIFFERENTIAL MODES    | MODEL                                          | SPD-17015C                                                   |            | SPD-25015C    |            | SPD-46015C    |              | SPD-61515C    |                | SPD-82025C                                  |              | SPD-100025C     |              |
|----------------------------------|------------------------------------------------|--------------------------------------------------------------|------------|---------------|------------|---------------|--------------|---------------|----------------|---------------------------------------------|--------------|-----------------|--------------|
|                                  | Electrical system                              | POS.(+), NEG.-), EARTH                                       |            |               |            |               |              |               |                |                                             |              |                 |              |
|                                  | Nominal voltage                                | 48 / 72 Vdc                                                  |            | 120 Vdc       |            | 240 Vdc       |              | 360 Vdc       |                | 600 Vdc                                     |              | 750 Vdc         |              |
|                                  | Maximum voltage (Voc)                          | 170 Vdc                                                      |            | 250 Vdc       |            | 460 Vdc       |              | 615 Vdc       |                | 820 Vdc                                     |              | 1,000 Vdc       |              |
|                                  | Application range (MCOV)                       | 40 -170 Vdc                                                  |            | 100 - 250 Vdc |            | 200 - 460 Vdc |              | 300 - 615 Vdc |                | 400 - 800 Vdc                               |              | 500 - 1,000 Vdc |              |
|                                  | Let through voltage                            | 400 V                                                        |            | 600 V         |            | 1,200 V       |              | 1,500 V       |                | 2,535 V                                     |              | 3,085 V         |              |
|                                  | Surge energy dissipation                       | 510 joules                                                   |            | 750 joules    |            | 1,365 joules  |              | 1,500 joules  |                | 1,330 joules                                |              | 1,580 joules    |              |
|                                  | Surge capability per mode (I <sub>max</sub> )* | 15 kA                                                        |            |               |            |               |              | 25 kA         |                |                                             |              |                 |              |
|                                  | Normal surge current (I <sub>n</sub> )         | 7.5 kA                                                       |            |               |            |               |              | 10 kA         |                |                                             |              |                 |              |
|                                  | TVSS protection mode                           | POS.-NEG., POS.-EARTH, NEG.-EARTH                            |            |               |            |               |              |               |                |                                             |              |                 |              |
|                                  | Location category                              | A1, A2, A3, B1, B2, B3, C1                                   |            |               |            |               |              |               |                |                                             |              |                 |              |
|                                  | Dimension (W x H x D) (mm)                     | 26.8 x 90.2 x 64.39                                          |            |               |            |               |              |               |                | 43 x 80.5 x 71                              |              |                 |              |
| COMMON MODES                     | MODEL                                          | SPD-17015B                                                   | SPD-17025B | SPD-25015B    | SPD-25025B | SPD-46015B    | SPD-46025B   | SPD-46040B    | SPD-61515B     | SPD-61525B                                  | SPD-61540B   | SPD-82040B      | SPD-100040B  |
|                                  | Electrical system                              | POS.(+), NEG.-), EARTH                                       |            |               |            |               |              |               |                |                                             |              |                 |              |
|                                  | Nominal voltage                                | 48 / 72 Vdc                                                  |            | 120 Vdc       |            | 240 Vdc       |              | 360 Vdc       |                | 600 Vdc                                     |              | 750 Vdc         |              |
|                                  | Maximum voltage (Voc)                          | 170 Vdc                                                      |            | 250 Vdc       |            | 460 Vdc       |              | 615 Vdc       |                | 820 Vdc                                     |              | 1,000 Vdc       |              |
|                                  | Application range (MCOV)                       | 40 -170 Vdc                                                  |            | 100 - 250 Vdc |            | 200 - 460 Vdc |              | 300 - 615 Vdc |                | 400-800 Vdc                                 |              | 500-1 kVdc      |              |
|                                  | Let through voltage                            | 400 V                                                        |            | 600 V         |            | 1,200 V       |              | 1,392 V       |                | 1,500 V                                     |              | 1,865 V         |              |
|                                  | Surge energy dissipation                       | 340 joules                                                   | 504 joules | 500 joules    | 750 joules | 910 joules    | 1,440 joules | 2,300 joules  | 1,000 joules   | 1,650 joules                                | 2,500 joules | 3,100 joules    | 4,000 joules |
|                                  | Surge capability per mode (I <sub>max</sub> )* | 15 kA                                                        | 25 kA      | 15 kA         | 25 kA      | 15 kA         | 25 kA        | 40 kA         | 15 kA          | 25 kA                                       | 40 kA        | 40 kA           | 40 kA        |
|                                  | Normal surge current (I <sub>n</sub> )         | 7.5 kA                                                       | 10 kA      | 7.5 kA        | 10 kA      | 7.5 kA        | 10 kA        | 20 kA         | 7.5 kA         | 10 kA                                       | 20 kA        | 20 kA           | 20 kA        |
|                                  | TVSS protection mode                           | POS.-EARTH., NEG.-EARTH                                      |            |               |            |               |              |               |                |                                             |              |                 |              |
|                                  | Location category                              | A1, A2, A3, B1, B2, B3, C1, C2 (25 kA Type), C3 (40 kA Type) |            |               |            |               |              |               |                |                                             |              |                 |              |
|                                  | Dimension (W x H x D) (mm)                     | 26.8 x 90.2 x 64.39                                          |            |               |            |               |              |               | 43 x 80.5 x 71 | 26.8 x 90.2 x 64.39                         |              | 43 x 80.5 x 71  |              |
| SINGLE MODE                      | MODEL                                          | SPD-17040A                                                   |            | SPD-25040A    |            | SPD-46040A    |              | SPD-61540A    |                | SPD-75015A                                  |              | SPD-75025A      |              |
|                                  | Electrical system                              | POS.(+) or NEG.-) or EARTH                                   |            |               |            |               |              |               |                |                                             |              |                 |              |
|                                  | Nominal voltage                                | 48 / 72 Vdc                                                  |            | 120 Vdc       |            | 240 Vdc       |              | 360 Vdc       |                | 480 Vdc                                     |              |                 |              |
|                                  | Maximum voltage (Voc)                          | 170 Vdc                                                      |            | 250 Vdc       |            | 460 Vdc       |              | 615 Vdc       |                | 750 Vdc                                     |              |                 |              |
|                                  | Application range (MCOV)                       | 40 -170 Vdc                                                  |            | 100 - 250 Vdc |            | 200 - 460 Vdc |              | 300 - 615 Vdc |                | 400 - 750 Vdc                               |              |                 |              |
|                                  | Let through voltage                            | 400 V                                                        |            | 600 V         |            | 1,200 V       |              | 1,500 V       |                | 2,100 V                                     |              |                 |              |
|                                  | Surge energy dissipation                       | 400 joules                                                   |            | 600 joules    |            | 1,150 joules  |              | 1,280 joules  |                | 840 joules                                  |              | 1,260 joules    |              |
|                                  | Surge capability per mode (I <sub>max</sub> )* | 40 kA                                                        |            | 40 kA         |            | 40 kA         |              | 40 kA         |                | 15 kA                                       |              | 25 kA           |              |
|                                  | Normal surge current (I <sub>n</sub> )         | 20 kA                                                        |            | 20 kA         |            | 20 kA         |              | 20 kA         |                | 7.5 kA                                      |              | 10 kA           |              |
|                                  | TVSS protection mode                           | Single mode                                                  |            |               |            |               |              |               |                |                                             |              |                 |              |
|                                  | Location category                              | A1, A2, A3, B1, B2, B3, C1, C2, C3                           |            |               |            |               |              |               |                | A1, A2, A3, B1, B2, B3, C1, C2 (25 kA Type) |              |                 |              |
|                                  | Dimension (W x H x D) (mm)                     | 26.8 x 90.2 x 64.39                                          |            |               |            |               |              |               |                |                                             |              |                 |              |
| Remote auxiliary fuse (0.2 Amax) |                                                | Yes                                                          |            |               |            |               |              |               |                |                                             |              |                 |              |
| Response time                    |                                                | ≤ 25 ns                                                      |            |               |            |               |              |               |                |                                             |              |                 |              |
| Ambient temperature              |                                                | - 40°C to 60°C                                               |            |               |            |               |              |               |                |                                             |              |                 |              |

\*8/20 μs current waveform. Continuous product development is our commitment. In that manner, the above specifications may be changed without prior notice.