

## SPD-series

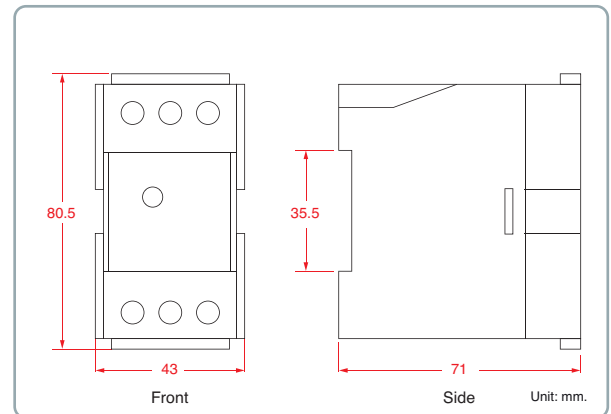
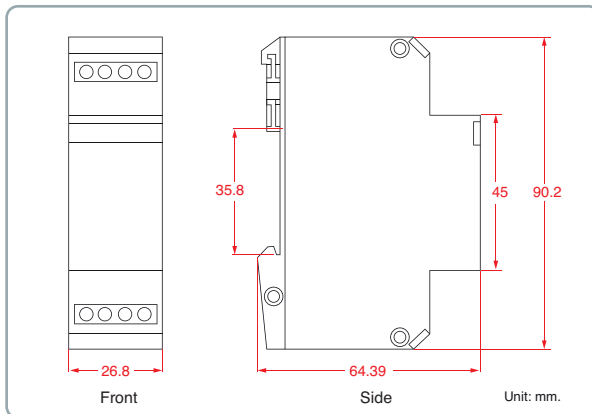
## DIN RAIL SURGE DIVERTER Solar Power Surge Protector



- 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 C62.42-2005

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

TVSS ⚡



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                  |  | 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                              |  |               |  |                 |  |                     |  |              |  |              |  |                |  |              |  |              |  |
| PROTECTION MODE                                |  | 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         |  | 2,485 V             |  | 2,985 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                                    |  | 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                               |  |               |  |               |  | 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.