IEC 61643-31 Type 1 + type 2 SPDs for Photovoltaic applications are capable of discharging the lightning currents within an electrical system resulting from direct lightning events.

They have effective voltage protection ratings keeping damaging voltage peaks from exceeding the withstand voltages of the protected equipment.

They are typically installed inside the string/combiner boxes or inside the PV inverter.

Additional PV SPDs may be required for an optimal protection if cable lengths between SPDs are greater than 10 meters.

### Key features

- **Protection mode**: L+ to L / L+ to G / L- to G
- **Number of protected lines**: 2
- **End of life indicator**: Green = functional / Red = replace
- **Technology**: Thermally protected varistor
- **Packing quantity**: 1 Piece

### Electrical performances

- **Total Impulse discharge current**: Imax (10/350µs) 12.5 kA
- **Impulse discharge current**: If (10/350µs) 6.25 kA
- **Maximal discharge current**: Imax (8/20µs) 40 kA
- **Nominal discharge current**: In (8/20µs) 20 kA
- **Maximal continuous operating voltage**: UCPV 1100 VDC
- **Intended power system application (UL)**: VPVDC 1100 VDC
- **Maximal continuous operating voltage**: MCOV - VDC
- **Voltage protection level**: Up +/-, +/G, -/G 3.8 kV
- **Voltage protection rating(UL)**: VPR VPK 2.5 kV
- **Surge circuit current rating**: Iscpv 11 kA
- **Surge circuit current rating(UL)**: SCCR 50 kA
- **Back up protection**: Not needed up to Iscpv
- **Leakage current**: Icpv, Ipc 50 µA
- **Leakage current (UL)**: Iq - µA
- **Response time**: < 25 ns

### Mechanical features

- **Dimensions**: L x W x D 110 x 54 x 86 mm
- **Max. Solid/ Stranded wire (max)**: 35 / 25 mm²
- **Stripping length**: 12,5 mm
- **Tightening torque**: 4.5 Nm
- **Maximal altitude**: 4000 m
- **Operating temperature**: -40 to +85 °C
- **Relative humidity**: 95 (non condensing) %HR
- **Degree of protection**: IP 20
- **Enclosure material rating and color**: UL 94 V-0 / Grey RAL 7035
- **Weight**: 462 g

### Replacement cartridge

- **Product ID / Model no**: OVR PV T1-T2 12.5-1000 P TS QS (2CTB812122R1000)
- **Product ID / Model no**: OVR PV T1-T2 12.5-1000 M C QS (2CTB812122R1001)

### Contacts information

- **Contacts information**: 1 NO - 1 NC
- **Min. & Max load**: 12 VDC - 0.5 mA / 250 VAC - 1 A
- **Connection cross-section max**: 1.5 mm²
- **Tightening torque**: Push in Nm
- **Stripping length**: 12 mm