

PV Modular Multi-pole SPD for Photovoltaic Systems  
**ProTec T2-PV 3+0-L**  
 Type 2 • Type 1CA



Location of Use: Photovoltaic Systems – PV Module Side  
 Mode of Protection: (+)-PE, (-)-PE, (+)-(-)  
 Surge Ratings:  $I_n$  = up to 20kA (8/20 $\mu$ s)  
 $I_{total}$  = up to 40kA (8/20 $\mu$ s)  
 EN/UL Category: Type 2 / Type 1CA  
 Protective Elements: High Energy MOV  
 Housing: Modular Design  
 Compliance: EN 50539-11:2013 + A1:2014  
 UL 1449, 4th Edition

**Technical Data**

ProTec T2-xxxxPV-3+0-L(-R)		1000	1500
<b>Electrical</b>			
Maximum Continuous Operating Voltage (DC)	$U_{OPV}$	1000V	1500V
Nominal Discharge Current (8/20 $\mu$ s)	$I_n$	20kA	15kA
Total Discharge Current (8/20 $\mu$ s)	$I_{total}$	40kA	40kA
Maximum Discharge Current (8/20 $\mu$ s)	$I_{max}$	40kA	40kA
Voltage Protection Level	(+)-(-) $U_p$ (+)/(-)-PE $U_p$	< 4.2kV < 4.2kV	< 4.8kV < 4.8kV
Short Circuit Current Rating	$I_{SCPV}$		9kA
Response Time	$t_A$		< 25 ns
Number of Ports			1

<b>UL Electrical</b>			
Maximum Permitted DC Voltage	$V_{PVDC}$	1000V	1500V
Voltage Protection Rating	VPR	2500V	3000V
Nominal Discharge Current (8/20 $\mu$ s)	$I_n$	20kA	10kA
Short Circuit Current Rating	SCCR	50kA	65kA

<b>Mechanical &amp; Environmental</b>			
Temperature Range	$T_a$	-40 °C to +85 °C	
Permissible Humidity	RH	5%...95%	
Altitude		2000 m	
Terminal Screw Torque	$M_{max}$	3.0Nm	
Conductor Cross Section (max)		35 mm <sup>2</sup> (solid) / 25 mm <sup>2</sup> (stranded)	
Mounting		35 mm DIN Rail, EN 60715	
Degree of Protection		IP 20 (built-in)	
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0	
Thermal Protection		Yes	
Operating State / Fault Indication		Green Flag / Not Green Flag	
Remote Contacts (RC)		Optional	
RC Switching Capacity		AC: 250V/1.0A, 120V/1.0A DC: 48V/0.5A, 24V/0.5A, 12V/0.5A	
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm <sup>2</sup> (Solid)	

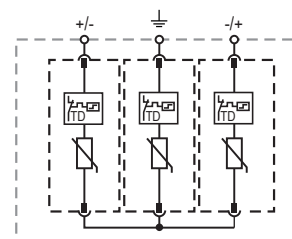
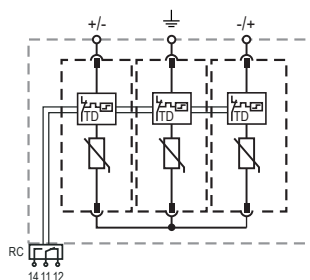
<b>Order Information</b>			
Order Code		1000	1500
ProTec T2-xxxxPV-3+0-L-R		515 300	515 302
ProTec T2-xxxxPV-3+0-L		515 301	515 303
ProTec T2-500PV-L-P		515 304	-
ProTec T2-750PV-L-P		-	515 305

## ProTec T2-PV 3+0-L

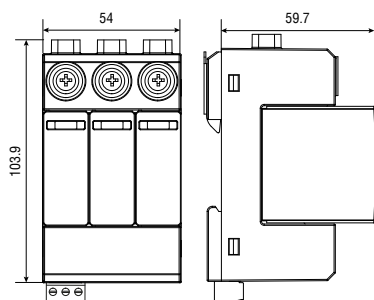
### Internal Configuration

#### Legend

- +/-, -/+ Terminal for +/-, -/+ Conductor
- ⏏ Terminal for PE/G Conductor
- RC Remote Contacts Optional
- TD Thermal Disconnect



### Dimensions & Packaging [mm]

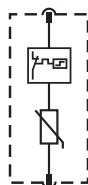


#### Dimensions & Packaging

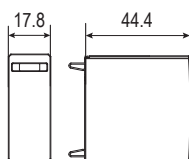
ProTec T2-xxxxPV-3+0-L-R	1000	1500
Single Unit Weight	333g	363g
Single Unit DIN 43880 Dimension	3 TE	
ProTec T2-xxxxPV-3+0-L	1000	1500
Single Unit Weight	329g	358g
Single Unit DIN 43880 Dimension	3 TE	
Packaging Dimensions (H x W x L)	110 x 80 x 60 mm (single unit)	
Minimum Package Quantity	5 Units	

### Module Internal Configuration

#### Module ProTec T2-xxxPV-L-P



### Dimensions & Packaging [mm]



#### Dimensions & Packaging

ProTec T2-xxxPV-L-P	500	750
Single Unit Weight	61g	71g
Single Unit DIN 43880 Dimension	1 TE	
Packaging Dimensions (H x W x L)	113 x 79 x 100 mm	
Minimum Order Quantity	12 Units	

Information contained in this document is subject to change at any time without notice.

