DATASHEET

Pluggable Multi-Pole SPD for EV Chargers

ProTec T2 DCGU 3Y

Class II • Type 2 • DC SPD Type 4CA

Unipolar



Location of Use: EV Chargers
Network Systems: Unipolar grounded / ungrounded, TN, TT*, IT*
Mode of Protection: (+)-PE/G, (-)-PE/G, (+)-(-)
IEC/EN/UL Category: Class II/Type 2/DC SPD Type 4CA
Housing: Pluggable Design
Compliance: IEC 61643-41:2025
EN IEC 61643-41:2025
UL 1449 5th Edition, Supplement SB

CE cULus RoHS COMPLIANT

Technical Data

ProTec T2-xxxxDCGU-3Y(-R)			1000	1500
IEC Electrical				
Nominal DC System Voltage	(+)-(-)	U_n	900 V	1250 V
Maximum Continuous Operating Voltage (DC)	(+)-(-)	U_c	1000 V	1500 V
	(+)/(-)-PE	U_c	1000 V	1000 V
Nominal Discharge Current (8/20 µs)		I_n	20 kA	20 kA
Maximum Discharge Current		I_{max}	40 kA	40 kA
Total Discharge Current (8/20 µs)		I_{Total}	65 kA	65 kA
Voltage Protection Level	(+)-(-)	U_p	3900 V	4100 V
	(+/-)-PE	U_p	2400 V	2500 V
Response Time	(+)-(-)	t_A	<25 ns	<25 ns
	(+)/(-)-PE	t_A	<100 ns	<100 ns
Overvoltage Category			III	III
Overcurrent Protection (max)			200 A gBat**	200 A gBat**
Short-Circuit Current Rating (DC)		I_{SCCR}	50 kA (L/R < 3 ms)	100 kA (L/R < 3 ms)
Number of Ports			1	1
UL Electrical				
Maximum Permitted DC Voltage	(+)-(-)	V_{dcmcov}	1000 V	1500 V
	(+)/(-)-G	V_{dcmcov}	1000 V	1000 V
Measured Limiting Voltage	(+)-(-)	MLV	3700 V	3900 V
	(+)/(-)-G	MLV	4300 V	4300 V
Nominal Discharge Current (8/20 µs)		I_n	20 kA	20 kA
Additional Electrical Parameters *(Tests performed within Raycap testing laboratory only)*				
Residual Voltage at 5 kA (8/20 µs)	(+)-(-)	U_{res}	3000 V	3000 V
	(+/-)-PE	U_{res}	1500 V	1500 V
Rated DC withstand voltage***		$U_{W\,DC}$	1200 V	1250 V
Impulse Discharge Current (10/350 µs)		I_{imp}	2.5 kA	2.5 kA
Total Discharge Current (10/350 µs)		I_{Total}	-	5 kA
Mechanical & Environmental				
Operating Temperature Range		T_a	-40 °F to +185 °F [-40 °C to +85 °C]	
Permissible Operating Humidity		RH	5%...95%	
Pollution Degree			2	
Altitude (max)			6562 ft [2000 m]	9842 ft [3000 m]
Terminal Screw Torque		M_{max}	35 lbf·in per UL 1449 [4.5 Nm]	
Conductor Cross Section (max)			6 AWG (Solid, Stranded) per UL 1449	
			35 mm² (Solid, Stranded) / 25 mm² (Flexible)	
			Cu Only per UL 1449	
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: 125 V / 1 A; DC: 48 V / 0.5 A, 24 V / 0.5 A, 12 V / 0.5 A	
RC Conductor Cross Section (max)			16 AWG (Solid) / 1.5 mm² (Solid)	
Overvoltage Category			III	

**Only for DC power systems which are electrically separated from AC power systems.*
***ETI NH1 BAT 200A/1500V DC (004110656)*
****In accordance with IEC 61851-23:2023 and prEN IEC CDV 61851-23-3:2024*

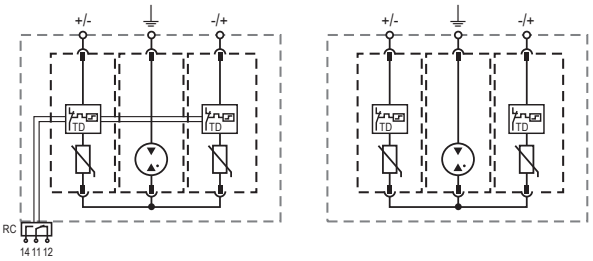
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Internal Configuration

Legend

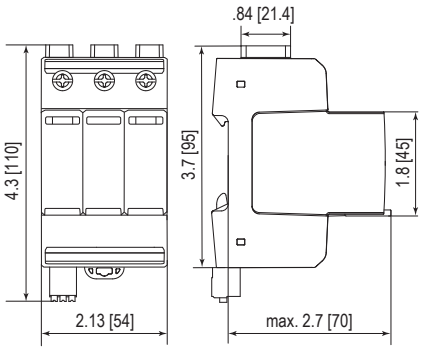
⏚ *PE / G Conductor Terminal*
RC *Remote Contacts Terminal (Optional)*
TD *Thermal Disconnector*



Order Information		
Order Code	**1000**	**1500**
ProTec T2-xxxxDCGU-3Y	59.C380	59.D040
ProTec T2-xxxxDCGU-3Y-R (with remote contacts)	59.C381	59.D041
ProTec T2-500DCGU-M-P (side plug)	59.C383	-
ProTec T2-750DCGU-M-P (side plug)	-	59.D043
ProTube T2-500DCGU-P (middle plug)	59.C382	59.C382

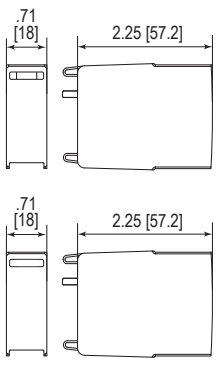
Dimensions & Packaging

inches [mm]



Complete Unit			
ProTec T2-xxxxDCGU-3Y		**1000**	**1500**
Weight	pounds [grams]	.758 [344]	.758 [344]
ProTec T2-xxxxDCGU-3Y-R			
Weight	pounds [grams]	.778 [353]	.778 [353]
DIN 43880 Dimension		3 TE / 2.13" [54 mm]	
Packaging Dimensions (H x W x L)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]	
Standard Order Quantity		5 Units	

Spare Plug



Single Unit			
ProTec T2-xxxDCGU-M-P		**500**	**750**
Weight	pounds [grams]	.148 [67]	.148 [67]
ProTube T2-xxxDCGU-P		**500**	
Weight	pounds [grams]	.088 [40]	
DIN 43880 Dimension		1 TE / .70" [18 mm]	
Packaging Dimensions (H x W x L)		3.2 x 4.5 x 12" [83 x 116 x 305 mm]	
Standard Order Quantity		24 Units	

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