

Pluggable Multi-Pole SPD for DC Systems
SafeTec T2-1000DC-3+0(-R)
 Class II • Type 2 • DC/PV SPD Type 4CA



Location of Use: DC Systems, EV Chargers
 Mode of Protection: (+)-PE, (-)-PE, (+)-(-)
 IEC/EN/UL Category: Class II / Type 2 / DC/PV SPD Type 4CA
 Housing: Pluggable Design
 Compliance: IEC 61643-31:2018
 EN 61643-31:2019
 UL 1449 5th Edition

Technical Data

SafeTec T2-1000DC-3+0(-R)

1000

EN Electrical

Nominal DC Voltage	U_n	900V
Maximum Continuous Operating Voltage (DC)	(+)-(-) U_{CDC}/U_{CPV}	1000V
	(+/-)-PE U_{CDC}/U_{CPV}	500V
Nominal Discharge Current (8/20 μ s)	I_n	20kA
Total Discharge Current	I_{Total}	65kA
Voltage Protection Level	(+)-(-) U_p	4800V
	(+/-)-PE U_p	2500V
Response Time	(+)-(-) t_A	< 25ns
	(+/-)-PE t_A	< 100ns
Number of Ports		1

UL Electrical

Maximum Permitted DC Voltage	V_{dcmcov}	1000V
Measured Limiting Voltage	(+)-(-) MLV	4590V
	(+/-)-PE MLV	2470V
Nominal Discharge Current (8/20 μ s)	I_n	20kA

Additional Electrical Parameters (Tests performed within Raycap testing laboratory only)





Residual Voltage at 5 kA (8/20 μ s)	(+)-(-) U_{res}	3100V
	(+/-)-PE U_{res}	1700V
Use in DC battery storage systems up to I_{SCCR}		30kA (L/R < 3ms)
Overcurrent protection fuse link for DC battery storage systems up to I_{SCCR}		ETI M1XL BAT 125A/1500V (004110654)

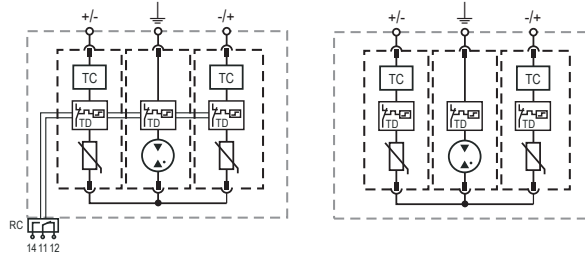
Mechanical & Environmental

Operating Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]
Permissible Operating Humidity	RH	5%...95%
Altitude (max)		13123 ft [4000 m]
Terminal Screw Torque	M_{max}	40 lbf-in [4.5Nm]
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible)
		35 mm ² (Solid, Stranded) / 25 mm ² (Flexible)
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/1A, 125V/1A; DC: 48V/0.5A, 24V/0.5A, 12V/0.5A
RC Conductor Cross Section (max)		16 AWG (Solid) / 1.5 mm ² (Solid)

Internal Configuration

Legend

-  PE Conductor Terminal
-  RC Remote Contacts Terminal (Optional)
-  TC Thermal Control Function
-  TD Thermal Disconnecter



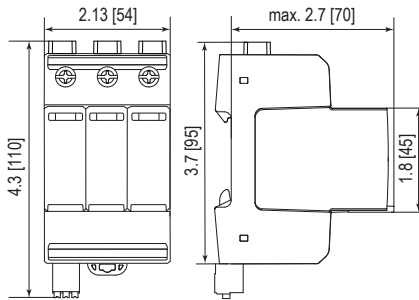
SafeTec T2-1000DC-3+0(-R)

Order Information

Order Code	1000
SafeTec T2-1000DC-3+0	59.0373
SafeTec T2-1000DC-3+0-R (with remote contacts)	59.0374
SafeTec T2-500DC-P (side plug)	59.0387
SafeTube T2-DC-P (middle plug)	59.0388

Dimensions & Packaging

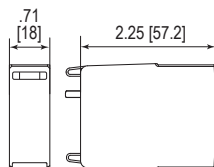
inches [mm]



Complete Unit

SafeTec T2-1000DC-3+0	1000
Weight	pounds .853
	grams 387
SafeTec T2-1000DC-3+0-R	
Weight	pounds .870
	grams 395
DIN 43880 Dimension	3 TE / 2.13" [54]
Packaging Dimensions (HxWxL)	4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]
Standard Order Quantity	5 Units

Spare Plug



Single Unit

SafeTec T2-xxxDC-P	500
Weight	pounds .176
	grams 80
SafeTube T2-DC-P	40
Weight	pounds .093
	grams 42
DIN 43880 Dimension	1 TE / .71" [18]
Packaging Dimensions (HxWxL)	3.2 x 4.5 x 12" [83 x 116 x 305 mm]
Standard Order Quantity	24 Units