

Pluggable Multi-Pole SPD for DC Systems  
**ProTec T2 DCB 3Y (Bipolar)**  
 Type 2 • DC SPD Type 1



Location of Use: DC Systems, EV Chargers  
 Network Systems: Bipolar grounded, TN-C, TN-C-S, TN-S  
 Mode of Protection: (+) - PE/M/G, (-) - PE/M/G, (+) - (-)  
 IEC/UL Category: Type 2, DC SPD Type 1  
 Housing: Pluggable Design  
 Compliance: IEC CD 61643-41 Edition 1  
 UL 1449 5th Edition




**Technical Data**

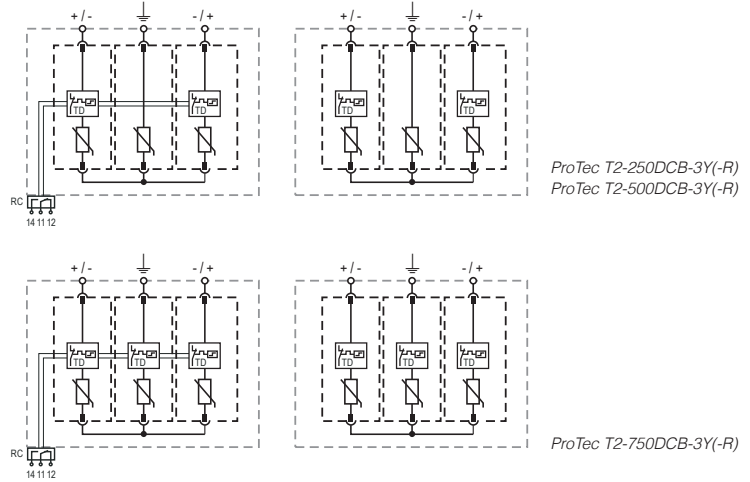
ProTec T2-xxxxDCB-3Y(-R)		250	500	750
<b>IEC Electrical</b>				
Nominal DC Voltage	$U_n$	250V	500V	750V
Maximum Continuous Operating Voltage (DC)	(+) - (-) $U_{CDC}$	500V	1000V	1500V
	(+)/(-) - PE/M $U_{CDC}$	250V	500V	750V
Nominal Discharge Current (8/20 $\mu$ s)	$I_n$	20kA	20kA	20kA
Maximum Discharge Current	$I_{max}$	40kA	40kA	40kA
Total Discharge Current (8/20 $\mu$ s)	$I_{Total}$	70kA	70kA	55kA
Impulse Discharge Current (10/350 $\mu$ s)	$I_{imp}$	5kA	5kA	2.8kA
Total Discharge Current (10/350 $\mu$ s)	$I_{Total}$	10kA	10kA	3kA
Voltage Protection Level	(+) - (-) $U_p$	2400V	3150V	3700V
	(+)/(-) - PE/M $U_p$	2400V	3150V	3700V
Overcurrent Protection (max)		200 A gBat*	200 A gBat**	200 A gBat**
Short-Circuit Current Rating (DC)	$I_{SCCR}$		30 kA (L/R < 3 ms)	
Response Time			<25 ns	
Overvoltage Category			III	
Number of Ports			1	
<b>TN-System Bipolar</b>				
TOV Withstand 5s (DC)	(+)/(-) - PE/M $U_T$	412V	825V	1238V
TOV Withstand 120min (DC)	(+)/(-) - PE/M $U_T$	550V	1100V	1650V
<b>TT-System Bipolar</b>				
TOV Withstand 5s (DC)	(+)/(-) - PE $U_T$	550V	1100V	1650V
TOV Withstand 120min (DC)	(+)/(-) - PE $U_T$	412V	825V	1238V
TOV Withstand 5s (DC)	(+)/(-) - M $U_T$	412V	825V	1238V
TOV Withstand 120min (DC)	(+)/(-) - M $U_T$	550V	1100V	1650V
<b>UL Electrical</b>				
Maximum Permitted DC Voltage	(+) - (-) $V_{demcov}$	500V	1000V	1500V
	(+)/(-) - G $V_{demcov}$	500V	1000V	1500V
Voltage Protection Rating	VPR	1800V	2500V	3000V
Nominal Discharge Current (8/20 $\mu$ s)	$I_n$		20kA	
Short-Circuit Current Rating (DC)	SCCR		100kA	
<b>Mechanical &amp; Environmental</b>				
Operating Temperature Range	$T_a$	-40 °F to +185 °F [-40 °C to +85 °C]		
Permissible Operating Humidity	RH	5%...95%		
Altitude (max)		6562 ft [2000 m]		
Terminal Screw Torque	$M_{max}$	35 lbf-in per UL 1449 [4.5Nm]		
Conductor Cross Section (max)		6 AWG (Solid, Stranded) per UL 1449		
		35 mm <sup>2</sup> (Solid, Stranded) / 25 mm <sup>2</sup> (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		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 mm <sup>2</sup> (Solid)		

\*ETI NH1 BAT 200A/500V DC (004723266), \*\*ETI NH1 BAT 200A/1500V DC (004110656)

## Internal Configuration

### Legend

-  PE/M/G Conductor Terminal
-  RC Remote Contacts Terminal (Optional)
-  TD Thermal Disconnect

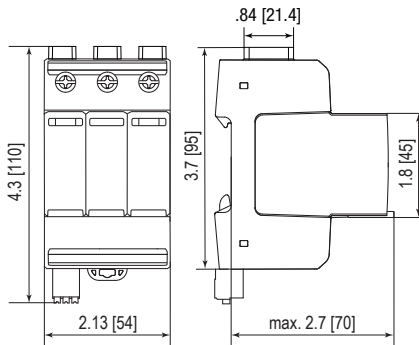


## Order Information

Order Code	250	500	750
ProTec T2-xxxDCB-3Y	59.A955	59.A957	59.A959
ProTec T2-xxxDCB-3Y-R (with remote contacts)	59.A956	59.A958	59.A960
ProTec T2-250DCB-M-P (side plug)	59.A961	-	-
ProTec T2-250DCB-P (middle plug)	59.A962	-	-
ProTec T2-500DCB-M-P (side plug)	-	59.A963	-
ProTec T2-500DCB-P (middle plug)	-	59.A964	-
ProTec T2-750DCB-M-P (plug)	-	-	59.A965

## Dimensions & Packaging

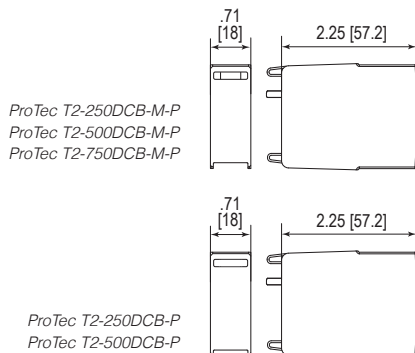
inches [mm]



### Complete Unit Dimensions & Packaging

ProTec T2-xxxxDCB-3Y	250	500	750	
Weight	pounds	.772	.831	.791
	grams	350	377	359
<b>ProTec T2-xxxxDCB-3Y-R</b>				
Weight	pounds	.789	.849	.809
	grams	358	385	367
DIN 43880 Dimension	3 TE / 2.13" [54mm]			
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 Dimensions & Packaging

ProTec T2-xxxDCB-M-P	250	500	750	
Weight	pounds	.141	.161	.146
	grams	64	73	66
<b>ProTec T2-xxxDCB-P</b>				
Weight	pounds	.134	.157	-
	grams	61	71	-
DIN 43880 Dimension	1 TE / .70" [18 mm]			
Packaging Dimensions (HxWxL)	3.2 x 4.5 x 12" [83 x 116 x 305 mm]			
Standard Order Quantity	24 Units			

