

Overvoltage Protection

ProTec T2 4+0

Class II • Type 2 • Type 1CA • Open Type 1 SPD Listed



Location of Use: Sub-Distribution Boards
 Network Systems: TN-S
 Mode of Protection: L-PE, N-PE
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA
 Open Type 1 SPD Listed
 Housing: Pluggable Design
 Compliance: IEC 61643-11:2011
 EN 61643-11:2012+A11:2018
 UL 1449 5th Edition

Technical Data

ProTec T2-xxx-4+0(-R) & ProTec T2-xxx-4+0-US(-R)

		150	300	350	440**	480	550***
IEC Electrical							
Nominal AC Voltage (50/60Hz)	U_o / U_n	120V	240V	277V	230V	400V	480V
Maximum Continuous Operating Voltage (AC)	U_c	150V	300V	350V	440V	480V	550V
Nominal Discharge Current (8/20µs)	I_n	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA
Maximum Discharge Current (8/20µs)	I_{max}	50 kA	50 kA	50 kA	50 kA	50 kA	50 kA
Voltage Protection Level	U_p	1250V	1500V	1750V	1800V	2300V	2500V
Response Time	t_A	< 25 ns					
Overcurrent Protection (max)		315 A / 250 A gG					
Short-Circuit Current Rating (AC)	I_{SCCR}	25 kA / 50 kA					
TOV Withstand 5s	U_T	229V	337V	403V	440V	581V	697V
TOV 120min	U_T	229V	442V	529V	440V	762V	915V
	mode	Withstand	Safe Fail	Safe Fail	Withstand	Safe Fail	Safe Fail
Number of Ports		1					

UL Electrical

Maximum Continuous Operating Voltage (AC)	MCOV	150V	300V	350V	-	480V	550V
Voltage Protection Rating	VPR	600V	900V	1000V	-	1500V	2000V
Nominal Discharge Current (8/20µs)	I_n	20 kA	20 kA	20 kA	-	20 kA	20 kA
Short-Circuit Current Rating (AC)	SCCR	200 kA	150 kA	200 kA	-	200 kA	200 kA

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

Residual Voltage at 5 kA (8/20 µs)	U_{res}	750V	1000V	1300V	1400V	1500V	1800V
Overcurrent Protection (min)		80 A gG					

Additional Electrical Parameters - Extended (Additionally tested by VDE)

Short-Circuit Current Rating (AC)	I_{SCCR}	100 kA					
Overcurrent Protection (max)		250 A gG					

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 [4000m]					
Terminal Screw Torque	M_{max}	35 lbf-in per UL 1499 [4.5 Nm]					
Conductor Cross Section (max)		6 AWG (Solid, Stranded) per UL 1449					
		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)		10 AWG (Solid, Stranded) per UL 1449 [1.5 mm ² (Solid)]					

**No VDE and UL certification.

***No VDE certification.

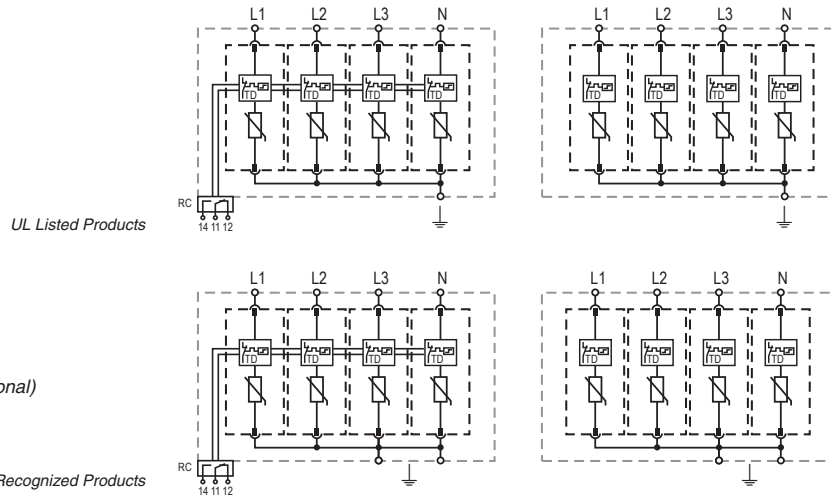
Technical Data includes technical values for both UL Recognized and Open Type 1 UL Listed products.

Mechanical Data includes only technical values for Open Type 1 UL Listed products.

Connection Configurations can be found in QR Code link on intro page.



Internal Configuration



Legend

- L Line Conductor Terminal
- N Neutral Conductor Terminal
- PE/G Conductor Terminal
- RC Remote Contacts Terminal (Optional)
- TD Thermal Disconnecter

ProTec T2-xxx-4+0(-R)

Order Information VDE Certified and UL Recognized Products

Order Code	150	300	350	440**	480	550***
ProTec T2-xxx-4+0	59.0101	59.0103	59.0300	59.0552	59.0105	59.0683
ProTec T2-xxx-4+0-R (with remote contacts)	59.0102	59.0104	59.0301	59.0553	59.0106	59.0684
ProTec T2-xxx-P (plug)	59.0064	59.0065	59.0066	59.0547	59.0067	59.0685

ProTec T2-xxx-4+0-US(-R)

For UL Listed products one PE/G Conductor Terminal is covered/closed.

Order Information VDE Certified and Open Type 1 UL Listed Products

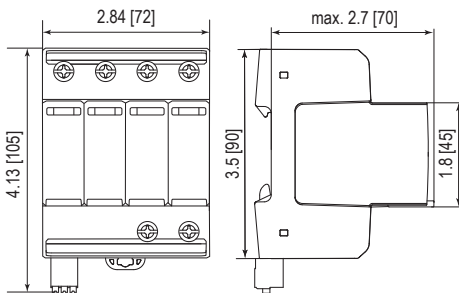
Order Code	150	300	350	440**	480	550***
ProTec T2-xxx-4+0-US	59.B111	59.B113	59.B115	-	59.B117	59.B119
ProTec T2-xxx-4+0-US-R (with remote contacts)	59.B112	59.B114	59.B116	-	59.B118	59.B120
ProTec T2-xxx-P (plug)	59.0064	59.0065	59.0066	59.0547	59.0067	59.0685

**No VDE and UL certification.

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Dimensions & Packaging

inches [mm]



Complete Unit UL Recognized Products

ProTec T2-xxx-4+0		150	300	350	440**	480	550***
Weight	pounds	1.009	1.035	1.079	1.098	1.132	1.228
	grams	457	469	489	498	513	557

ProTec T2-xxx-4+0-R

Weight	pounds	1.028	1.055	1.099	1.120	1.152	1.248
	grams	466	478	498	507	522	566

Complete Unit UL Listed Products

ProTec T2-xxx-4+0-US		150	300	350	440**	480	550***
Weight	pounds	.989	1.015	1.059	1.078	1.112	1.208
	grams	448	460	480	489	504	548

ProTec T2-xxx-4+0-US-R

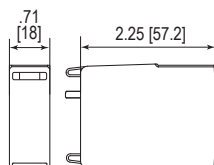
Weight	pounds	1.008	1.035	1.079	1.100	1.132	1.228
	grams	457	469	489	498	513	557

DIN 43880 Dimension 4 TE / 2.84" [72]

Packaging Dimensions (HxWxL) 4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]

Standard Order Quantity 4 Units

Spare Plug



Single Unit

ProTec T2-xxx-P		150	300	350	440**	480	550***
Weight	pounds	.123	.130	.141	.146	.154	.163
	grams	56	59	64	66	70	74

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