

Overvoltage Protection ProTec T2 3+1

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



Location of Use: Sub-Distribution Boards
 Network Systems: TT, TN-S
 Mode of Protection: L-N, 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-3+1(-R) & ProTec T2-xxx-3+1-US(-R)

300

350

IEC Electrical

Parameter	Symbol	300	350
Nominal AC Voltage (50/60Hz)	U_o/U_n	240V	277V
Maximum Continuous Operating Voltage (AC)	(L-N) U_c	300V	350V
	(N-PE) U_c	305V	305V
Nominal Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_n	20kA / 40kA	20kA / 40kA
Maximum Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_{max}	50kA / 65kA	50kA / 65kA
Voltage Protection Level	(L-N)/(N-PE) U_p	1500V / 1500V	1750V / 1500V
Follow Current Interrupt Rating	(N-PE) I_{fi}	100A	
Response Time	(L-N)/(N-PE) t_A	< 25 ns / < 100 ns	
Overcurrent Protection (max)		315A / 250A gG	
Short-Circuit Current Rating (AC)	(L-N) I_{SCCR}	25kA / 50kA	
TOV Withstand 5s	(L-N) U_T	337V	403V
TOV 120min	(L-N) U_T	mode	Safe Fail
		mode	Safe Fail
TOV Withstand 200ms	(N-PE) U_T	1200V	
Number of Ports		1	

UL Electrical

Parameter	Symbol	300	350
Maximum Continuous Operating Voltage (AC)	(L-N)/(N-G) MCOV	300V / 305V	350V / 305V
Voltage Protection Rating	(L-N)/(N-G) VPR	900V / 1000V	1000V / 1000V
Nominal Discharge Current (8/20 μ s)	(L-N)/(N-G) I_n	20kA / 20kA	
Short-Circuit Current Rating (AC)	(L-N) SCCR	150kA	200kA

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

Residual Voltage at 5 kA (8/20 μ s)	U_{res}	1000V / 305V	1300V / 305V
Overcurrent Protection (min)		80A gG	

Additional Electrical Parameters - Extended (Additionally tested by VDE)

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

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.

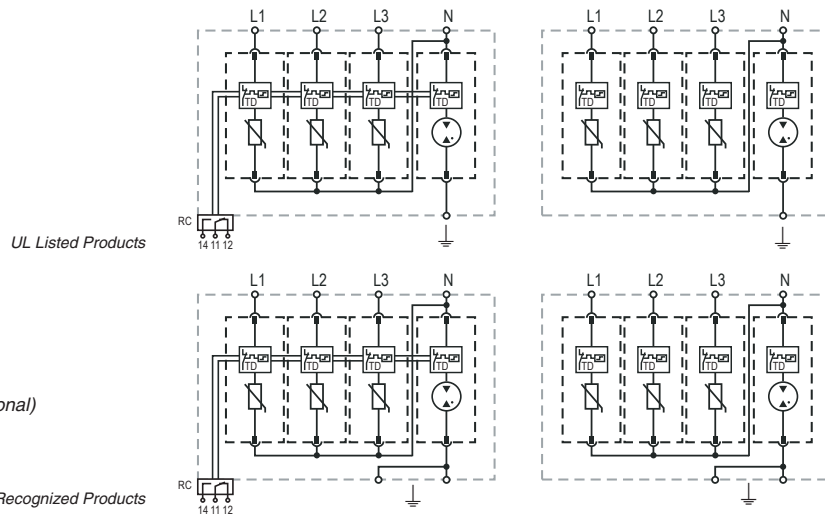


Raycap

www.raycap.com

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

Internal Configuration



Legend

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

ProTec T2-xxx-3+1(-R)

Order Information VDE Certified and UL Recognized Products

Order Code	300	350
ProTec T2-xxx-3+1	59.0121	59.0123
ProTec T2-xxx-3+1-R (with remote contacts)	59.0122	59.0124
ProTec T2-xxx-P (plug L-N)	59.0065	59.0066
ProTube T2-40-P (plug N-PE)	59.0273	59.0273

ProTec T2-xxx-3+1-US(-R)

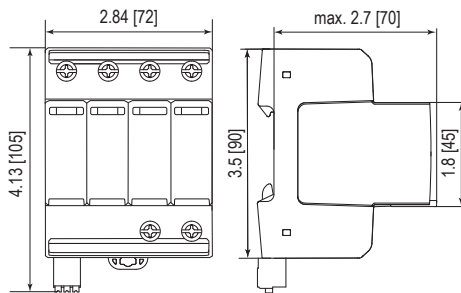
For UL Listed products one PE/G Conductor Terminal is covered/closed.

Order Information VDE Certified and Open Type 1 UL Listed Products

Order Code	300	350
ProTec T2-xxx-3+1-US	59.B129	59.B131
ProTec T2-xxx-3+1-US-R (with remote contacts)	59.B130	59.B132
ProTec T2-xxx-P (plug L-N)	59.0065	59.0066
ProTube T2-40-P (plug N-PE)	59.0273	59.0273

Dimensions & Packaging

inches [mm]



Complete Unit UL Recognized Products

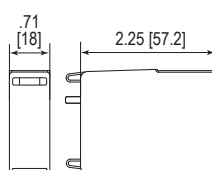
ProTec T2-xxx-3+1		300	350
Weight	pounds	1.020	1.053
	grams	462	477
ProTec T2-xxx-3+1-R			
Weight	pounds	1.031	1.064
	grams	467	482

Complete Unit UL Listed Products

ProTec T2-xxx-3+1-US		300	350
Weight	pounds	1.000	1.033
	grams	453	468
ProTec T2-xxx-3+1-US-R			
Weight	pounds	1.011	1.044
	grams	458	473

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		300	350
Weight	pounds	.130	.141
	grams	59	64
ProTube T2-40-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