

Overvoltage Protection **ProTec T2-ADV 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-ADV-xxx-3+1(-R) & ProTec T2-ADV-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	20 kA / 40 kA	20 kA / 40 kA
Maximum Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_{max}	50 kA / 65 kA	50 kA / 65 kA
Voltage Protection Level	(L-N)/(N-PE) U_p	1300V / 1500V	1700V / 1500V
Follow Current Interrupt Rating	(N-PE) I_{fi}	100 A	
Response Time	(L-N)/(N-PE) t_A	< 25 ns / < 100 ns	
Overcurrent Protection (max)		160 A gG	
Short-Circuit Current Rating (AC)	I_{SCCR}	50 kA	
TOV Withstand 5s	(L-N) U_T	337V	403V
	(L-N) U_T	442V	528V
TOV 120min	mode	Safe Fail	Safe Fail
	(N-PE) U_T	1200V	
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	1200V / 1000V
Nominal Discharge Current (8/20 μ s)	(L-N)/(N-G) I_n	20 kA / 20 kA	
Short-Circuit Current Rating (AC)	(L-N) SCCR	150 kA	200 kA

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

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

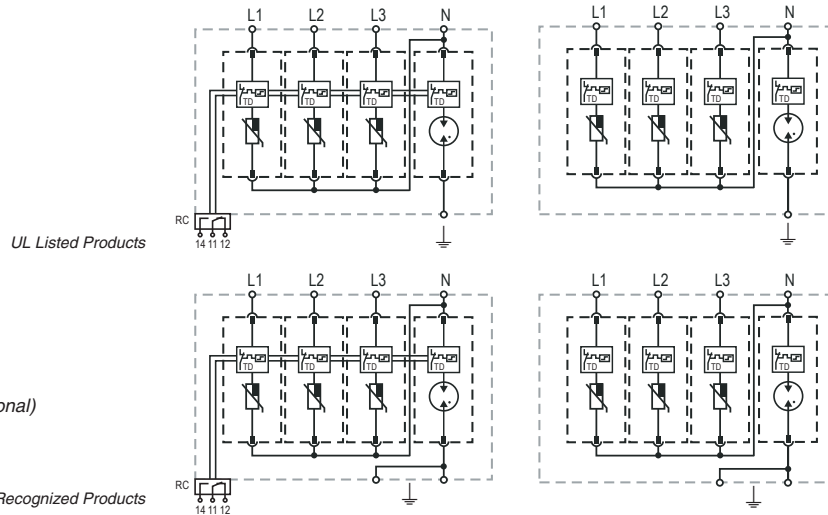
Additional Electrical Parameters - Extended (Additionally tested by VDE)

Short-Circuit Current Rating (AC)	I_{SCCR}	100 kA	
Overcurrent Protection (max)		160 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)]	

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-ADV-xxx-3+1(-R)

Order Information VDE Certified and UL Recognized Products

Order Code	300	350
ProTec T2-ADV-xxx-3+1	59.0256	59.0258
ProTec T2-ADV-xxx-3+1-R (with remote contacts)	59.0257	59.0259
ProTec T2-ADV-xxx-P (plug L-N)	59.0204	59.0205
ProTube T2-ADV-40-P (plug N-PE)	59.0275	59.0275

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

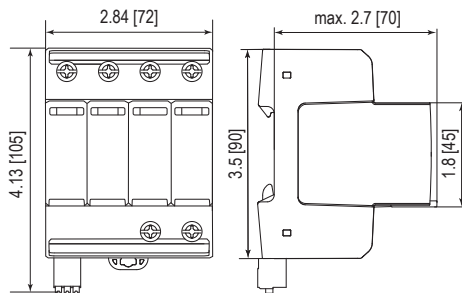
For UL Listed products one PE/G Conductor Terminal is covered/closed.

Order Information VDE Certified and Open Type 1 UL Listed Products

Order Code	300	350
ProTec T2-ADV-xxx-3+1-US	59.B179	59.B181
ProTec T2-ADV-xxx-3+1-US-R (with remote contacts)	59.B180	59.B182
ProTec T2-ADV-xxx-P (plug L-N)	59.0204	59.0205
ProTube T2-ADV-40-P (plug N-PE)	59.0275	59.0275

Dimensions & Packaging

inches [mm]



Complete Unit UL Recognized Products

ProTec T2-ADV-xxx-3+1		300	350
Weight	pounds	1.080	1.113
	grams	490	505

ProTec T2-ADV-xxx-3+1-R		300	350
Weight	pounds	1.100	1.133
	grams	499	514

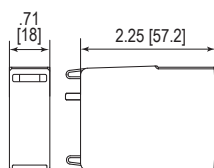
Complete Unit UL Listed Products

ProTec T2-ADV-xxx-3+1-US		300	350
Weight	pounds	1.060	1.093]
	grams	481	496

ProTec T2-ADV-xxx-3+1-US-R		300	350
Weight	pounds	1.080	1.113
	grams	490	505

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 Dimensions & Packaging

ProTec T2-ADV-xxx-P		300	350
Weight	pounds	.143	.154
	grams	65	70

ProTube T2-ADV-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