

Overvoltage Protection ProTec T2-ADV 1+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-1+1(-R) & ProTec T2-ADV-xxx-1+1(-US)(-R)

75 150 300 350

IEC Electrical

Nominal AC Voltage (50/60Hz)	U_o/U_n	60V	120V	240V	277V
Maximum Continuous Operating Voltage (AC)	(L-N) U_c	75V	150V	300V	350V
	(N-PE) U_c	305V	305V	305V	305V
Nominal Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_n	20 kA / 40 kA	20 kA / 40 kA	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	50 kA / 65 kA	50 kA / 65 kA
Voltage Protection Level	(L-N)/(N-PE) U_p	600V / 1500V	1000V / 1500V	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)		160A gG			
Short-Circuit Current Rating (AC)	I_{SCCR}	50 kA			
TOV Withstand 5s	(L-N) U_T	114V	229V	337V	403V
	mode	Withstand	Withstand	Safe Fail	Safe Fail
TOV 120min	(L-N) U_T	114V	229V	442V	528V
	(N-PE) U_T	1200V			
TOV Withstand 200ms	(N-PE) U_T	1200V			
Number of Ports		1			

UL Electrical

Maximum Continuous Operating Voltage (AC)	(L-N)/(N-G) MCOV	75V / 305V	150V / 305V	300V / 305V	350V / 305V
Voltage Protection Rating	(L-N)/(N-G) VPR	400V / 1000V	600V / 1000V	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	100 kA	200 kA	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}	400V / 305V	700V / 305V	1000V / 305V	1300V / 305V
Overcurrent Protection (min)		160A gG			

Additional Electrical Parameters - Extended (Additionally tested by VDE)

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

Mechanical & Environmental

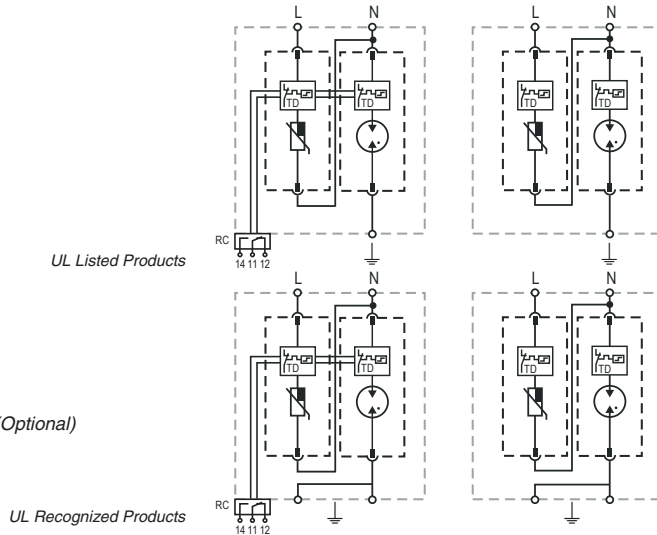
Operating Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]			
Permissible Operating Humidity	RH	5%...95%			
Altitude (max)		13123 ft [4000m]			
Terminal Screw Torque	M_{max}	35 lbf-in per UL 1499 [4.5 Nm]			
Conductor Cross Section (max)		6 AWG (Solid, Stranded) per UL 1449			
		35 mm ² (Solid, 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 Disconnecter



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

Order Information VDE Certified and UL Recognized Products

Order Code	75	150	300	350
ProTec T2-ADV-xxx-1+1	59.0244	59.0246	59.0248	59.0250
ProTec T2-ADV-xxx-1+1-R (with remote contacts)	59.0245	59.0247	59.0249	59.0251
ProTec T2-ADV-xxx-P (plug L-N)	59.0202	59.0203	59.0204	59.0205
ProTube T2-ADV-40-P (plug N-PE)	59.0275	59.0275	59.0275	59.0275

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

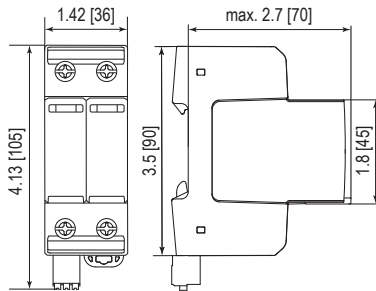
For UL Listed products one PE/G Conductor Terminal is covered/closed.

Order Information VDE Certified and Open Type 1 UL Listed Products

Order Code	75	150	300	350
ProTec T2-ADV-xxx-1+1-US	59.B171	59.B173	59.B175	59.B177
ProTec T2-ADV-xxx-1+1-US-R (with remote contacts)	59.B172	59.B174	59.B176	59.B178
ProTec T2-ADV-xxx-P (plug L-N)	59.0202	59.0203	59.0204	59.0205
ProTube T2-ADV-40-P (plug N-PE)	59.0275	59.0275	59.0275	59.0275

Dimensions & Packaging

inches [mm]



Complete Unit UL Recognized Products

ProTec T2-ADV-xxx-1+1	75	150	300	350
Weight	pounds .520	.529	.544	.555
	grams 236	240	247	252

ProTec T2-ADV-xxx-1+1-R

Weight	pounds .533	.542	.557	.568
	grams 242	246	253	258

Complete Unit UL Listed Products

ProTec T2-ADV-xxx-1+1-US	75	150	300	350
Weight	pounds .500	.509	.524	.535
	grams 227	231	238	243

ProTec T2-ADV-xxx-1+1-US-R

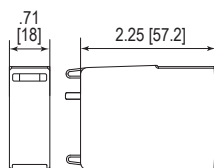
Weight	pounds .513	.522	.537	.548
	grams 233	237	244	249

DIN 43880 Dimension 2 TE / 1.42" [36]

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

Standard Order Quantity 7 Units

Spare Plug



Single Unit Dimensions & Packaging

ProTec T2-ADV-xxx-P	75	150	300	350
Weight	pounds .120	.127	.143	.154
	grams 54	58	65	70

ProTube T2-ADV-40-P

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