

Overvoltage Protection

ProTec T2-ADV 1+1

Class II • Type 2 • Type 1CA



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
 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)

		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			
Overvoltage Category		III			
Maximum Backup fuse, if required		160A gG			
Short-Circuit Current Rating (AC)	I_{SCCR}	50kA			
TOV Withstand 5s	(L-N) U_T	114V	229V	337V	403V
TOV 120min	(L-N) U_T	114V	229V	442V	528V
	mode	Withstand	Withstand	Safe Fail	Safe Fail
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
Minimum Backup fuse, if required		160A gG			

Additional Electrical Parameters - Extended (Additionally tested by VDE)

Short-Circuit Current Rating (AC)	I_{SCCR}	100kA			
Maximum Backup fuse, if required		160A gG			

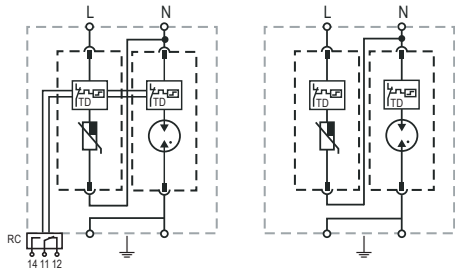
Mechanical & Environmental

Operating Temperature Range	T_a	-40 °F to +185 °F [-40 °C to +85 °C]			
Permissible Operating Humidity	RH	5%...95%			
Pollution Degree		2			
Altitude (max)		13123 ft [4000m]			
Terminal Screw Torque	M_{max}	40 lbf·in [4.5Nm]			
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible)			
		35 mm² (Solid, Stranded) / 25 mm² (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)		16 AWG (Solid) / 1.5 mm² (Solid)			
Overvoltage Category		III			

Internal Configuration

Legend

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

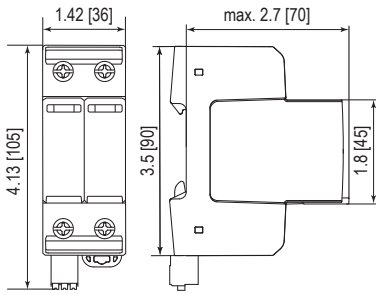


ProTec T2-ADV-xxx-1+1(-R)

Order Information

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

Dimensions & Packaging

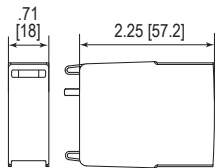


inches [mm]

Complete Unit

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
DIN 43880 Dimension			2 TE / 1.42" [36mm]		
Packaging Dimensions (HxWxL)			4.3 x 4.5 x 13.8" [109 x 115 x 352mm]		
Standard Order Quantity			7 Units		

Spare Plug



Single Unit

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			40		
Weight	pounds	.093			
	grams	42			
DIN 43880 Dimension			1 TE / .71" [18mm]		
Packaging Dimensions (HxWxL)			3.2 × 4.5 × 12" [83 × 116 × 305 mm]		
Standard Order Quantity			24 Units		