

# Overvoltage Protection

## ProTec T2 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  
 Compliance: IEC 61643-11:2011  
 EN 61643-11:2012  
 UL 1449 4th Edition

## Technical Data

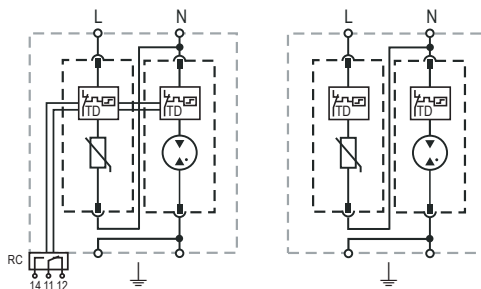
ProTec T2-xxx-1+1(-R)		75	150	300	350
<b>IEC Electrical</b>					
Nominal AC Voltage (50/60Hz)	$U_o/U_n$	60V	120V	240V	277V
Maximum Continuous Operating Voltage (AC)	(L-N) $U_c$	75V	150V	300V	350V
	(N-PE) $U_c$	305V	305V	305V	305V
Nominal Discharge Current (8/20 $\mu$ s)	(L-N)/(N-PE) $I_n$	20kA / 40kA	20kA / 40kA	20kA / 40kA	20kA / 40kA
Maximum Discharge Current (8/20 $\mu$ s)	(L-N)/(N-PE) $I_{max}$	50kA / 65kA	50kA / 65kA	50kA / 65kA	50kA / 65kA
Voltage Protection Level	(L-N)/(N-PE) $U_p$	800V / 1500V	1250V / 1500V	1500V / 1500V	1750V / 1500V
Follow Current Interrupt Rating	(N-PE) $I_{fi}$	100A <sub>RMS</sub>			
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) $U_T$	114V	229V	337V	403V
TOV 120min	(L-N) $U_T$	114V	229V	442V	529V
		mode	Withstand	Withstand	Safe Fail
TOV Withstand 200ms	(N-PE) $U_T$	1200V			
Number of Ports		1			
<b>UL Electrical</b>					
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	330V / 1000V	600V / 1000V	900V / 1000V	1000V / 1000V
Nominal Discharge Current (8/20 $\mu$ s)	(L-N)/(N-G) $I_n$	20kA / 20kA			
Short-Circuit Current Rating (AC)	(L-N) SCCR	100kA	200kA	150kA	200kA
<b>Mechanical &amp; Environmental</b>					
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	$M_{max}$	39.9 lbf-in [4.5Nm]			
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible)			
		35 mm <sup>2</sup> (Solid, Stranded) / 25 mm <sup>2</sup> (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 mm <sup>2</sup> (Solid)			
<b>Order Information</b>					
Order Code		75	150	300	350
ProTec T2-xxx-1+1		59.0109	59.0111	59.0113	59.0115
ProTec T2-xxx-1+1-R (with remote contacts)		59.0110	59.0112	59.0114	59.0116
ProTec T2-xxx-P (plug L-N)		59.0063	59.0064	59.0065	59.0066
ProTube T2-40-P (plug N-PE)		59.0273	59.0273	59.0273	59.0273

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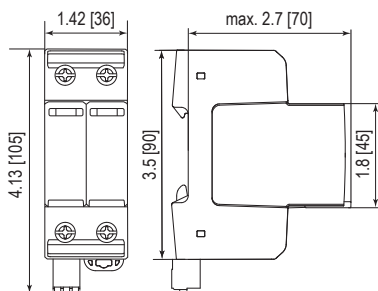
### Internal Configuration

#### Legend

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



### Complete Unit

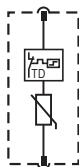


#### Complete Unit Dimensions & Packaging

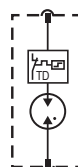
		75	150	300	350
<b>ProTec T2-xxx-1+1</b>					
Weight	pounds	.512	.527	.534	.545
	grams	232	239	242	247
<b>ProTec T2-xxx-1+1-R</b>					
Weight	pounds	.521	.536	.543	.554
	grams	236	243	246	251
DIN 43880 Dimension		2 TE / 1.42" [36]			
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]			
Standard Order Quantity		7 Units			

### Plug Internal Configuration

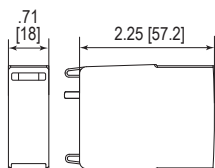
#### ProTec T2-xxx-P



#### ProTube T2-40-P



### Spare Plug



#### Single Unit Dimensions & Packaging

		75	150	300	350
<b>ProTec T2-xxx-P</b>					
Weight	pounds	.108	.123	.130	.141
	grams	49	56	59	64
<b>ProTube T2-40-P</b>			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 115 x 305 mm]			
Standard Order Quantity		24 Units			

inches  
[mm]

