

Pluggable Single-Pole SPD  
**ProTec T2 1+0**  
 Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards  
 Network Systems: TN-S, TN-C, TT (only L-N)  
 Mode of Protection: L-PE, N-PE (only TN-S), L-PEN, L-N  
 Surge Ratings:  $I_n = 20\text{ kA}$  (8/20 $\mu\text{s}$ )  
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA  
 Protective Elements: High Energy MOV  
 Housing: Pluggable Design  
 Compliance: IEC 61643-11:2011  
 EN 61643-11:2012  
 UL 1449 4th Edition

**Technical Data**

ProTec T2-xxx-1+0(-R)		75	150	300	350	480	750
<b>IEC Electrical</b>							
Nominal AC Voltage (50/60Hz)	$U_o/U_n$	60V	120V	240V	277V	400V	600V
Maximum Continuous Operating Voltage (AC)	$U_c$	75V	150V	300V	350V	480V	750V
Nominal Discharge Current (8/20 $\mu\text{s}$ )	$I_n$	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA
Maximum Discharge Current (8/20 $\mu\text{s}$ )	$I_{max}$	50 kA	50 kA	50 kA	50 kA	50 kA	35 kA
Voltage Protection Level	$U_p$	800V	1250V	1500V	1750V	2300V	3400V
Response Time	$t_A$	< 25ns					
Back-Up Fuse (max)		315 A / 250 A gG					
Short-Circuit Current Rating (AC)	$I_{SCCR}$	25 kA / 50 kA					
TOV Withstand 5s	$U_T$	114V	229V	337V	403V	581V	871V
TOV 120min	$U_T$	114V	229V	442V	529V	762V	1143V
	mode	Withstand	Withstand	Safe Fail	Safe Fail	Safe Fail	Safe Fail
Number of Ports		1					

<b>UL Electrical</b>							
Maximum Continuous Operating Voltage (AC)	MCOV	75V	150V	300V	350V	480V	750V
Voltage Protection Rating	VPR	330V	600V	900V	1000V	1500V	2500V
Nominal Discharge Current (8/20 $\mu\text{s}$ )	$I_n$	20 kA	20 kA	20 kA	20 kA	20 kA	20 kA
Short-Circuit Current Rating (AC)	SCCR	100 kA	200 kA	150 kA	200 kA	200 kA	200 kA

<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		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)					

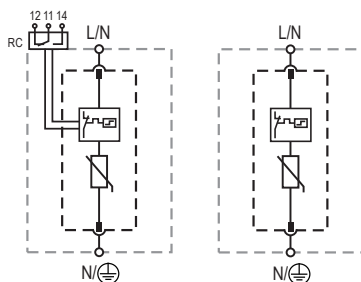
<b>Order Information</b>							
Order Code		75	150	300	350	480	750
ProTec T2-xxx-1+0		59.0069	59.0071	59.0073	59.0075	59.0077	59.0079
ProTec T2-xxx-1+0-R (with remote contacts)		59.0070	59.0072	59.0074	59.0076	59.0078	59.0080
ProTec T2-xxx-P		59.0063	59.0064	59.0065	59.0066	59.0067	59.0068

## ProTec T2 1+0

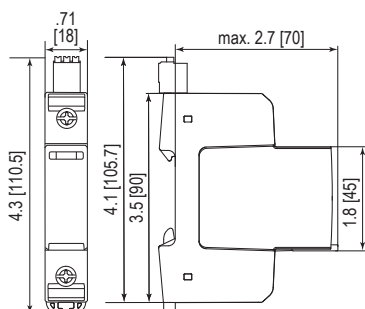
### Internal Configuration

#### Legend

- L Line
- N Neutral
- ⊕ Protective Earth
- RC Remote Contacts Optional



### Dimensions & Packaging

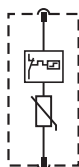


#### Dimensions & Packaging

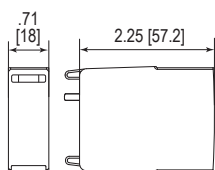
		75	150	300	350	480	750	
<b>ProTec T2-xxx-1+0</b>	Single Unit Weight							
		pounds	.258	.267	.283	.294	.305	.340
		grams	117	121	128	133	138	154
<b>ProTec T2-xxx-1+0-R</b>	Single Unit Weight							
		pounds	.274	.283	.298	.309	.320	.355
		grams	124	128	135	140	145	161
Single Unit DIN 43880 Dimension		1 TE						
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]						
Minimum Order Quantity		12 Units						

### Plug Internal Configuration

#### ProTec T2-xxx-P



### Dimensions & Packaging



#### Dimensions & Packaging

		75	150	300	350	480	750	
<b>ProTec T2-xxx-P</b>	Single Unit Weight							
		pounds	.111	.120	.135	.146	.157	.192
		grams	50	54	61	66	71	87
Single Unit DIN 43880 Dimension		1 TE						
Packaging Dimensions (HxWxL)		3.3 x 4.6 x 12" [83 x 116 x 305 mm]						
Minimum Order Quantity		24 Units						

inches  
[mm]

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



# Raycap

www.raycap.com

© 2018 Raycap All rights reserved.  
G29-00-398 180216

Pluggable Multi-Pole SPD  
**ProTube T2 40 0+1**  
 Class II • Type 2 • Type 1CA



Location of Use: Sub-Distribution Boards  
 Network Systems: TT, TN-S  
 Mode of Protection: N-PE  
 Surge Ratings:  $I_n = 20\text{kA}$  (8/20 $\mu\text{s}$ )  
 IEC/EN/UL Category: Class II / Type 2 / Type 1CA  
 Protective Elements: GDT with Thermal Disconnecter  
 Housing: Pluggable Design  
 Compliance: IEC 61643-11:2011  
 EN 61643-11:2012  
 UL 1449 4th Edition

**Technical Data**

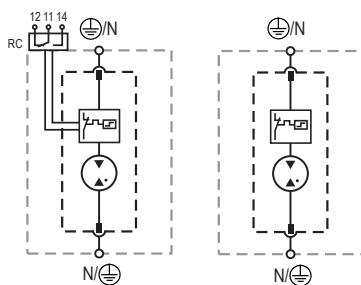
ProTube T2-xxx-0+1(-R)		<b>40</b>
<b>IEC Electrical</b>		
Nominal AC Voltage (50/60Hz)	$U_o / U_n$	0V
Maximum Continuous Operating Voltage	$U_c$	305V
Nominal Discharge Current (8/20 $\mu\text{s}$ )	$I_n$	40kA
Maximum Discharge Current (8/20 $\mu\text{s}$ )	$I_{max}$	65kA
Voltage Protection Level	$U_p$	1500V
Follow Current Interrupt Rating	$I_{fi}$	100 A <sub>RMS</sub>
Response Time	$t_A$	< 100 ns
TOV Withstand 200ms	$U_T$	1200V
Number of Ports		1
<b>UL Electrical</b>		
Maximum Continuous Operating Voltage (AC)	MCOV	305V
Voltage Protection Rating	VPR	1000V
Nominal Discharge Current (8/20 $\mu\text{s}$ )	$I_n$	20kA
<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		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) 35mm <sup>2</sup> (Solid, Stranded) / 25mm <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		<b>40</b>
ProTube T2-xxx-0+1		59.0280
ProTube T2-xxx-0+1-R (with remote contacts)		59.0336
ProTube T2-40-P		59.0273

## ProTube T2 40 0+1

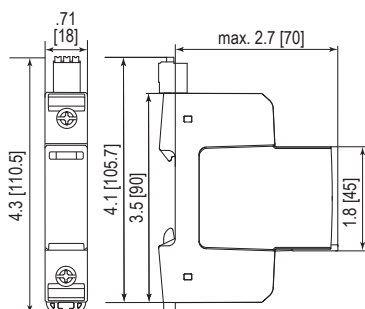
### Internal Configuration

#### Legend

- L Line
- N Neutral
- ⊕ Protective Earth
- RC Remote Contacts Optional



### Dimensions & Packaging

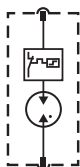


#### Dimensions & Packaging

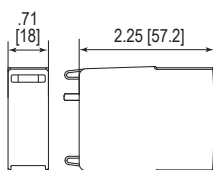
ProTube T2-xxx-0+1		40
Single Unit Weight	pounds	.255
	grams	116
ProTube T2-xxx-0+1-R		40
Single Unit Weight	pounds	.271
	grams	123
Single Unit DIN 43880 Dimension		1 TE
Packaging Dimensions (HxWxL)		4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]
Minimum Order Quantity		12 Units

### Plug Internal Configuration

#### ProTube T2-40-P



### Dimensions & Packaging



#### Dimensions & Packaging

ProTube T2-40-P		40
Single Unit Weight	pounds	.093
	grams	42
Single Unit DIN 43880 Dimension		1 TE
Packaging Dimensions (HxWxL)		3.3 x 4.6 x 12" [83 x 116 x 305 mm]
Minimum Order Quantity		24 Units

inches  
[mm]

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

