

Lightning and Overvoltage Protection  
**ProTec T1S 2+0**  
 Class I • Class II • Type 1 • Type 2



Location of Use: Main Distribution Boards  
 Network Systems: TN-S, IT (only 440)  
 Mode of Protection: L-PE, N-PE  
 IEC/EN Category: Class I+II / Type 1+2  
 Housing: Pluggable Design  
 Compliance: IEC 61643-11:2011  
 EN 61643-11:2012+A11:2018

**Technical Data**

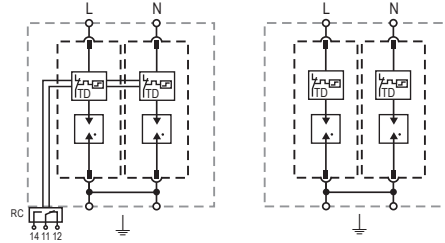
ProTec T1S-xxx-2+0(-R)		275	440*
<b>IEC Electrical</b>			
Nominal AC Voltage (50/60Hz)	$U_o / U_n$	240V	400V
Maximum Continuous Operating Voltage (AC)	$U_c$	275V	440V
Nominal Discharge Current (8/20 $\mu$ s)	$I_n$	25 kA	25 kA
Maximum Discharge Current (8/20 $\mu$ s)	$I_{max}$	65 kA	50 kA
Impulse Discharge Current (10/350 $\mu$ s)	$I_{imp}$	25 kA	25 kA
Specific Energy	W/R	156.2 kJ/ $\Omega$	156.2 kJ/ $\Omega$
Charge	Q	12.5 As	12.5 As
Voltage Protection Level	$U_p$	1500V	2500V
Response Time	$t_A$	< 100ns	< 100ns
Overcurrent Protection (max)		315 A gG	315 A gG / 250 A gG
Short-Circuit Current Rating (AC)	$I_{SCCR}$	50 kA	50 kA / 100 kA
Follow Current Interrupt Rating (AC)	$I_{fi}$	50 kA	50 kA / 100 kA
TOV 120min	$U_T / mode$	442V/Withstand	762V / Safe Fail
TOV Safe Fail 200ms	$U_T$	-	1640V
Number of Ports			1
<b>Additional Electrical Parameters - Standard</b> (Tests performed within Raycap testing laboratory only)			
Residual Voltage at 5 kA (8/20 $\mu$ s)	$U_{res}$	1400V	1500V
Overcurrent Protection (min)		250 A gG	250 A gG
<b>Additional Electrical Parameters - Extended</b> (Additionally tested by VDE)			
Short-Circuit Current Rating (AC)	$I_{SCCR}$		100 kA
Overcurrent Protection (max)		315 A gG	250 A gG
<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		6562 ft [2000m]	
Terminal Screw Torque	$M_{max}$	40 lbf-in [4.5 Nm]	
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)	

\*No VDE Certification.

## Internal Configuration

### Legend

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



### ProTec T1S-xxx-2+0(-R)

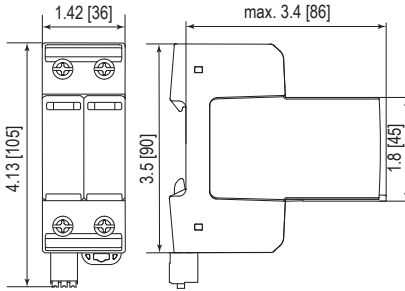
#### Order Information

Order Code	275	440*
ProTec T1S-xxx-2+0	59.0740	59.A519
ProTec T1S-xxx-2+0-R (with remote contacts)	59.0741	59.A520
ProTec T1S-xxx-P (plug)	59.0384	59.A515

\*No VDE Certification.

## Dimensions & Packaging

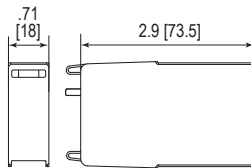
inches [mm]



#### Complete Unit

ProTec T1S-xxx-2+0	275	440*
Weight	pounds [grams] .749 [340]	.771 [350]
ProTec T1S-xxx-2+0-R	275	440*
Weight	pounds [grams] .769 [349]	.791 [359]
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

ProTec T1S-xxx-P	275	440*
Weight	pounds [grams] .231 [105]	.242 [110]
DIN 43880 Dimension	1 TE / .71 [18]	
Packaging Dimensions (HxWxL)	4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]	
Standard Order Quantity	28 Units	