

Lightning and Overvoltage Protection  
**ProTec T1HS 3+1**  
 Class I • Class II • Type 1 • Type 2 • Type 4CA

25 kA Series



Location of Use: Main Distribution Boards  
 Network Systems: TT, TN-S  
 Mode of Protection: L-N, N-PE  
 IEC/EN/UL Category: Class I+II, Type 1+2, Type 4CA  
 Technology: Hybrid  
 Leakage Current Free: Yes  
 Housing: Pluggable Design  
 Compliance: IEC 61643-11: 2011  
 EN 61643-11: 2012  
 UL 1449 4th Edition

**Technical Data**

ProTec T1HS-xxx-3+1(-R)

300

**IEC Electrical**

Nominal AC Voltage (50/60Hz)	$U_o/U_n$	240 V
Maximum Continuous Operating Voltage (AC)	(L-N) / (N-PE) $U_c$	300 V / 305 V
Nominal Discharge Current (8/20 $\mu$ s)	(L-N) / (N-PE) $I_n$	25 kA / 100 kA
Maximum Discharge Current (8/20 $\mu$ s)	(L-N) / (N-PE) $I_{max}$	65 kA / 130 kA
Impulse Discharge Current (10/350 $\mu$ s)	(L-N) / (N-PE) $I_{imp}$	25 kA / 100 kA
Specific Energy	(L-N) / (N-PE) W/R	156.2 kJ/ $\Omega$ / 2500 kJ/ $\Omega$
Charge	(L-N) / (N-PE) Q	12.5 As / 50 As
Voltage Protection Level	(L-N) / (N-PE) $U_p$	1500 V / 1500 V
Rated Load Current	$I_L$	100 A
Response Time	(L-N) / (N-PE) $t_A$	< 100 ns / < 100 ns
Overcurrent Protection (max)		315 A gG
Short-Circuit Current Rating (AC)	$I_{SCCR}$	50 kA
Follow Current Interrupt Rating	(N-PE) $I_{fi}$	100 A <sub>RMS</sub>
TOV Withstand 120min	(L-N) $U_T$	442 V
TOV Withstand 200ms	(N-PE) $U_T$	1200 V
Number of Ports		1

**UL Electrical**

Maximum Continuous Operating Voltage (AC)	(L-N)/(N-G) MCOV	300 V / 305 V
Measured Limiting Voltage	(L-N)/(N-G) MLV	1280 V / 1000 V
Nominal Discharge Current (8/20 $\mu$ s)	(L-N)/(N-G) $I_n$	20 kA

**Mechanical & Environmental**

Operating Temperature Range	$T_a$	-40 °F to +185 °F [-40 °C to +85 °C]
Permissible Operating Humidity	RH	5%...95%
Altitude		13123 ft [4000 m]
Terminal Screw Torque	$M_{max}$	39.9 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)

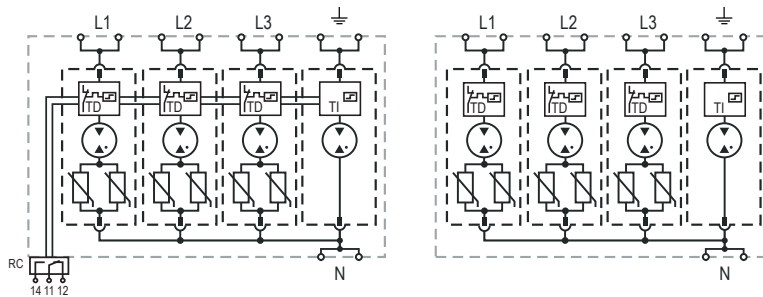
**Order Information**

Order Code	300
ProTec T1HS-xxx-3+1	59.0306
ProTec T1HS-xxx-3+1-R (with remote contacts)	59.0307
ProTec T1HS-xxx-P (plug L-N)	59.0302
ProTube T1HS-100-P (plug N-PE)	59.0303

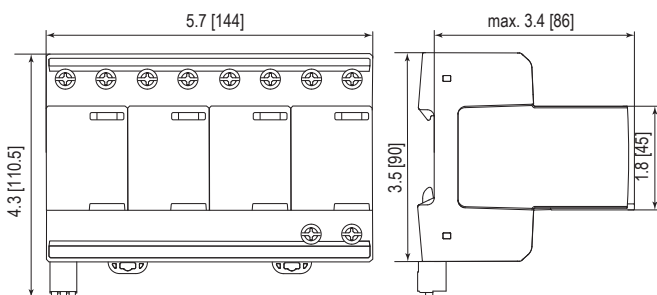
**Internal Configuration**

**Legend**

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



**Complete Unit**



**Complete Unit Dimensions & Packaging**

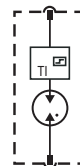
<b>ProTec T1HS-xxx-3+1</b>	<b>300</b>
Weight	pounds [grams] 2.348 [1065]
<b>ProTec T1HS-xxx-3+1-R</b>	
Weight	pounds [grams] 2.368 [1074]
DIN 43880 Dimension	8 TE / 5.7 [144]
Packaging Dimensions (HxWxL)	4.3 x 4.5 x 13.8" [109 x 115 x 352 mm]
Standard Order Quantity	2 Units

**Plug Internal Configuration**

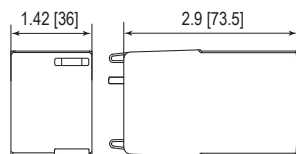
**ProTec T1HS-xxx-P**



**ProTube T1HS-100-P**



**Spare Plug**



**Single Unit Dimensions & Packaging**

<b>ProTec T1HS-xxx-P</b>	<b>300</b>
Weight	pounds [grams] .364 [165]
<b>ProTube T1HS-100-P</b>	<b>100</b>
Weight	pounds [grams] 0.209 [95]
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	14 Unit

inches  
[mm]