

Combined Lightning Current and Surge Arrester

**ProTec ZP T1H 3+1**

**Class I • Class II • Type 1 • Type 2**



**Location of Use:** Main Distribution Boards,  
40mm Busbar Systems

**Network Systems:** TN-S, TT

**Mode of Protection:** L-N,N-PE (L-PE only at TN-S systems)

**Surge Ratings:**  $I_{imp} = 12.5\text{ kA} / 50\text{ kA}$  (L-N / N-PE)  
 $I_n = 20\text{ kA} / 80\text{ kA}$  (L-N / N-PE)

**IEC/EN:** Class I+II / Type 1+2

**Technology:** Hybrid

**Protective Elements:** GDT in series with High Energy MOV  
(L-N) and GDT (N-PE)

**Leakage Current:** No

**Line Follow Current:** No

**Housing:** Compact design

**Compliance:** IEC 61643-11:2011  
EN 61643-11:2012

**Technical Data**

**ProTec ZP T1H-xxx-3+1-R**

**300**

**IEC Electrical**

Nominal AC Voltage (50/60Hz)	$U_o / U_n$	230/400V
Maximum Continuous Operating Voltage (AC)	(L-N) $U_c$	300 V
	(N-PE) $U_c$	305 V
Nominal Discharge Current (8/20 $\mu$ s)	(L-N)/(N-PE) $I_n$	20 kA / 80 kA
Maximum Discharge Current (8/20 $\mu$ s)	(L-N)/(N-PE) $I_{max}$	50 kA / 100 kA
Impulse Discharge Current (10/350 $\mu$ s)	(L-N)/(N-PE) $I_{imp}$	12.5 kA / 50 kA
Specific Energy	(L-N)/(N-PE) W/R	39 kJ/ $\Omega$ / 625 kJ/ $\Omega$
Charge	(L-N)/(N-PE) Q	6.25As / 25As
Voltage Protection Level	(L-N)/(N-PE) $U_p$	1500V / 1500V
Follow Current Interrupt Rating	(N-PE) $I_{fi}$	100A <sub>RMS</sub>
Response Time	(L-N)/(N-PE) $t_A$	< 100ns / < 100ns
Back-Up Fuse (max)		160 A gG
Short-Circuit Current Rating (AC)	$I_{SCCR}$	25 kA
TOV Withstand 120min	(L-N) $U_T$	442 V
TOV Withstand 200ms	(N-PE) $U_T$	1200V
Number of Ports		1

**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)		35mm <sup>2</sup> (Solid, Stranded) / 25mm <sup>2</sup> (Flexible)
		2 AWG (Solid, Stranded) / 4 AWG (Flexible)
Mounting		40mm Busbar Systems
Degree Of Protection		IP 30 (in combination with cover)
Housing Material		Thermoplastic: Extinguishing Degree UL 94 V-0
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)		1.5mm <sup>2</sup> (Solid) / 16 AWG (Solid)

**Order Information**

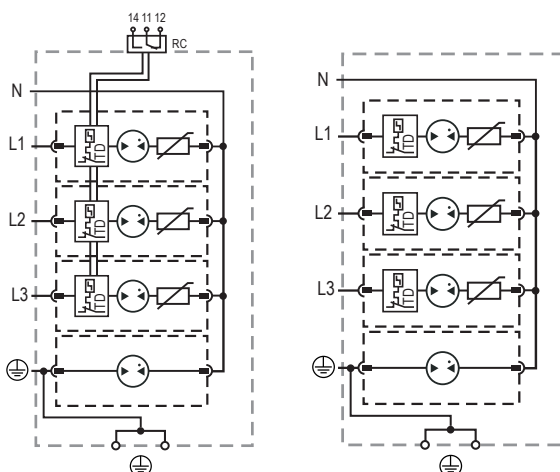
<b>Order Code</b>	<b>300</b>
ProTec ZP T1H-xxx-3+1	59.0638
ProTec ZP T1H-xxx-3+1-R (with remote contacts)	59.0361

## ProTec ZP T1H 3+1

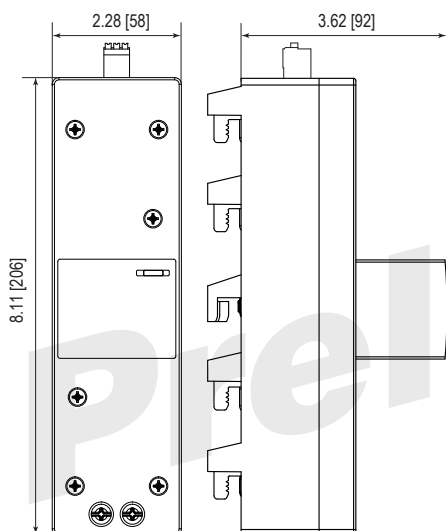
### Internal Configuration

#### Legend

- L Terminal for Line Busbar
- N Terminal for Neutral Conductor
- ⊕ Terminal for PE/G Busbar/Conductor
- RC Terminal for Remote Contacts
- TD Thermal Disconnect



### Dimensions & Packaging



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##### ProTec ZP T1H-xxx-3+1-R

300

Single Unit Weight	pounds [grams]	1.874 [850]
Packaging Dimensions (HxWxL)		2.9 × 4.5 × 8.6" [75 × 116 × 220 mm]
Order Quantity		1 piece

inches  
[mm]

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

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