

DATA SHEET

Combined Lightning Current and Surge Arrester
ProTec ZP T1H 3+1 E
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: $I_{imp} = 7.5\text{ kA} / 30\text{ kA}$ (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-E-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 μ s)	(L-N)/(N-PE) I_n	20 kA / 80 kA
Maximum Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_{max}	50 kA / 100 kA
Impulse Discharge Current (10/350 μ s)	(L-N)/(N-PE) I_{imp}	7.5 kA / 30 kA
Specific Energy	(L-N)/(N-PE) W/R	14 kJ/ Ω / 225 kJ/ Ω
Charge	(L-N)/(N-PE) Q	3.75 As / 15As
Voltage Protection Level	(L-N)/(N-PE) U_p	1500V / 1500V
Follow Current Interrupt Rating	(N-PE) I_{fi}	100A _{RMS}
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 ² (Solid, Stranded) / 25mm ² (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 ² (Solid) / 16 AWG (Solid)

Order Information

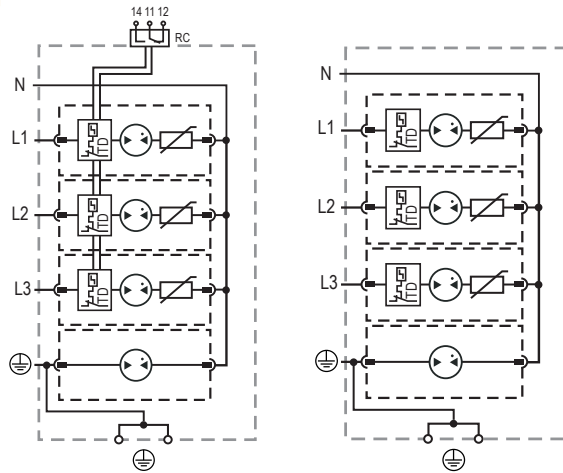
Order Code	300
ProTec ZP T1H-xxx-3+1-E	59.0636
ProTec ZP T1H-xxx-3+1-E-R (with remote contacts)	59.0363

ProTec ZP T1H 3+1 E

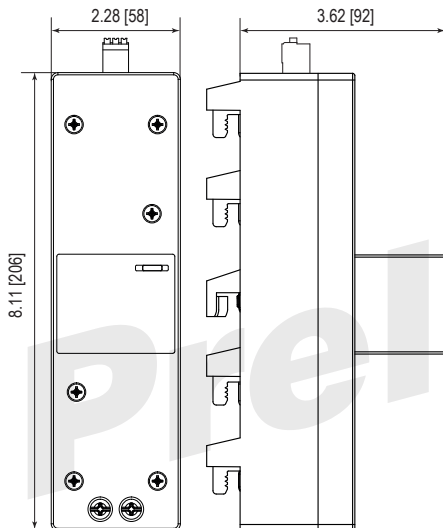
Internal Configuration

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



Dimensions & Packaging

ProTec ZP T1H-xxx-3+1-E-R		300
Single Unit Weight	pounds [grams]	1.874 [850]
Packaging Dimensions (HxWxL)		2.9 x 4.5 x 8.6" [75 x 116 x 220 mm]
Order Quantity		1 piece

inches
[mm]

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

RoHS COMPLIANT  CE