

DATA SHEET

Combined Lightning Current and Surge Arrester
ProTec ZPS T1H 3+1(-R)-L
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

Voltage: $U_c = 300V / 305V$

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

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

Technology: Hybrid

Leakage Current Free: Yes

Line Follow Current: No

Housing: Compact design

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

Technical Data

ProTec ZPS T1H-xxx-3+1(-R)-L

IEC Electrical

Nominal AC Voltage (50/60Hz)	U_o / U_n	240 V
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}	12.5 kA / 50 kA
Specific Energy	(L-N)/(N-PE) W/R	39 kJ/ Ω / 625 kJ/ Ω
Charge	(L-N)/(N-PE) Q	6.25 As / 25 As
Voltage Protection Level	(L-N)/(N-PE) U_p	1500 V / 1500 V
Follow Current Interrupt Rating	(N-PE) I_{fi}	100 A _{RMS}
Response Time	(L-N)/(N-PE) t_A	< 100 ns / < 100 ns
Back-Up Fuse (max)		315 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	1200 V
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}	PZ2 / 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 20*
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)

Load Terminal (L1')

Rated Current	I_L	20 A
Load Side Overcurrent Protective Device		20 A gG
Wire Connection Method		Push In
Conductor Cross Section		10 AWG / 4 mm ² (Solid, Stranded, Flexible)
Stripping Length		12 mm

Order Information

Order Code		
ProTec ZPS T1H-300-3+1-L (with load terminal)		59.0910
ProTec ZPS T1H-300-3+1-R-L (with remote contacts and load terminal)		59.0911

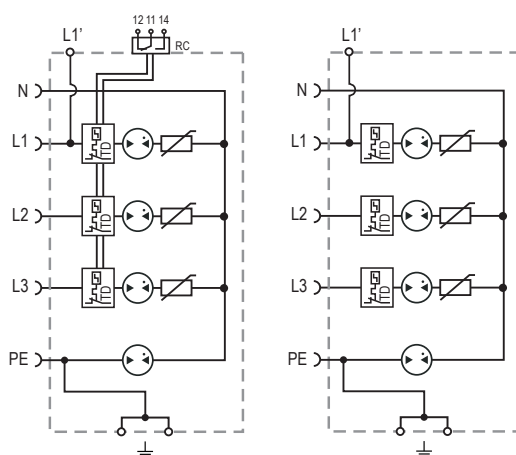
*IP 40 (in combination with cover)

ProTec ZPS T1H 3+1(-R)-L

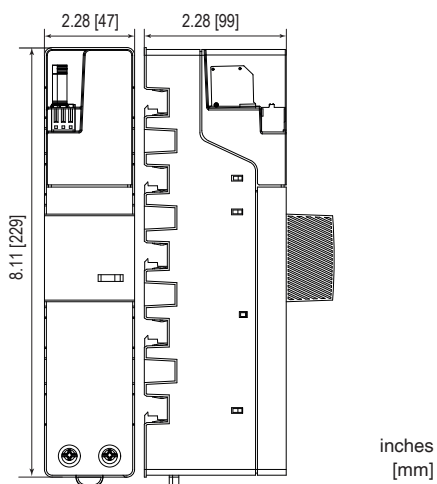
Internal Configuration

Legend

- L Line Busbar Terminal
- L1' Load Terminal (Optional)
- N Neutral Busbar Terminal
- PE PE Busbar Terminal
- ⏏ Terminal for Main Earthing Terminal
- RC Remote Contacts (Optional) Terminal
- TD Thermal Disconnecter



Complete Unit



Complete Unit Dimensions & Packaging

ProTec ZPS T1H-xxx-3+1-L	300
Weight	pounds [grams] 1.658 [752]
Packaging Dimensions (HxWxL)	2.9 x 4.5 x 8.6" [75 x 116 x 220 mm]
Standard Order Quantity	1 Unit
ProTec ZPS T1H-xxx-3+1-R-L	300
Weight	pounds [grams] 1.676 [760]
Packaging Dimensions (HxWxL)	2.9 x 4.5 x 8.6" [75 x 116 x 220 mm]
Standard Order Quantity	1 Unit

inches
[mm]