

Combined Lightning Current and Surge Arrester

ProTec ZPS T1H 3+1 E(-R)

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: $I_{imp} = 7.5kA / 30kA$ (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-E(-R)

IEC Electrical

Nominal AC Voltage (50/60Hz)	U_o/U_n	240V
Maximum Continuous Operating Voltage (AC)	(L-N) U_c	300V
	(N-PE) U_c	305V
Nominal Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_n	20kA / 80kA
Maximum Discharge Current (8/20 μ s)	(L-N)/(N-PE) I_{max}	50kA / 100kA
Impulse Discharge Current (10/350 μ s)	(L-N)/(N-PE) I_{imp}	7.5kA / 30kA
Specific Energy	(L-N)/(N-PE) W/R	14kJ/ Ω / 225kJ/ Ω
Charge	(L-N)/(N-PE) Q	3.75As / 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)		315A gG
Short-Circuit Current Rating (AC)	I_{SCCR}	25kA
TOV Withstand 120min	(L-N) U_T	442V
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 [4000m]
Terminal Screw Torque	M_{max}	PZ2 / 39.9 lbf-in [4.5Nm]
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)

Order Information

Order Code	
ProTec ZPS T1H-300-3+1-E (basic)	59.0912
ProTec ZPS T1H-300-3+1-E-R (with remote contacts)	59.0913

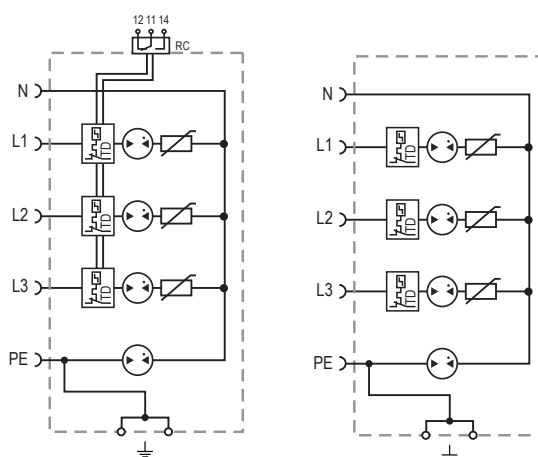
*IP 40 (in combination with cover)

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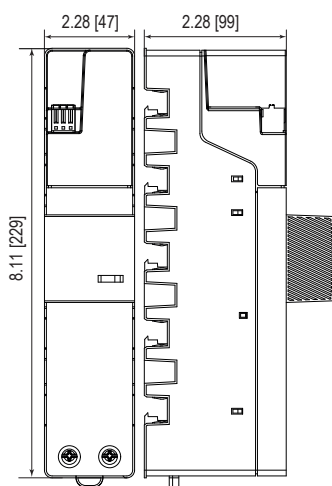
Internal Configuration

Legend

- L Line Busbar Terminal
- 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-E	300
Weight	pounds [grams] 1.636 [742]
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-E-R	300
Weight	pounds [grams] 1.653 [750]
Packaging Dimensions (HxWxL)	2.9 x 4.5 x 8.6" [75 x 116 x 220 mm]
Standard Order Quantity	1 Unit

inches
[mm]