

DATA SHEET

Combined Lightning Current and Surge Arrester
ProTec ZPS T1H 3+1 E(-R)(-F)-L
Class I • Class II • Class III • Type 1 • Type 2 • Type 3



Location of Use: Main Distribution Boards,
40mm Busbar Systems
 Network Systems: TN-S, TT
 Mode of Protection: L-N,N-PE
 IEC/EN: Class I+II+III / Type 1+2+3
 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)(-F)-L

IEC Electrical

Nominal AC Voltage (50/60Hz)	U_0/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
Open Circuit Voltage of Combination Wave Generator	U_{oc}	6kV
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
Overcurrent Protection (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 (max)		13123 ft [4000m]
Terminal Screw Torque	M_{max}	PH2 / 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)

Protected Load Terminal (L1') for ProTec ZPS T1H-xxx-3+1-E(-R)-L

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

Order Information

Order Code		
ProTec ZPS T1H-300-3+1-E-L (with protected load terminal)		59.0914
ProTec ZPS T1H-300-3+1-E-R-L (with remote contacts and protected load terminal)		59.0915

*IP 40 (in combination with cover)



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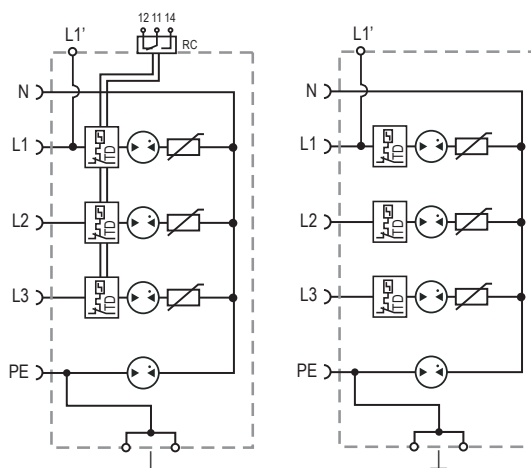
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ProTec ZPS T1H 3+1 E(-R)(-F)-L

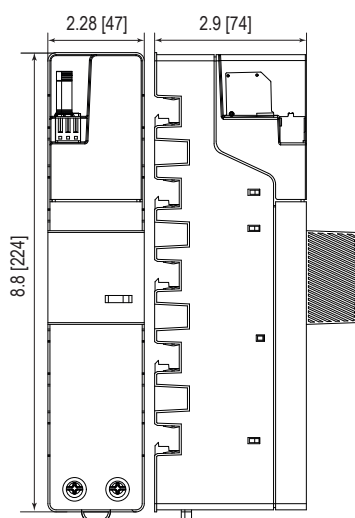
Internal Configuration

Legend

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



Complete Unit



Complete Unit Dimensions & Packaging

ProTec ZPS T1H-xxx-3+1-E(-F)-L		300
Weight	pounds [grams]	1.653 [750]
Packaging Dimensions (HxWxL)		12.5 x 13.4 x 9.5" [320 x 340 x 240 mm]
Standard Order Quantity		18 Units

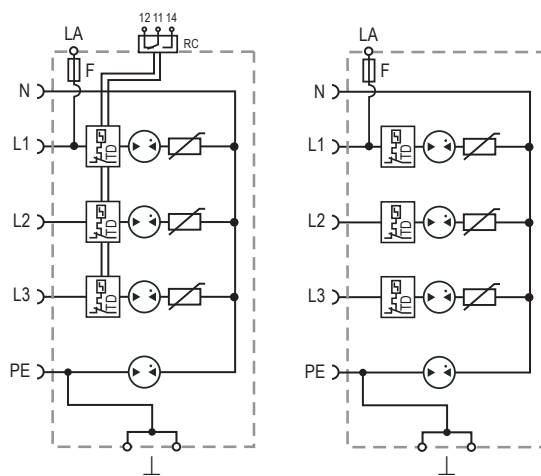
ProTec ZPS T1H-xxx-3+1-E-R(-F)-L		300
Weight	pounds [grams]	1.671 [758]
Packaging Dimensions (HxWxL)		12.5 x 13.4 x 9.5" [320 x 340 x 240 mm]
Standard Order Quantity		18 Units

The weight for products with integrated fuse on L1' terminal is .020 pounds [9 grams] more.

Auxiliary Terminal with Integrated Fuse

Legend

- F Integrated Fuse Link
- LA Auxiliary Terminal
- L Line Busbar Terminal
- N Neutral Busbar Terminal
- PE PE Busbar Terminal
- ⏚ Terminal for Main Earthing Terminal
- RC Remote Contacts Terminal (Optional)
- TD Thermal Disconnecter



Auxiliary Terminal (LA) for ProTec ZPS T1H-xxx-3+1-E(-R)(-F)-L

Rated Current Integrated Fuse	I_n	6.3A
Fuse Link		SIBA GZ 5 x 20 mm FF (7000740.6,3)
Wire Connection Method		Push In
Conductor Cross Section		10 AWG / 4 mm ² (Solid, Stranded, Flexible)

Order Information

Order Code		
ProTec ZPS T1H-300-3+1-E-F-L (with auxiliary terminal)		59.A248
ProTec ZPS T1H-300-3+1-E-R-F-L (with remote contacts and auxiliary terminal)		59.A249