

# Combined Lightning Current and Surge Arrester **ProTec ZPN T1H 3+1 E(-R)**

**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 + A11:2018

## Technical Data

**ProTec ZPN T1H-xxx-3+1-E(-R)**

**300**

### 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 $\mu$ s)	(L-N)/(N-PE) $I_n$	20 kA / 80 kA
Maximum Discharge Current (8/20 $\mu$ s)	(L-N)/(N-PE) $I_{max}$	40 kA / 100 kA
Impulse Discharge Current (10/350 $\mu$ s)	(L-N)/(N-PE) $I_{imp}$	7.5 kA / 30 kA
Specific Energy	(L-N)/(N-PE) W/R	14 kJ/ $\Omega$ / 225 kJ/ $\Omega$
Charge	(L-N)/(N-PE) Q	3.75 As / 15As
Open Circuit Voltage of Combination Wave Generator	$U_{oc}$	6 kV
Voltage Protection Level	(L-N)/(N-PE) $U_p$	1500V / 1500V
Follow Current Interrupt Rating	(N-PE) $I_{fi}$	100A
Response Time	(L-N)/(N-PE) $t_A$	< 100ns / < 100ns
Overcurrent Protection (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) $U_T$	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 (max)		13123 ft [4000m]
Terminal Screw Torque	$M_{max}$	PH2 / 40 lbf.in [4.5Nm]
Conductor Cross Section (max)		2 AWG (Solid, Stranded) / 4 AWG (Flexible)
		35mm <sup>2</sup> (Solid, Stranded) / 25mm <sup>2</sup> (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)		16 AWG (Solid) / 1.5mm <sup>2</sup> (Solid)

### Order Information

Order Code	<b>300</b>
ProTec ZPN T1H-xxx-3+1-E	59.A612
ProTec ZPN T1H-xxx-3+1-E-R (with remote contacts)	59.A613

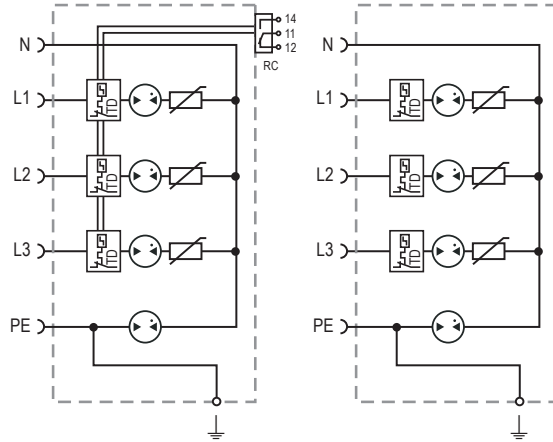
\*IP 40 (in combination with cover)

## ProTec ZPN T1H 3+1 E(-R)

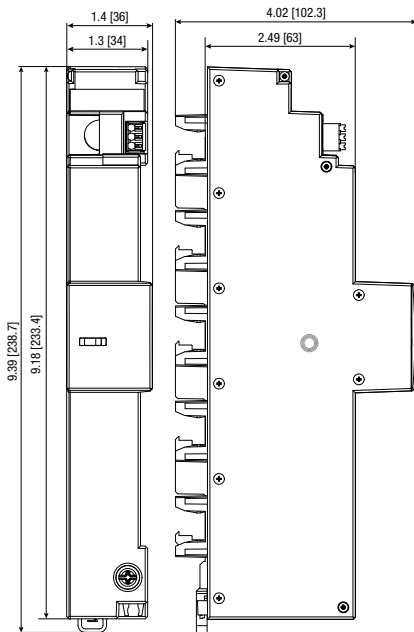
### Internal Configuration

#### Legend

- 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



### Complete Unit



#### Complete Unit Dimensions & Packaging

<b>ProTec ZPN T1H-xxx-3+1-E</b>	<b>300</b>
Weight	pounds [grams] 1.395 [633]
Packaging Dimensions (HxWxL)	270x375x395 [10.6x14.8x15.5]
Standard Order Quantity	24 Units
<b>ProTec ZPN T1H-xxx-3+1-E-R</b>	<b>300</b>
Weight	pounds [grams] 1.406 [638]
Packaging Dimensions (HxWxL)	270x375x395 [10.6x14.8x15.5]
Standard Order Quantity	24 Units

inches  
[mm]

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