

# Combined Lightning Current and Surge Arrester

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

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)-F

300

#### 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 $\mu$ 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	$U_{oc}$	6kV
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) $U_T$	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 / 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)

#### Auxiliary Terminal (LA)

Rated Current Integrated Fuse	$I_n$	6.3A
Fuse Link		FF, 5 x 20 mm, 6.3A
Short Circuit Interrupt Capability		25 kA
Wire Connection Method		Push In
Conductor Cross Section (max)		14 AWG / 2.5 mm <sup>2</sup> (Solid, Flexible)

#### Order Information


Order Code		300
ProTec ZPN T1H-xxx-3+1-E-F (with protected auxiliary terminal)		59.A614
ProTec ZPN T1H-xxx-3+1-E-R-F (with remote contacts and protected auxiliary terminal)		59.A615

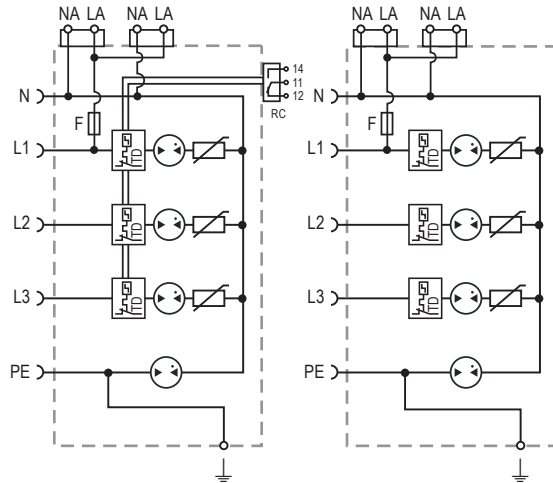
\*IP 40 (in combination with cover)

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

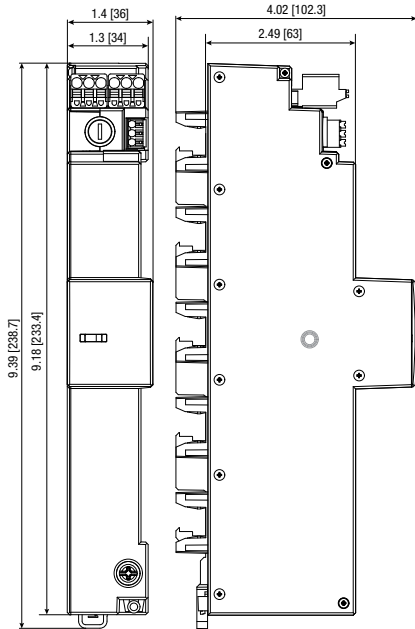
### Internal Configuration

#### Legend

- F* Integrated Fuse Link
- NA* Neutral Auxiliary Terminal
- LA* Line 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 Disconnect



### Complete Unit



#### Complete Unit Dimensions & Packaging

<b>ProTec ZPN T1H-xxx-3+1-E-F</b>	<b>300</b>
Weight	pounds [grams] 1.446 [656]
Packaging Dimensions (HxWxL)	270x375x395 [10.6x14.8x15.5]
Standard Order Quantity	24 Units
<b>ProTec ZPN T1H-xxx-3+1-E-R-F</b>	<b>300</b>
Weight	pounds [grams] 1.457 [661]
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.

