



IEC/EN Category: D1/C1/C2/C3  
 Voltages: 110V DC  
 Maximum Operating Voltage: 180V DC  
 Frequency Range: up to 250MHz  
 Surge Discharge Ratings:  $I_n$ : up to 20kA  
 $I_{imp}$ : up to 7.5kA  
 Housing: Compact Design  
 Compliance: IEC/EN 61643-21

The RayTel 20 is intended to protect DSL Networks from overvoltage surges and electrostatic discharges created by switching transients in buildings. DSL systems are particularly prone to such disturbances due to long cable lengths.

Enables fast connection of one pair without tools and integrated strain relief for the connecting cable. Cut off frequency up to 250 MHz enables maximum transmission performance in case of high speed signal parts.

## Technical Data

### RayTel 20

#### Electrical

Type per IEC/EN 61643-21		D1/C1/C2/C3
Number of Protected Pairs		1 Pair (2 Conductors)
Nominal Operating Voltage (DC)	$U_n$	110V
Maximum Continuous Operating Voltage (DC)	$U_c$	180V
Maximum Continuous Operating Voltage (AC)	$U_c$	127V
Nominal Current at 40°C	$I_L$	0.4 A
C2 Total Nominal Discharge Current (8/20 $\mu$ s)	$I_n$	20 kA
C2 Nominal Discharge Current per Line (8/20 $\mu$ s)	$I_n$	10 kA
D1 Total Lightning Impulse Current per Line (10/350 $\mu$ s)	$I_{imp}$	7.5 kA
D1 Lightning Impulse Current per Line (10/350 $\mu$ s)	$I_{imp}$	2.5 kA
Voltage Protection Level at at 1 kV/ $\mu$ s C3 (Line-Line)	$U_p$	<250V
(Lines-Ground)		<550V
Voltage Protection Level at $I_n$ (Lines-Ground)	$U_p$	<750V
Series Resistance per Line	$R_s$	9 $\Omega$
Bandwidth	$f_G$	up to 250 MHz
Capacitance (Line-Line)	C	$\leq 20$ pF
(Lines-Ground)	C	$\leq 10$ pF

#### Mechanical

Temperature Range	-13 °F to +104 °F [-25 °C to +40 °C]
Cross-sectional Area of the Signal Lines	0.13-2.5mm <sup>2</sup> (solid)
Cross-sectional Area of the Signal Lines	0.13-2.5mm <sup>2</sup> (flexible)
Cross-sectional Area of the Earth Terminal	0.2-2.5 mm <sup>2</sup>
Connection Type	PCB Terminals
Degree of Protection IEC/EN 60529	IP 66
Housing Material	Polypropylene; Grey

#### Order Information

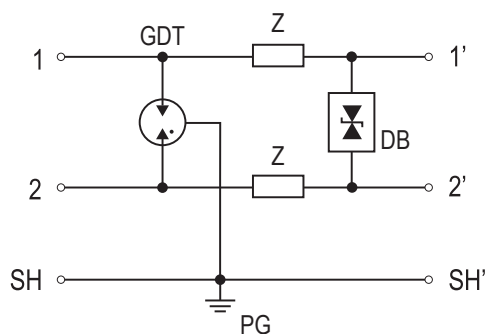
Order Code	
RayTel 20	124 152

## RayTel 20

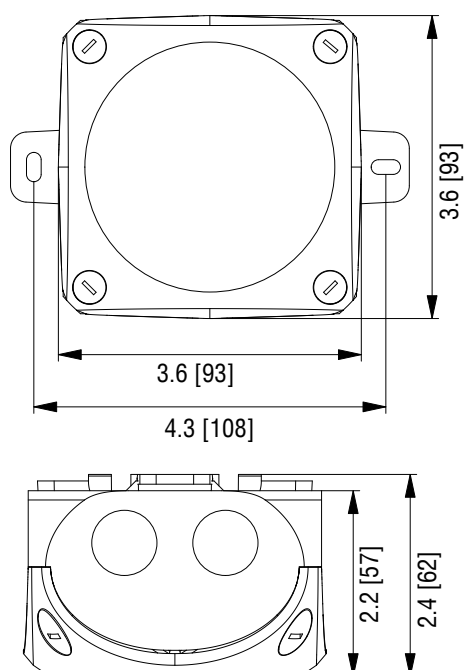
### Internal Configuration

#### Legend

DB Diode Block  
GDT Gas Discharge Tube  
PG Protective Grounding  
Z Impedance



### Dimensions & Packaging



#### RayTel 20

##### Dimensions

Weight per Unit	5.29 oz [150 g]
Packaging Dimensions (Single Unit)	3.6 × 3.6 × 2.4" [93 × 93 × 63 mm]
Minimum Package Quantity	1 piece

inches  
[mm]

Information contained in this document is subject to  
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COMPLIANT  CE

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