

**DATA SHEET**

SPD for RS-485 Systems

**RayDat RS 485****D1 • C1 • C2 • C3**

IEC/EN Category: D1/C1/C2/C3  
 Surge Discharge Ratings:  $I_n$ : 20 kA,  $I_{imp}$ : 2.5 kA  
 Voltages: 5VDC  
 Max. Operating Voltage: 6VDC  
 Frequency Range: 1 MHz  
 Housing: 16 Terminal, Compact Design  
 Compliance: IEC/EN 61643-21

**Technical Data****RS 485****Electrical**

Number of Protected Pairs		2(4 Conductors)
Nominal Operating Voltage (DC)	$U_n$	5V
Maximum Continuous Operating Voltage (DC)	$U_c$	6V
Rated Load Current at 25°C	$I_L$	500mA
C2 Nominal Discharge Current (8/20 $\mu$ s) (Line-Line)	$I_n$	20kA
D1 Impulse Current (10/350 $\mu$ s)	$I_{imp}$	2.5kA
Residual Voltage at 5kA (8/20 $\mu$ s) (Line-Line)	$U_{res}$	20V
Rated Spark Overvoltage (5, 6, 7 & 8-4, SG)		6.5V – 8.5V
	(5-6 & 7-8)	6.5V – 8.5V
	(5,6,7 & 8-2, PG)	78V – 116V
Response Time Overvoltage Protection (5,6,7,8,SG)	$t_A$	< 1 ns
Thermal Protection (5,6,7,8)		Yes
Insulation Resistance of Protection	$R_{iso}$	6k $\Omega$
Serial Resistance per Path	R	1.7 – 1.9 $\Omega$
Transverse Capacitance	C	< 2nF
Cut-off Frequency	$f_G$	> 1 MHz

**Mechanical**

Temperature Range		-40 °F to +176 °F [-40 °C to +80 °C]
Terminal Cross Section Multi-strand (max.)		2x14 AWG [2x2.5mm <sup>2</sup> ]
Terminal Screw Torque		17.7 lbf.in [2.0Nm]
Degree of Protection IEC/EN 60529		IP 20 (built-in)
Housing Material		Thermoplastic; Grey; Extinguishing Degree V-0
Mounting IEC/EN 60715		35mm DIN Rail

**Order Information**

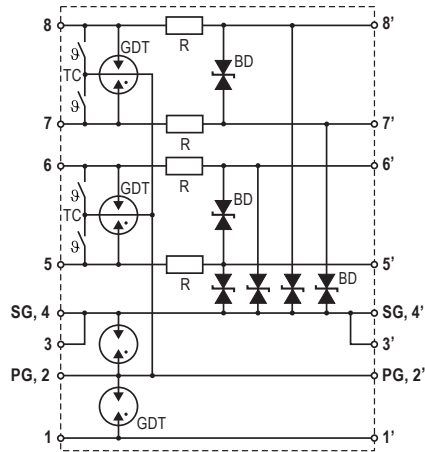
Order Code		
RS 485		703 812

# RayDat RS 485

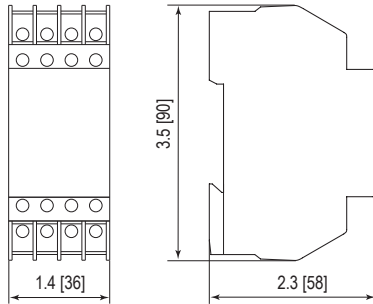
## Internal Configuration

### Legend

- BD Bi-directional TVS Diode
- GDT Gas Discharge Tube
- PG Protective Grounding
- R Resistor
- SG Signal Grounding
- TC Thermo-clip



## Dimensions & Packaging



### RS 485

#### Dimensions

Weight per Unit	4.02 oz [114 g]
Dimensions DIN 43880	2TE
Packaging Dimensions (Single Unit)	1.5 × 2.9 × 4.2" [39 × 74 × 106 mm]
Minimum Package Quantity	6 pieces

inches  
[mm]

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

RoHS COMPLIANT  CE

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