

**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: 5 VDC  
 Max. Operating Voltage: 6 VDC  
 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                        | $I_L$     | 500 mA          |
| C2 Nominal Discharge Current (8/20µs) (Line-Line) | $I_n$     | 20 kA           |
| D1 Impulse Current (10/350µs)                     | $I_{imp}$ | 2.5 kA          |
| Residual Voltage at 5kA (8/20µs) (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               | $R_{iso}$ | 6 kΩ            |
| Serial Resistance per Path                        | $R$       | 1.7 – 1.9 Ω     |
| Transverse Capacitance                            | $C$       | < 2 nF          |
| 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 [2x2.5 mm <sup>2</sup> ]             |
| Terminal Screw Torque                      | 17.7 lbf.in [2.0 Nm]                          |
| Degree of Protection IEC/EN 60529          | IP 20 (built-in)                              |
| Housing Material                           | Thermoplastic; Grey; Extinguishing Degree V-0 |
| Mounting IEC/EN 60715                      | 35 mm DIN Rail                                |

**Order Information**

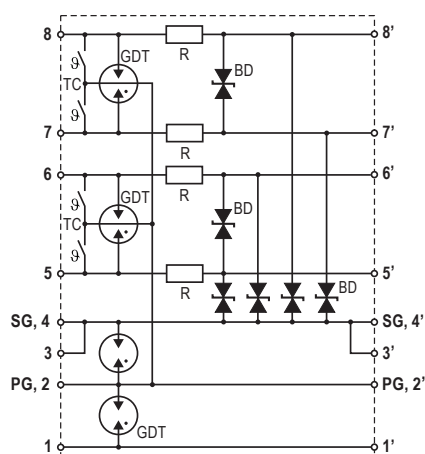
|            |         |
|------------|---------|
| Order Code |         |
| RS 485     | 703 812 |

## RayDat RS 485

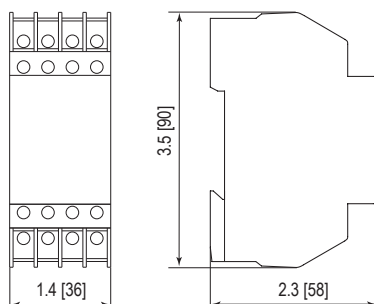
### Internal Configuration

#### 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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