

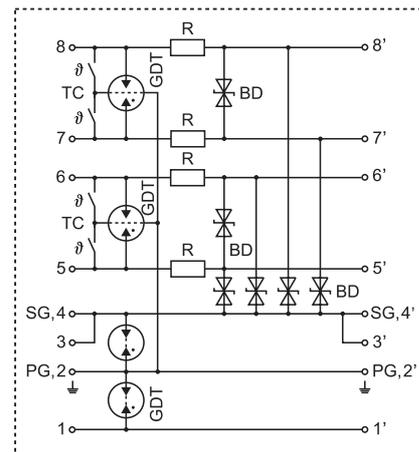
## surge protection of data protocol



- **Purpose:** the **RP-RS 485** series has been developed to protect two pair data transmission circuit using the RS 485 and V11 protocol
- **Mounting:** direct mounting on 35 mm DIN rail mount, EN 50022
- **Overvoltage protection:** the circuit topology consists of two balanced pairs with equipotential equalization between them. Equipotential equalization is also provided between signal ground and protective ground to avoid equipment damage from ground potential rises during surge activity. Coarse protection is provided by a three terminal gas discharge tube while fine protection is provided using a high speed silicon stage which provides both common (longitudinal) mode protection from each line to protective ground, and differential (transverse) mode protection between each pair. Care is taken to ensure coordination between these two stages without voltage or surge current blind spots occurring is provided to reduce the hazards of thermal runaway should there be an inadvertent mains incursion fault compact design with built-in protective insert
- **Thermal protection:**
- **Housing:**
- **Compliance with standard:** PN-IEC 61643-1
- **Recognitions, certifications:**



RP-RS 485



Legend:

- TC thermo-clip
- GDT gas discharge tube
- R resistor
- BD bi-directional TVS diode
- PG protective grounding - the arrester is additionally fitted with a wire
- SG signal grounding

Type of arrester

RP-RS 485

Technical data

Protection construction		one part
Number of protected pairs		2 (4 conductors)
Nominal operating voltage	$U_n$	5 V DC
Max. continuous operating voltage	$U_c$	6 V DC
Rated spark overvoltage		
• (5-6 and 7-8)		6...8 V
• (5/6/7 and 8-4, SG)		6...8 V
• (5/6/7 and 8-2, PG)		78...116 V
Nominal current at 25 °C	$I_n$	0,5 A
Nominal discharge current (8/20)	$I_{sn}$	20 kA
Max. discharge current (8/20)	$I_{max}$	20 kA
Residual voltage at 5 kA (8/20 $\mu$ s)		20 V
Response time	$t_A$	< 1 ns (5/6/7/8-SG)
Thermal protection		thermo-clip TC (for 5,6,7,8)
Insulation resistance of the protection		$\geq 5 \text{ k}\Omega / 5 \text{ V DC}$
Serial resistance	$R$	1,7...1,9 $\Omega$
Transverse capacitance	$C$	< 2 nF
Limit frequency	$f_G$	> 1 MHz
Operating temperature	$\vartheta$	-40...+80 °C
Cross-section of connection wire		max. 6 mm <sup>2</sup>
Terminal screw torque		0,25 Nm
Housing protection category		IP 20
Housing material		thermoplastic, extinguishing degree UL 94 V-0
Housing colour		gray
Dimensions		90 x 36 x 58 mm (DIN 43880: 2TE)

