

# DATA SHEET

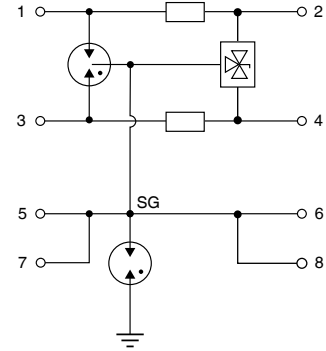
## SPD with Separated Signal Ground (RS 232)

### RayDat SGH-3 Series

D1 • C1 • C2 • C3



IEC/EN Category: D1/C1/C2/C3  
 Surge Discharge Ratings:  $I_n$ : 10kA,  $I_{max}$ : 20kA,  $I_{imp}$ : 2.5kA  
 Voltages: 5, 12, 15, 24, 30, 48, 60, 110V DC  
 Frequency Range: 30MHz  
 Housing: Modular Design  
 Compliance: IEC/EN 61643-21  
 Configuration:



### Technical Data

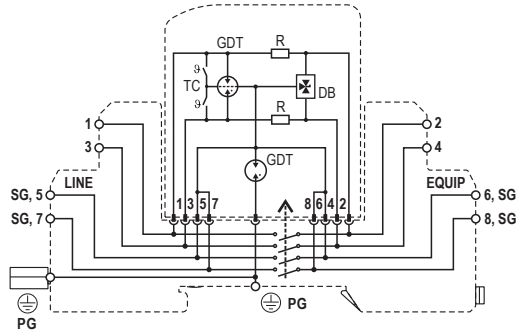
SGH-3 Series		5	12	15	24	30	48	60
<b>Electrical</b>								
Lines Protected		1 (2 Conductors)						
Nominal Operating Voltage (DC)	$U_n$	5V	12V	15V	24V	30V	48V	60V
Maximum Continuous Operating Voltage (DC)	$U_c$	6V	15V	18V	28V	33V	52V	64V
Rated Load Current at 25°C	$I_L$	1 A						
C2 Nominal Discharge Current (8/20µs)	$I_n$	10kA						
Maximum Discharge Current (8/20µs)	$I_{max}$	20kA						
D1 Impulse Current (10/350µs)	$I_{imp}$	2.5kA						
Residual Voltage at 5kA (8/20µs)	(Line-Line) $U_{res}$	<22V	<42V	<48V	<70V	<80V	<140V	<160V
Rated Spark Overvoltage	(SG-Ground)	184-276V						
	(Line-Line), (Line-SG)	7-10V	16-19V	20-24V	30-36V	35-43V	55-68V	67-85V
Response Time Overvoltage Protection	(Line-Line) $t_A$	< 1 ns						
	(Line-Ground)	< 100 ns						
Insulation Resistance of the Protection	(Line-Line) $R_{iso}$	≥ 6KΩ	≥ 15MΩ	≥ 18MΩ	≥ 28MΩ	≥ 33MΩ	≥ 52MΩ	≥ 64MΩ
	(Line-Ground)	> 1GΩ/100V						
Serial Resistance per Path	$R$	1.6-2.0Ω						
Transverse Capacitance	(Line-Line) $C$	50pF						
	(Line-Ground)	5pF						
Cut-off Frequency	$f_G$	30MHz						
<b>Mechanical</b>								
Temperature Range		-40 °F to +176 °F [-40 °C to +80 °C]						
Terminal Cross Section Multi-strand (max.)		12 AWG [4 mm <sup>2</sup> , 2.5 mm <sup>2</sup> Q Version]						
Terminal Screw Torque		4.5 lbf-in [0.5 Nm]						
Degree of Protection IEC/EN 60529		IP20 (built-in)						
Housing Material		Thermoplastic; Grey; Extinguishing Degree V-0						
Mounting IEC/EN 60715		35 mm DIN Rail						
<b>Order Information</b>								
Order Code		5	12	15	24	30	48	60
SGH-3-xxx		7086.61	7086.62	7086.63	7086.64	7086.65	7086.66	7086.67
SGH-3-xxxM (module)		7086.69	7086.70	7086.71	7086.72	7086.73	7086.74	7086.75

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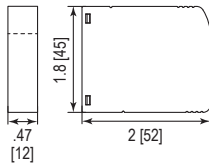
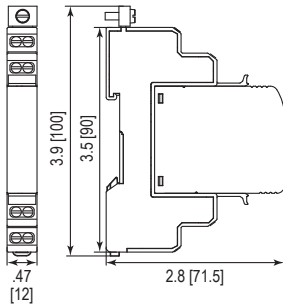
## Internal Configuration

### Legend

- DB Diode Block
- GDT Gas Discharge Tube
- R Resistor
- PG Protective Grounding
- SG Signal Grounding
- TC Thermo-clip



## Dimensions & Packaging



SGH-3 Series	5	12	15	24	30	48	60
<b>Dimensions</b>							
Weight per Unit	2.11 oz [60g]						
Dimensions DIN 43880	2/3 TE						
Packaging Dimensions (Single Unit)	3.4 x .59 x 4" [87 x 15 x 102mm]						
Minimum Package Quantity	15 pieces						

SGH-3-xxxM Series	5	12	15	24	30	48	60
<b>Dimensions</b>							
Weight per Unit	.91 oz [26g]						
Packaging Dimensions (Single Unit)	3.4 x .59 x 4" [87 x 15 x 102mm]						
Minimum Package Quantity	15 pieces						

inches  
[mm]

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

