

DATA SHEET

Modular SPD for Industrial Fieldbus Systems

RayDat SBH-3 Series

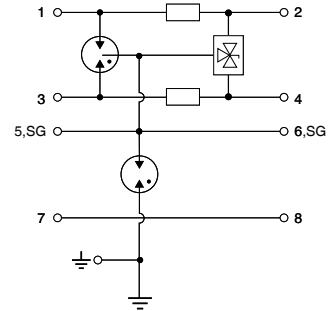
D1 • C1 • C2 • C3

UL Listed



IEC/EN Category: D1/C1/C2/C3
 Surge Discharge Ratings: I_n : 10 kA, I_{max} : 20 kA, I_{imp} : 2.5 kA
 Voltages: 5, 12, 30V DC
 Frequency Range: 30 MHz
 Housing: Modular Design
 Compliance: IEC/EN 61643-21
 UL 497B 4th Edition

Configuration:



Technical Data

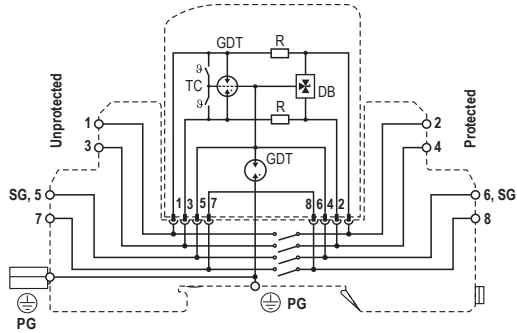
SBH-3 Series	5	12	30	
Electrical				
Lines Protected	1 (2 Conductors)			
Nominal Operating Voltage (DC)	U_n	5V	12V	30V
Maximum Continuous Operating Voltage (DC)	U_c	6V	15V	33V
Rated Load Current at 25°C	I_L	1 A		
C2 Nominal Discharge Current (8/20 μs)	I_n	10 kA		
Maximum Discharge Current (8/20 μs)	I_{max}	20 kA		
D1 Impulse Current (10/350 μs)	I_{imp}	2.5 kA		
Residual Voltage at 5 kA (8/20 μs)	(Line-Line) U_{res}	< 22V	< 42V	< 80V
Rated Spark Overvoltage	(SG-Ground)	184-276V		
	(Line-Line)	7-10V	16-19V	35-43V
Response Time Overvoltage Protection	(Line-Line) t_A	< 1 ns		
	(Line-Ground)	< 100 ns		
Insulation Resistance of the Protection	(Line-Ground) R_{iso}	> 1 GΩ/100V		
	(Line-Line)	≥ 6 KΩ	≥ 15 MΩ	≥ 33 MΩ
Serial Resistance per Path	R	1.6-2.0 Ω		
Transverse Capacitance	(Line-Line) C	50 pF		
	(Line-Ground)	5 pF		
Cut-off Frequency	f_G	30 MHz		
Mechanical				
Temperature Range	-40 °F to +176 °F [-40 °C to +80 °C]			
Terminal Cross Section Multi-strand (max.)	12 AWG			
	4 mm ² , 2.5 mm ² Q Version			
Terminal Screw Torque	4.5 lbf-in [0.5 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	5	12	30	
SBH-3-xx	7082.86	7082.88	7082.90	
SBH-3-xxQ (Quick Connect Terminals)	7085.21	7085.22	7085.23	
SBH-3-xxM (module)	7082.87	7082.89	7082.91	

RayDat SBH-3 Series

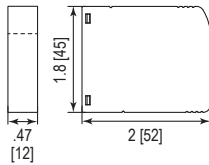
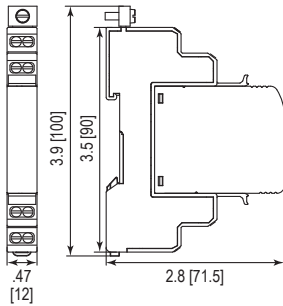
Internal Configuration

Legend

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



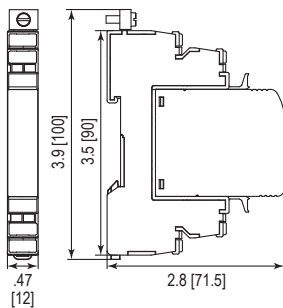
Dimensions & Packaging



SBH-3 Series	5	12	30
Dimensions			
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 102 mm]		
Minimum Package Quantity	15 pieces		

SBH-3-xxM Series	5	12	30
Dimensions			
Weight per Unit	.91 oz [26g]		
Packaging Dimensions (Single Unit)	3.4 x .59 x 4" [87 x 15 x 102 mm]		
Minimum Package Quantity	15 pieces		

Quick Connect Terminals



SBH-3-xxQ Series	5	12	30
Dimensions			
Weight per Unit	2.18 oz [62g]		
Dimensions DIN 43880	2/3 TE		
Packaging Dimensions (Single Unit)	3.4 x .59 x 4" [87 x 15 x 102 mm]		
Minimum Package Quantity	15 pieces		

inches
[mm]

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

