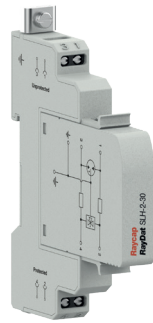


DATA SHEET

Modular SPD for Single Pair RayDat SLH-2 Series D1 • C1 • C2 • C3

*UL Listed



IEC/EN Category: D1/C1/C2/C3
 Mode of Protection: Longitudinal, Transverse
 Coarse Protection: 3 Terminal GDT
 Voltages: 5, 12, 15, 24, 30*, 48, 60, 110V DC
 Frequency Range: 30 MHz
 Surge Discharge Ratings: I_n : 10 kA, I_{max} : 20 kA, I_{imp} : 2.5 kA
 Series Load Current: 1 A
 Enclosure: DIN 43880 2/3TE, DIN Rail Mount
 Terminals: Stranded to 4 mm²
 Housing: Modular Design
 Compliance: IEC/EN 61643-21
 UL 497B 4th Edition

These efficient overvoltage barriers contain both coarse and fine protection stages and provide longitudinal and a transverse surge protection.

The initial protection stage comprises a three-pole gas discharge tube and is designed to divert the primary surge energy. The subsequent fine protection stage is carried out using fast bi-directional silicon avalanche diodes. Care is taken in the design of this fine protection stage to avoid capacitive line loading and thereby ensuring a low insertion loss and wide operating frequency range.

Series line impedances ensure energy coordination between the

coarse and a fine protection stages at all levels of the incident surge. To protect against the hazards of electric shock and fire which often results when power frequency contact occurs between power and communication lines, often called mains incursion, a thermo-clip is included on the primary protection stage to divert the power frequency current to ground.

The plug-in module/base design facilitates replacement of a failed module without the need to remove system wiring.

If the module is unplugged out of the base, the connection lines remain enabled.

Technical Data

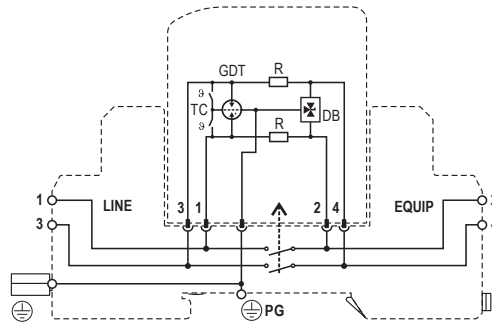
SLH-2 Series		5	12	15	24	30*	48	60	110
Electrical									
Lines Protected		1 (2 Conductors)							
Nominal Operating Voltage (DC)	U_n	5V	12V	15V	24V	30V	48V	60V	110V
Maximum Continuous Operating Voltage (DC)	U_c	6V	15V	18V	28V	33V	52V	64V	170V
Rated Load Current at 25°C	I_L	1 A							
C2 Nominal Discharge Current (8/20µs)	I_n	10 kA							
Maximum Discharge Current (8/20µs)	I_{max}	20 kA							
D1 Impulse Current (10/350µs)	I_{imp}	2.5 kA							
Residual Voltage at 5kA (8/20µs)	U_{res}	<22V	<42V	<48V	<70V	<80V	<140V	<160V	<450V
Rated Spark Overvoltage	(Line-Ground)	7-10V	16-21V	21-25V	31-37V	36-44V	57-69V	68-84V	184-264V
	(Line-Line)	7-10V	16-21V	21-25V	31-37V	36-44V	57-69V	68-84V	184-264V
Response Time Overvoltage Protection	t_A	< 1 ns							
Thermal Protection		Yes							
Insulation Resistance of the Protection	R_{iso}	≥ 6 KΩ	≥ 15 MΩ	≥ 18 MΩ	≥ 28 MΩ	≥ 33 MΩ	≥ 52 MΩ	≥ 64 MΩ	≥ 170 MΩ
Serial Resistance per Path	R	1.6-2.0Ω							
Transverse Capacitance	C	50 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	15	24	30*	48	60	110
SLH-2-xxx		7086.33	7086.34	7086.35	7086.36	7082.80	7086.37	7086.38	7086.39
SLH-2-xxxQ (Quick Connect Terminals)		7085.05	7085.06	7085.07	7085.08	7085.09	7085.10	7085.11	7085.12
SLH-2-xxxM (module)		7086.40	7086.41	7086.42	7086.43	7082.81	7086.44	7086.45	7086.46

RayDat SLH-2 Series

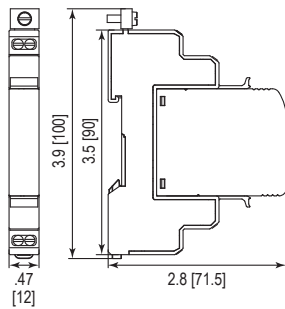
Internal Configuration

Legend

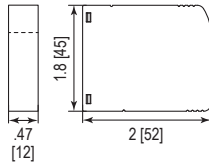
- DB Diode Block
- GDT Gas Discharge Tube
- PG Protective Grounding
- R Resistor
- TC Thermo-clip



Dimensions & Packaging

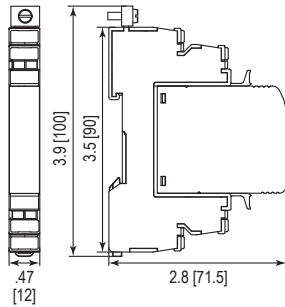


SLH-2 Series	5	12	15	24	30	48	60	110
Dimensions								
Weight per Unit	1.83 oz [52 g]							
Dimensions DIN 43880	2/3 TE							
Packaging Dimensions (Single Unit)	3.4 x .59 x 4" [87 x 15 x 102 mm]							
Minimum Package Quantity	15 pieces							



SLH-2-xxxM Series	5	12	15	24	30	48	60	110
Dimensions								
Weight per Unit	.84 oz [24 g]							
Packaging Dimensions (Single Unit)	3.4 x .59 x 4" [87 x 15 x 102 mm]							
Minimum Package Quantity	15 pieces							

Quick Connect Terminals



SLH-2-xxxQ Series	5	12	15	24	30	48	60	110
Dimensions								
Weight per Unit	1.90 oz [54 g]							
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							



Bases with Quick Connect Terminals enable faster installation and have built-in contacts to enhance vibration resistance.

inches
[mm]

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

