

DATA SHEET

SPD with Visual Indication RayDat SRH-2L Series D1 • C1 • C2 • C3



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

The RayDat SRH-2L Series provides the same level of protection and technical performance as the SLH-2L Series, but also provides visual LED indication. If the unit fails, the LED is lighted.

Note: device must be properly connected to RayDat PSU-14 unit. These barriers provide both coarse and fine protection stages and offer longitudinal and transverse 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 implemented using fast bi-directional silicon avalanche diodes. Special design techniques have been employed in the design of the fine protection stage to avoid capacitive line loading and thereby ensure a low insertion loss and wide operating frequency range.

Series line impedance is used to ensure energy co-ordination between the coarse and fine protection stages irrespective of the magnitude of the incident surge. When power frequency contact occurs between power and communication lines, the hazard of electric shock and fire is increased. To prevent such risk, a thermo-clip is included in the primary protection stage of this device 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 from the base, the through-connection is maintained, allowing continued operations while a replacement module is ordered.

Technical Data

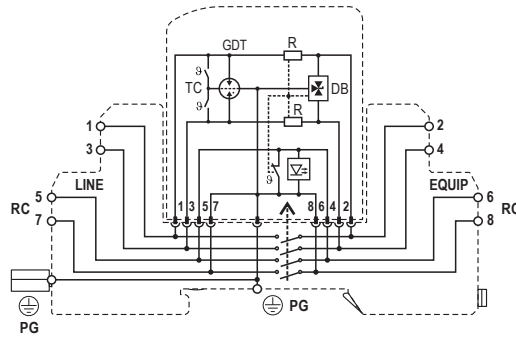
SRH-2L Series		5	12	24	30
Electrical					
Lines Protected		1 (2 Conductors)			
Nominal Operating Voltage (DC)	U_n	5V	12V	24V	30V
Maximum Continuous Operating Voltage (DC)	U_c	6V	15V	28V	33V
Rated Load Current at 25°C	I_L	1 A			
C2 Nominal Discharge Current (8/20µs)	I_n	10kA			
Maximum Discharge Current (8/20µs)	I_{max}	20kA			
D1 Impulse Current (10/350µs)	I_{imp}	2.5kA			
Residual Voltage at 5kA (8/20µs)	U_{res}	<22V	<42V	<70V	<80V
Rated Spark Overvoltage	(Line-Ground)	7-10V	16-21V	31-37V	36-44V
	(Line-Line)	7-10V	16-21V	31-37V	36-44V
Response Time Overvoltage Protection	t_A	< 1 ns			
Thermal Protection		Yes			
Insulation Resistance of the Protection	R_{iso}	≥ 6 KΩ	≥ 15 MΩ	≥ 28 MΩ	≥ 33 MΩ
Serial Resistance per Path	R	1.6-2.0Ω			
Transverse Capacitance	C	50pF			
Cut-off Frequency	f_G	30MHz			
Mechanical					
Temperature Range		-40 °F to +176 °F [-40 °C to +80 °C]			
Terminal Cross Section Multi-strand (max.)		12 AWG [4 mm ²]			
Terminal Screw Torque		4.42 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		35mm DIN Rail			
Remote Contacts Ratings		AC 250V/0.5A, DC 50V/1A			
Order Information					
Order Code		5	12	24	30
SRH-2-xxxL		7085.44	7085.46	7085.48	7085.42
SRH-2-xxxLM (module)		7085.45	7085.47	7085.49	7085.43
SRH-2-xxxLQ		7085.56	7085.58	7085.60	7085.62

RayDat SRH-2L Series

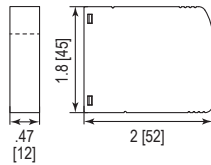
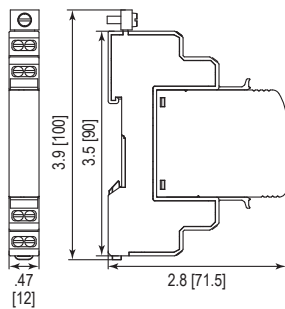
Internal Configuration

Legend

- DB Diode Block
- GDT Gas Discharge Tube
- PG Protective Grounding
- R Resistor
- RC Remote Control (NC)
- TC Thermo-clip



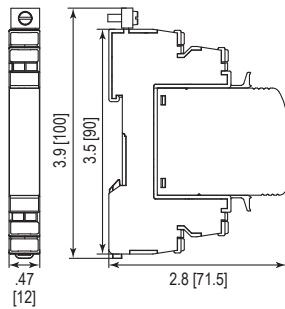
Dimensions & Packaging



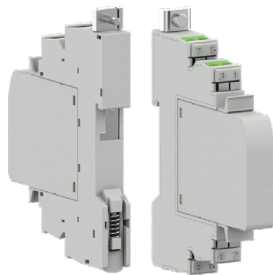
SRH-2L Series	5	12	24	30
Dimensions				
Weight per Unit	2.04 oz [58 g]			
Dimensions DIN 43880	2/3 TE			
Packaging Dimensions (Single Unit)	3.4 x .59 x 4" [87 x 15 x 102 mm]			
Minimum Package Quantity	15 pieces			

SRH-2-xxxLM Series	5	12	24	30
Dimensions				
Weight per Unit	.85 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



SRH-2LQ Series	5	12	24	30
Dimensions				
Weight per Unit	2.11 oz [60 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.

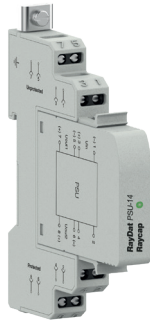
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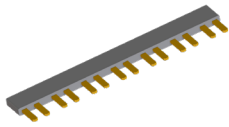
SPD with Visual Indication
RayDat SRH-2L Accessories
 D1 • C1 • C2 • C3

RayDat PSU-14

RayDat PSU-14 **127 621**

Electrical

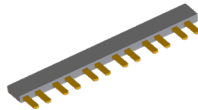
Input Voltage	U_{out}	21.5V DC ... 28V DC
Output Voltage		max. 28V DC
Output Current	I_{out}	2x2mA
Input Terminals		3 (+), 1 (-)

RayDat PSU-PB-7P

RayDat PSU-PB-7P **127 622**

Electrical

Number of Poles		7
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RayDat PSU-PB-6P

RayDat PSU-PB-6P **127 623**

Electrical

Number of Poles		6
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