

SPD with Multi-Protection Modes
RayDat SUHI-2 Series
 D1 • C1 • C2 • C3



IEC/EN Category: D1/C1/C2/C3
 Mode of Protection: Longitudinal, Transverse
 Coarse Protection: 2 × 2 terminal GDT
 1 × 3 Terminal GDT
 Voltages: 5, 12, 15, 24, 30, 48, 60, 110V DC
 Frequency Range: 0.6 - 10MHz
 Surge Discharge Ratings: I_n : 20kA, I_{max} : 30kA, I_{imp} : 5kA
 Series Load Current: 1A
 Enclosure: DIN 43880 1TE, DIN Rail Mount
 Terminals: Stranded to 6 mm²
 Housing: Modular Design
 Compliance: IEC/EN 61643-21

The RayDat SUHI-2 Series of surge protective devices has been developed to protect against the effects of induced voltages onto data, signal and communication circuits.

It is intended for those applications where higher than normal surge discharge levels may be experienced.

Coarse protection is provided by 2 two-terminal gas discharge tubes. A second stage of protection is provided using a three

terminal gas discharge tube which assists in common mode protection.

Fine protection is provided using a high speed silicon avalanche diodes or metal oxide varistor stage. Care is taken to ensure coordination between these two stages without voltage or surge current blind spots occurring.

Both common (longitudinal) mode and differential (transverse) mode protection is provided.

Technical Data

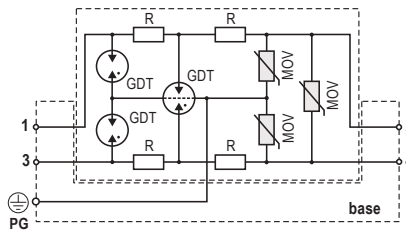
SUHI-2 Series		5V	12V	15V	24V	30V	48V	60V	110V
Electrical									
Lines Protected		1 (2 Conductors)							
Nominal Operating Voltage (DC)	U_n	5V	12V	15V	24V	30V	48V	60V	110V
Maximum Continuous Operating Voltage (DC)	U_c	6V	15V	18V	28V	33V	52V	64V	170V
Rated Load Current at 25°C	I_L	1A							
C2 Nominal Discharge Current (8/20µs)	I_n	20kA							
Maximum Discharge Current (8/20µs)	I_{max}	30kA							
D1 Impulse Current (10/350µs)	I_{imp}	5kA							
Residual Voltage at 5kA (8/20µs)	U_{res}	<20V	<39V	<45V	<65V	<77V	<135V	<150V	<450V
Rated Spark Overvoltage	(Line-Ground)	6.5-9V	16-20V	20-24V	30-36V	35-43V	55-68V	67-85V	184-264V
	(Line-Line)	6.5-9V	16-20V	20-24V	30-36V	35-43V	55-68V	67-85V	184-264V
Response Time Overvoltage Protection	t_A	<1 ns							<25 ns
Insulation Resistance of the Protection	R_{iso}	≥ 6KΩ	≥ 15MΩ	≥ 18MΩ	≥ 28MΩ	≥ 33MΩ	≥ 52MΩ	≥ 64MΩ	≥ 170MΩ
Serial Resistance per Path	R	9-11Ω	9-11Ω	9-11Ω	9-11Ω	9-11Ω	9-11Ω	9-11Ω	cca. 2Ω
Transverse Capacitance	C	7.0nF	4.5nF	3.3nF	2.9nF	2.1nF	1.2nF	1.0nF	150pF
Cut-off Frequency	f_G	0.6MHz	0.9MHz	1.1MHz	1.4MHz	1.8MHz	2.2MHz	3.0MHz	10MHz
Mechanical									
Temperature Range		-40 °C to +80 °C							
Terminal Cross Section Multi-strand		6mm ²							
Terminal Screw Torque		2.0Nm							
Degree of Protection IEC/EN 60529		IP20							
Housing Material		Thermoplastic; Yellow; Extinguishing Degree V-0							
Mounting IEC/EN 60715		35mm DIN Rail							
Order Information									
Order Code		5V	12V	15V	24V	30V	48V	60V	110V
SUHI-2-xxx		7025.59	7025.60	7025.61	7025.62	7025.63	7025.64	7025.65	7025.66
SUHI-2-xxxM (module)		7025.67	7025.68	7025.69	7025.70	7025.71	7025.72	7025.73	7025.74

SUHI-2 Series

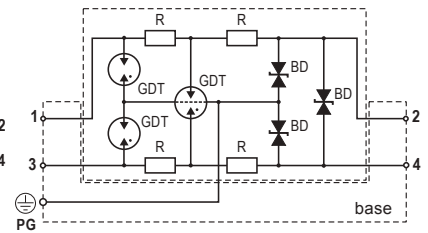
Internal Configuration

Legend

- BD Bi-directional TVS Diode
- GDT Gas Discharge Tube
- MOV Metal Oxide Varistor
- PG Protective Grounding
- R Resistor

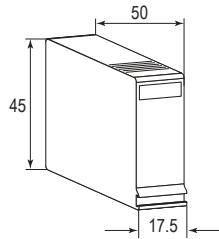
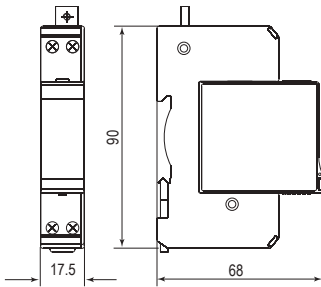


SUHI-2 110V



SUHI-2 5-60V

Dimensions & Packaging



SUHI-2 Series	5V	12V	15V	24V	30V	48V	60V	110V
Dimensions								
Weight per Unit	96 g							
Dimensions DIN 43880	1 TE							
Packaging Dimensions (Single Unit)	78 × 23 × 108 mm							
Minimum Package Quantity	15 pieces							

SUHI-2-xxxM Series	5V	12V	15V	24V	30V	48V	60V	110V
Dimensions								
Weight per Unit	34 g							
Packaging Dimensions (Single Unit)	76 × 23 × 108 mm							
Minimum Package Quantity	15 pieces							