

SPD with Multi-Protection Modes

RayDat SUHI-2 Series

D1 • C1 • C2 • C3

VMO Series



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	1 A							
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							
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	9-11 Ω	9-11 Ω	9-11 Ω	9-11 Ω	9-11 Ω	9-11 Ω	9-11 Ω	cca. 2 Ω
Transverse Capacitance	C	7.0 nF	4.5 nF	3.3 nF	2.9 nF	2.1 nF	1.2 nF	1.0 nF	150 pF
Cut-off Frequency	f_G	0.6 MHz	0.9 MHz	1.1 MHz	1.4 MHz	1.8 MHz	2.2 MHz	3.0 MHz	10 MHz
Mechanical									
Temperature Range		-40 °C to +80 °C							
Terminal Cross Section Multi-strand		6 mm ²							
Terminal Screw Torque		2.0 Nm							
Degree of Protection IEC/EN 60529		IP20							
Housing Material		Thermoplastic; Yellow; Extinguishing Degree V-0							
Mounting IEC/EN 60715		35 mm 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

