VMO Series

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, 110 V DC

Frequency Range: 0.6 - 10 MHz

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)	Un	5V	12V	15V	24V	30 V	48V	60 V	110V		
Maximum Continuous Operating Voltage (DC)	U _c	6V	15V	18V	28V	33V	52V	64 V	170V		
Rated Load Current at 25°C	IL				1	A					
C2 Nominal Discharge Current (8/20 µs)	l _n				20	kA					
Maximum Discharge Current (8/20 µs)	I _{max}	30 kA									
D1 Impulse Current (10/350 µs)	I _{imp}	5kA									
Residual Voltage at 5 kA (8/20 µs)	U_{res}	<20V	<39V	<45V	<65 V	<77V	<135V	<150V	<450V		
Rated Spark Overvoltage (Line-Ground)		6.5-9V	16-20V	20-24V	30-36V	35-43V	55-68V	67-85V	184-264 V		
(Line-Line)		6.5-9V	16-20V	20-24V	30-36V	35-43V	55-68 V	67-85V	184-264V		
Response Time Overvoltage Protection	t _A				<1 ns				<25 ns		
Insulation Resistance of the Protection	R _{iso}	≥ 6KΩ	≥ 15MΩ	≥ 18MΩ	≥ 28 MΩ	≥ 33 MΩ	≥ 52MΩ	≥ 64 MΩ	≥ 170 MΩ		
Serial Resistance per Path	R	9-11Ω	9-11Ω	9-11Ω	9-11Ω	9-11Ω	9-11Ω	9-11Ω	cca.2Ω		
Transverse Capacitance	С	7.0 nF	4.5 nF	3.3nF	2.9 nF	2.1 nF	1 . 2nF	1.0 nF	150 pF		
Cut-off Frequency	f_{G}	0.6MHz	0.9 MHz	1.1 MHz	1.4 MHz	1.8MHz	2.2 MHz	3.0 MHz	10MHz		
Mechanical											
Temperature Range					-40 °C to	o +80 °C					
Terminal Cross Section Multi-strand					6 m	nm²					
Terminal Screw Torque					2.0	Nm					
Degree of Protection IEC/EN 60529					IP	20					
Housing Material				Thermoplas	tic; Yellow; E	extinguishing	g 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		

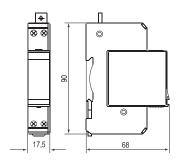
SUHI-2 Series

Internal Configuration

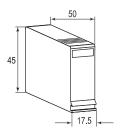
BD Bi-directional TVS Diode
GDT Gas Discharge Tube
MOV Metal Oxide Varistor
PG Protective Grounding
R Resistor

⊕ -SUHI-2 110 V SUHI-2 5-60 V

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)		$78 \times 23 \times 108 \text{mm}$									
Minimum Package Quantity				15 pi	eces						



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								