

DATA SHEET

SPD for DC Power Systems with Low Residual Voltage

RayDat PSC-2 Series

C1 • C2 • C3



IEC/EN Category: C1/C2/C3
 Mode of Protection: Longitudinal, Transverse
 Location of Use: DC Power Systems
 Coarse Protection: MOV
 Voltages: 12, 24, 48V DC
 Surge Discharge Ratings: I_n : 10kA, I_{max} : 20kA
 Serial Inductivity: 10–14 μ H
 Series Load Current: 4A
 Enclosure: DIN 43880 2/3TE, DIN Rail Mount
 Terminals: Stranded to 4 mm²
 Housing: Modular Design
 Compliance: IEC/EN 61643-21

The RayDat PSC-2 Series has been developed to protect power supplies. Coarse protection is provided by varistors, while fine protection is provided using a high-speed silicon stage.

Internal thermal disconnectors are used to reduce the hazards of thermal runaway during fault conditions, or if mains incursion onto the low voltage data circuit occurs.

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

Technical Data

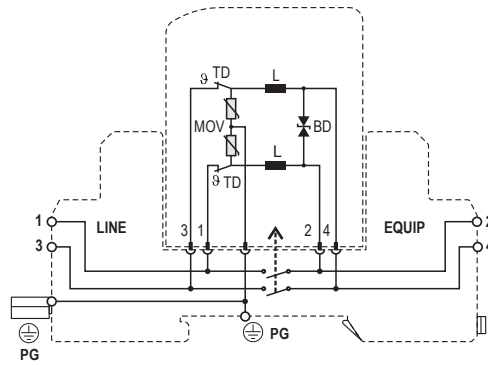
PSC-2 Series		12	24	48
Electrical				
Lines Protected		1 (2 Conductors)		
Nominal Operating Voltage (DC)	U_n	12V	24V	48V
Maximum Continuous Operating Voltage (DC)	U_c	15V	28V	52V
Rated Operating Current at 25 °C	I_L	4A		
C2 Nominal Discharge Current (8/20 μ s)	I_n	10kA		
Maximum Discharge Current (8/20 μ s)	I_{max}	20kA		
Residual Voltage at 5kA (8/20 μ s)	U_{res}	<32V	<60V	<135V
Rated Spark Overvoltage	(1, 3-PG)	90-110V	90-110V	90-110V
	(1, 3)	16-20V	30-36V	57-69V
Response Time Overvoltage Protection	t_A	<1 ns		
Thermal Protection Thermal Disconnection				
Insulation Resistance of the Protection	R_{iso}	$\geq 15M\Omega$	$\geq 28M\Omega$	$\geq 52M\Omega$
Serial Inductance per Path	L	10–14 μ H		
Transverse Capacitance	C	<5nF	<3nF	<1.5nF
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		4.5 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		35 mm DIN Rail		
Order Information				
Order Code		12	24	48
PSC-2-xx		7086.83	7086.84	7086.85
PSC-2-xxM (module)		7086.86	7086.87	7086.88

RayDat PSC-2 Series

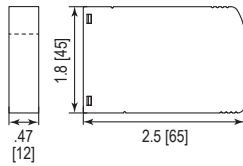
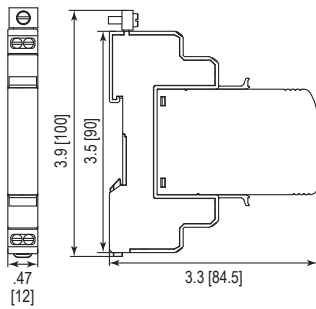
Internal Configuration

Legend

- BD Bi-Directional TVS Diode
- L Inductor
- MOV Metal Oxide Varistor
- PG Protective Ground
- TD Thermal Disconnecter



Dimensions & Packaging



PSC-2 Series	12	24	48
Dimensions			
Weight per Unit	2.25 oz [64 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		

PSC-2-xxM	12	24	48
Dimensions			
Weight per Unit	1.26 oz [36 g]		
Packaging Dimensions (Single Unit)	3.4 x .59 x 4" [87 x 15 x 102 mm]		
Minimum Package Quantity	15 pieces		

inches
[mm]

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

