

# SPD for DC Power Systems with Low Residual Voltage

## RayDat PSC-2 Series

C1 • C2 • C3

SMH-PS Series



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:  $I_n$ : 10 kA,  $I_{max}$ : 20 kA  
 Serial Inductivity: 10–14  $\mu$ H  
 Series Load Current: 4 A  
 Enclosure: DIN 43880 2/3TE, DIN Rail Mount  
 Terminals: Stranded to 4 mm<sup>2</sup>  
 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

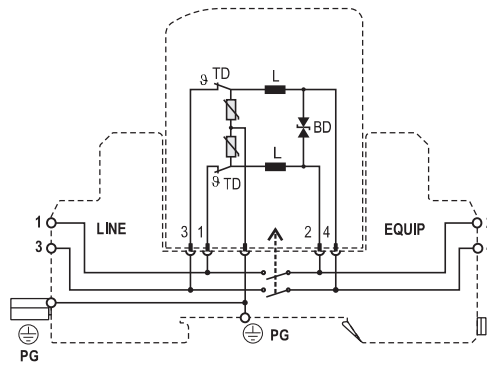
PSC-2 Series		12V	24V	48V
<b>Electrical</b>				
Lines Protected		1 (2 Conductors)		
Nominal Operating Voltage (DC)	$U_n$	12V	24V	48V
Maximum Continuous Operating Voltage (DC)	$U_c$	15V	28V	52V
Rated Operating Current at 25 °C	$I_L$	4 A		
C2 Nominal Discharge Current (8/20 $\mu$ s)	$I_n$	10 kA		
Maximum Discharge Current (8/20 $\mu$ s)	$I_{max}$	20 kA		
Residual Voltage at 5kA (8/20 $\mu$ s)	$U_{res}$	<32V	<60V	<135V
Rated Spark Overvoltage	(1, 2-PG)	90-110V	90-110V	90-110V
	(1, 2)	16-20V	30-36V	57-69V
Response Time Overvoltage Protection	$t_A$	<1 ns		
Thermal Protection Thermal Disconnection				
Insulation Resistance of the Protection	$R_{iso}$	$\geq 15 M\Omega$	$\geq 28 M\Omega$	$\geq 52 M\Omega$
Serial Inductance per Path	L	10–14 $\mu$ H		
Transverse Capacitance	C	<5nF	<3nF	<1.5nF
<b>Mechanical</b>				
Temperature Range		-40 °C to +80 °C		
Terminal Cross Section Multi-strand		4 mm <sup>2</sup>		
Terminal Screw Torque		0.5 Nm		
Degree of Protection IEC/EN 60529		IP 20		
Housing Material		Thermoplastic; Grey; Extinguishing Degree V-0		
Mounting IEC/EN 60715		35 mm DIN Rail		
<b>Order Information</b>				
Order Code		12V	24V	48V
PSC-2-xx		7086.83	7086.84	7086.85
PSC-2-xxM (module)		7086.86	7086.87	7086.88

## RayDat PSC-2 Series

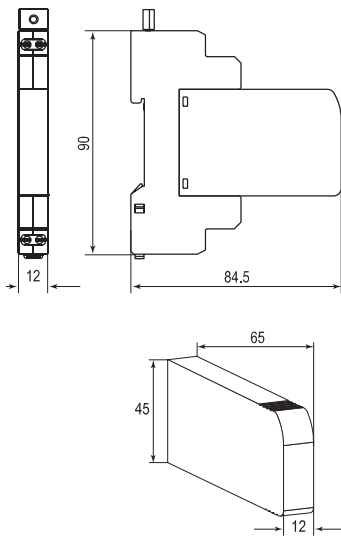
### Internal Configuration

#### Legend

- GDT Gas Discharge Tube
- MOV Metal Oxide Varistor
- PE Ground
- R Resistor
- RC Remote Control (NC)



### Dimensions & Packaging



PSC-2 Series	12V	24V	48V
<b>Dimensions</b>			
Weight per Unit	64 g		
Dimensions DIN 43880	2/3 TE		
Packaging Dimensions (Single Unit)	87 × 15 × 102 mm		
Minimum Package Quantity	15 pieces		

PSC-2-xxM	12V	24V	48V
<b>Dimensions</b>			
Weight per Unit	36 g		
Packaging Dimensions (Single Unit)	87 × 15 × 102 mm		
Minimum Package Quantity	15 pieces		

