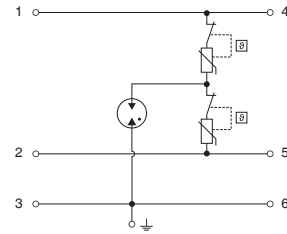


# DATA SHEET

## SPD for DC Power Systems RayDat NPS-2 Series C1 • C2 • C3



IEC/EN Category: C1/C2/C3  
 Voltages: 24, 48 V DC  
 Frequency Range: up to 800 kHz  
 Housing: Modular Design  
 Compliance: IEC/EN 61643-21  
 Configuration:



### Technical Data

NPS-2 Series		24	48*
<b>Electrical</b>			
Lines Protected		1 (2 Conductors)	
Nominal Operating Voltage (DC)	$U_n$	24V	48V
Maximum Continuous Operating Voltage (DC)	$U_c$	38V	63V
Maximum Continuous Operating Voltage (AC)	$U_c$	38V	50V
Rated Load Current at 40 °C	$I_L$	12A	
Rated Load Current at 70 °C	$I_L$	10A	
C2 Nominal Discharge Current (8/20 $\mu$ s)	(Line-Line) $I_n$	4 kV/2 kA	
	(Line-Ground)	4 kV/2 kA	
C2 Total Nominal Discharge Current (8/20 $\mu$ s)	$I_n$	8 kV/4 kA	
C2 Voltage Protection Level (4 kV/2 kA)	(Line-Line) $U_p$	250V	400V
	(Line-Ground)	650V	680V
C3 Voltage Protection Level (1 kV/ $\mu$ s)	(Line-Line) $U_p$	200V	350V
	(Line-Ground)	700V	750V
Rated Spark Overvoltage	(Line-Line)	84V - 106V	138V - 170V
	(Line-Ground)	72V - 160V	80V - 193V
Response Time Overvoltage Protection	$t_A$	<25 ns	
Thermal Protection		Yes	
Insulation Resistance of the Protection	(Line-Line) $R_{iso}$	> 10 M $\Omega$	
Serial Resistance per Path	$R$	0.1 $\Omega$	
Capacitance	(Line-Line) $C$	typ. 5 nF	typ. 2.5 nF
	(Line-Ground)	typ. 10 pF	
Maximum Frequency	$f_G$	550 kHz	800 kHz
<b>Mechanical</b>			
Temperature Range		-40 °F to +176 °F [-40 °C to +80 °C]	
Conductor Cross Section (max.)		12 AWG / 4 mm <sup>2</sup> (solid)	
		14 AWG / 2.5 mm <sup>2</sup> (flexible)	
Degree of Protection IEC/EN 60529		IP 20 (built-in)	
Housing Material		Thermoplastic; Grey; Extinguishing Degree V-0	
Mounting IEC/EN 60715		35 mm DIN Rail	
Operating State / Fault Indication		Green Flag / Red Flag	
<b>Order Information</b>			
Order Code		24	48*
NPS-2-xx		7088.21	7088.58
NPS-2-xxM (module)		7088.22	7088.59

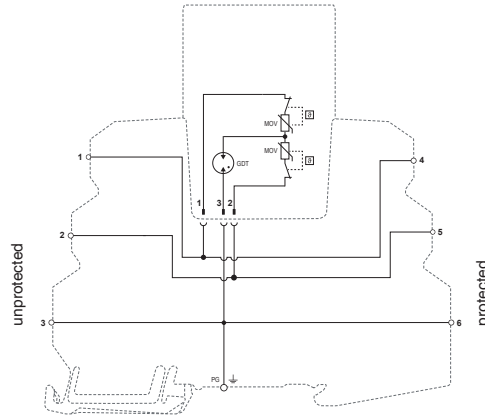
\*No UL Certification.

# RayDat NPS-2 Series

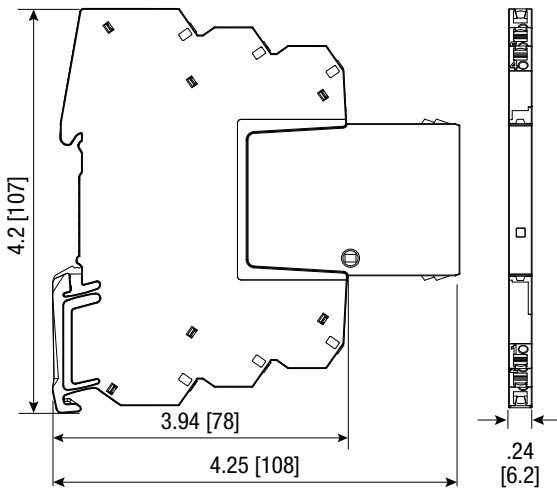
## Configuration

### Legend

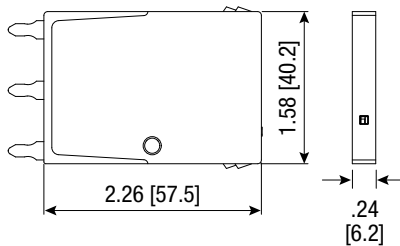
- GDT Gas Discharge Tube
- PG Protective Grounding
- MOV Metal Oxide Varistor



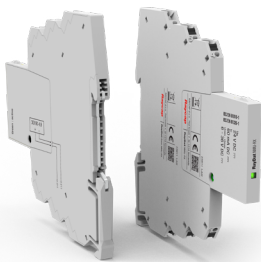
## Dimensions & Packaging



NPS-2 Series	24	48*
<b>Dimensions</b>		
Weight per Unit	2.05 oz [58g]	
Dimensions DIN 43880	.24" [6.2mm]	
Packaging Dimensions (Single Unit)	4.72×4.33×0.39" [120×110×10mm]	
Minimum Package Quantity	15 pieces	



NPS-2-xxxM Series	24	48*
<b>Dimensions</b>		
Weight per Unit	0.56 oz [16g]	
Packaging Dimensions (Single Unit)	4.72×4.33×0.39" [120×110×10mm]	
Minimum Package Quantity	15 pieces	



Monitoring Unit  
Transmitter  
& Receiver  
available for all  
product variants.

inches  
[mm]

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

