

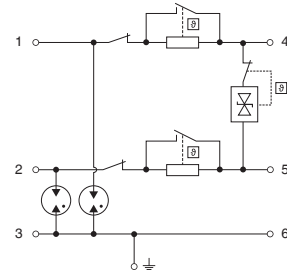
# DATA SHEET

## Modular SPD for Single Pair RayDat NSP-2 Series D1 • C1 • C2 • C3



IEC/EN Category: D1/C1/C2/C3  
 Voltages: 24, 110 V DC  
 Frequency Range: 120 MHz  
 Housing: Modular Design  
 Compliance: IEC/EN 61643-21  
 UL 497B 4th Edition

Configuration:



### Technical Data

NSP-2 Series	24	48*	110*
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#### Electrical

Lines Protected	1 (2 Conductors)			
Nominal Operating Voltage (DC)	$U_n$	24V	48V	110V
Maximum Continuous Operating Voltage (DC)	$U_c$	30V	54V	170V
Rated Load Current at 40 °C	$I_L$		800 mA	
Rated Load Current at 70 °C	$I_L$		600 mA	
C2 Nominal Discharge Current (8/20 $\mu$ s)	(Line-Line) $I_n$		10 kA	
	(Line-Ground)		10 kA	
C2 Total Nominal Discharge Current (8/20 $\mu$ s)	$I_n$		20 kA	
C2 Voltage Protection Level (10kV/5kA)	(Line-Line) $U_p$	180V	240V	400V
	(Line-Ground)	950V	960V	980V
C3 Voltage Protection Level (1 kV/ $\mu$ s)	(Line-Line) $U_p$	70V	140V	300V
	(Line-Ground)		650V	
D1 Impulse Current (10/350 $\mu$ s)	(Line-Line) $I_{imp}$		2.5 kA	
	(Line-Ground)		2.5 kA	
D1 Total Impulse Current (10/350 $\mu$ s)	$I_{imp}$		5 kA	
Rated Spark Overvoltage	(Line-Line)	33V-51V	60V-70V	188V-255V
	(Line-Ground)	184V-286V	184V-276V	184V-276V
Response Time Overvoltage Protection	$t_A$		< 1 ns	
Thermal Protection			Yes	
Insulation Resistance of the Protection	(Line-Line) $R_{iso}$	> 15 M $\Omega$	> 27 M $\Omega$	> 85 M $\Omega$
Serial Resistance per Path	$R$		1 $\Omega$	
Capacitance	(Line-Line) $C$		typ. 25 pF	
	(Line-Ground)		typ. 15 pF	
Maximum Frequency	$f_G$		120 MHz	

#### Mechanical

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	IP20 (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

#### Order Information

Order Code	24	48*	110*
NSP-2-xx	7088.05	7088.50	7088.07
NSP-2-xxM (module)	7088.06	7088.51	7088.08

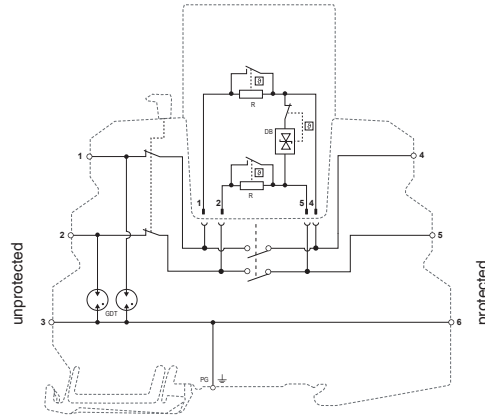
\*No UL Certification.

# RayDat NSP-2 Series

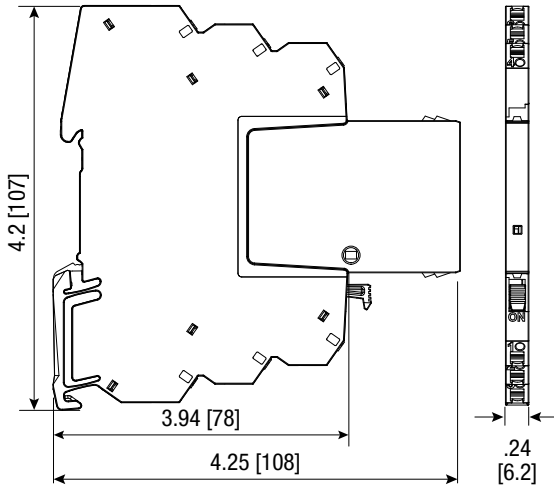
## Configuration

### Legend

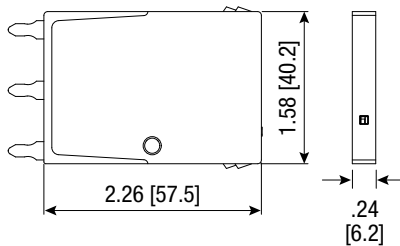
- DB Diode Block
- GDT Gas Discharge Tube
- PG Protective Grounding
- R Resistor



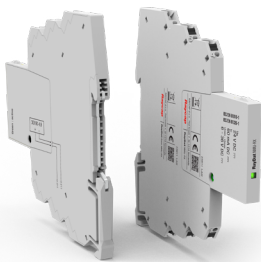
## Dimensions & Packaging



NSP-2 Series	24	48*	110*
<b>Dimensions</b>			
Weight per Unit	2.12 oz [60g]		
Dimensions DIN 43880	.24" [6.2mm]		
Packaging Dimensions (Single Unit)	4.72×4.33×0.39" [120×110×10mm]		
Minimum Package Quantity	15 pieces		



NSP-2-xxxM Series	24	48*	110*
<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.

