

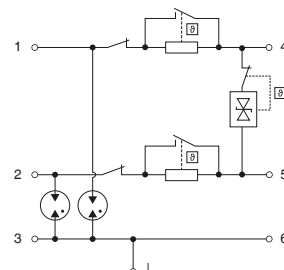
DATA SHEET

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

110*

Electrical

Lines Protected		1 (2 Conductors)	
Nominal Operating Voltage (DC)	U_n	24V	110V
Maximum Continuous Operating Voltage (DC)	U_c	30V	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 μ s)	(Line-Line) I_n	10 kA	
	(Line-Ground)	10 kA	
C2 Total Nominal Discharge Current (8/20 μ s)	I_n	20 kA	
C2 Voltage Protection Level (10 kV/5 kA)	(Line-Line) U_p	180V	400V
	(Line-Ground)	950V	980V
C3 Voltage Protection Level (1 kV/ μ s)	(Line-Line) U_p	70V	300V
	(Line-Ground)	650V	
D1 Impulse Current (10/350 μ s)	(Line-Line) I_{imp}	2.5 kA	
	(Line-Ground)	2.5 kA	
D1 Total Impulse Current (10/350 μ s)	I_{imp}	5 kA	
Rated Spark Overvoltage	(Line-Line)	33V - 51V	188V - 255V
	(Line-Ground)	184V - 286V	184V - 276V
Response Time Overvoltage Protection	t_A	< 1 ns	
Thermal Protection		Yes	
Insulation Resistance of the Protection	(Line-Line) R_{iso}	> 15 M Ω	> 85 M Ω
Serial Resistance per Path	R	1 Ω	
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 ² (solid)		
	14 AWG / 2.5 mm ² (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

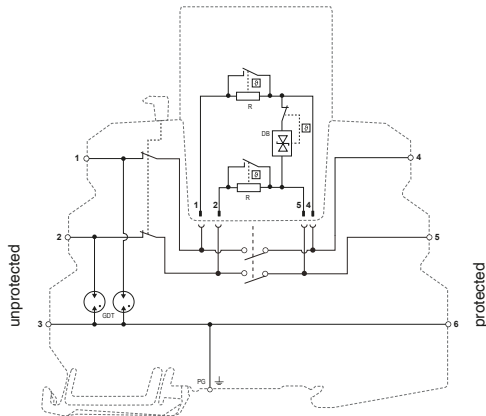
Order Code	24	110*
NSP-2-xx	7088.05	7088.07
NSP-2-xxM (module)	7088.06	7088.08

*No UL Certification.

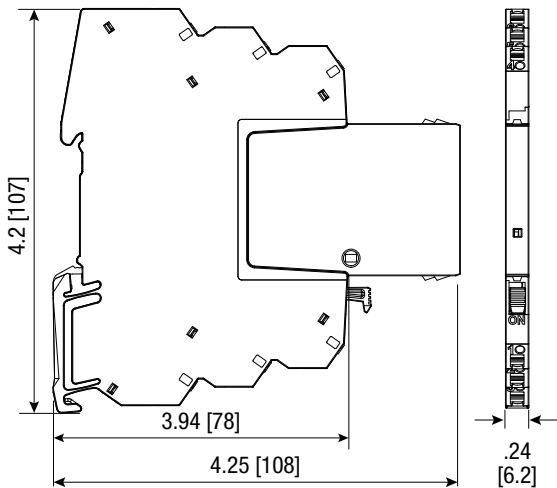
RayDat NSP-2 Series

Configuration

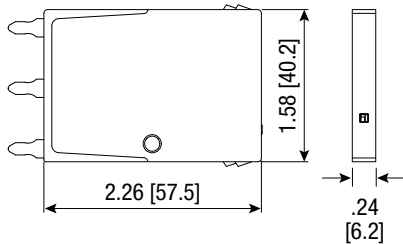
- Legend
- DB Diode Block
 - GDT Gas Discharge Tube
 - PG Protective Grounding
 - R Resistor



Dimensions & Packaging



NSP-2 Series	24	110*
Dimensions		
Weight per Unit	2.12 oz [60g]	
Dimensions DIN 43880	.24" [6.2mm]	
Packaging Dimensions (Single Unit)	4.45×4.37×0.43" [113×111×11 mm]	
Minimum Package Quantity	15 pieces	



NSP-2-xxxM Series	24	110*
Dimensions		
Weight per Unit	0.56 oz [16g]	
Packaging Dimensions (Single Unit)	4.45×4.37×0.43" [113×111×11 mm]	
Minimum Package Quantity	15 pieces	



Monitoring Unit
Transmitter
& Receiver
available for all
product variants.

inches
[mm]

