

DATA SHEET

Modular Low Frequency SPD for Single Pair

RayDat NSP-2 LF Series

D1 • C1 • C2 • C3



IEC/EN Category: D1/C1/C2/C3

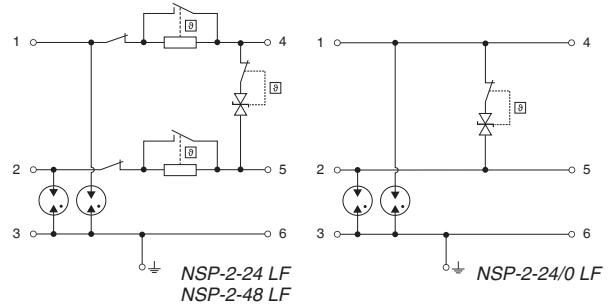
Voltages: 24, 24/0 V DC

Frequency Range: 1.5 MHz

Housing: Modular Design

Compliance: IEC/EN 61643-21, UL 497B 4th Edition

Configuration:



Technical Data

NSP-2 LF Series

24

48*

24/0

Electrical

Lines Protected	1 (2 Conductors)				
Nominal Operating Voltage (DC)	U_n	24V	48V	24V	
Maximum Continuous Operating Voltage (DC)	U_c	30V	54V	30V	
Rated Load Current at 40 °C	I_L	800 mA	800 mA	12 A	
Rated Load Current at 70 °C	I_L	600 mA	600 mA	10 A	
C2 Nominal Discharge Current (8/20 μs)	(Line-Line)	I_n	10 kA	10 kA	250 A
	(Line-Ground)		10 kA		
C2 Total Nominal Discharge Current (8/20 μs)	I_n		20 kA		
C2 Voltage Protection Level (10kV/5kA)	(Line-Line)	U_p	140V	160V	-
	(Line-Ground)		950V	950V	950V
C3 Voltage Protection Level (1 kV/μs)	(Line-Line)	U_p	60V	120V	60V
	(Line-Ground)			650V	
D1 Impulse Current (10/350 μs)	(Line-Line)	I_{imp}		2.5 kA	
	(Line-Ground)			2.5 kA	
D1 Total Impulse Current (10/350 μs)	I_{imp}		5 kA		
Rated Spark Overvoltage	(Line-Line)		33V-49V	60V-68V	33V-51V
	(Line-Ground)		184V-286V	184V-276V	184V-286V
Response Time Overvoltage Protection	t_A		< 1 ns		
Thermal Protection			Yes		
Insulation Resistance of the Protection	(Line-Line)	R_{iso}		> 15 MΩ	
Serial Resistance per Path		R	1 Ω	1 Ω	0.1 Ω
Capacitance	(Line-Line)	C	typ. 1 nF	typ. 1 nF	typ. 1 nF
	(Line-Ground)			typ. 15 pF	
Maximum Frequency	f_G		1.5 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	48*	24/0
NSP-2-xx LF	7088.03	7088.52	7088.60
NSL-2-xxM LF (module)	7088.04	7088.53	7088.61

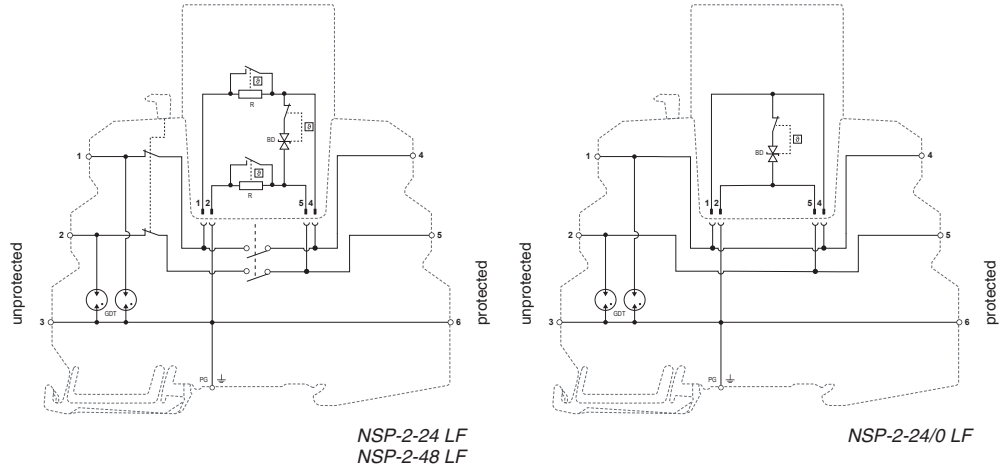
*No UL Certification.

RayDat NSP-2 LF Series

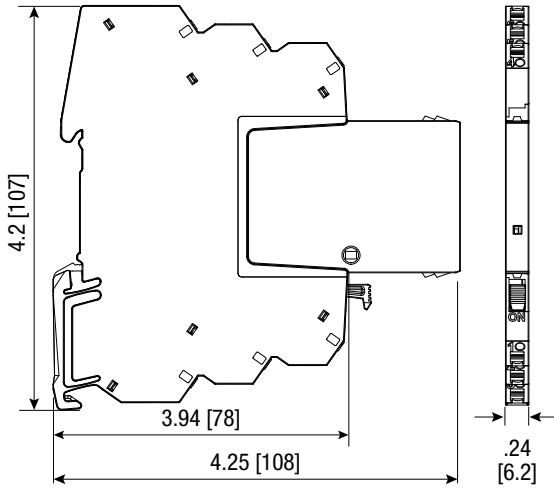
Configuration

Legend

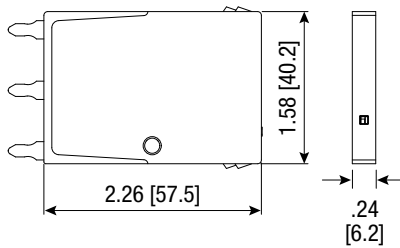
- BD Bi-directional TVS Diode
- GDT Gas Discharge Tube
- PG Protective Grounding
- R Resistor



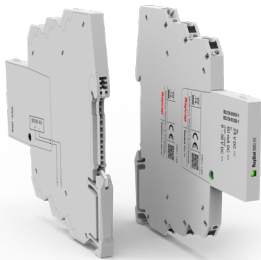
Dimensions & Packaging



NSP-2 LF Series	24	48*	24/0
Dimensions			
Weight per Unit	2.12 oz [60 g]	2.12 oz [60 g]	2.05 oz [58 g]
Dimensions DIN 43880	.24" [6.2 mm]		
Packaging Dimensions (Single Unit)	4.72×4.33×0.39" [120×110×10 mm]		
Minimum Package Quantity	15 pieces		



NSP-2-xxxM LF Series	24	48*	24/0
Dimensions			
Weight per Unit	0.56 oz [16 g]	0.56 oz [16 g]	0.49 oz [14 g]
Packaging Dimensions (Single Unit)	4.72×4.33×0.39" [120×110×10 mm]		
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.

