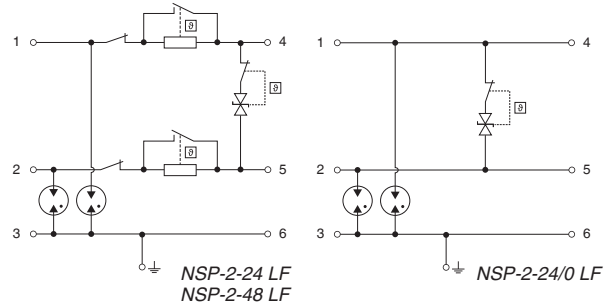


DATA SHEET

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 μ s) | (Line-Line) I_n | 10 kA | 10 kA | 250 A |
| | (Line-Ground) | | 10 kA | |
| C2 Total Nominal Discharge Current (8/20 μ s) | 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/ μ s) | (Line-Line) U_p | 60V | 120V | 60V |
| | (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-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 M Ω | |
| 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 |

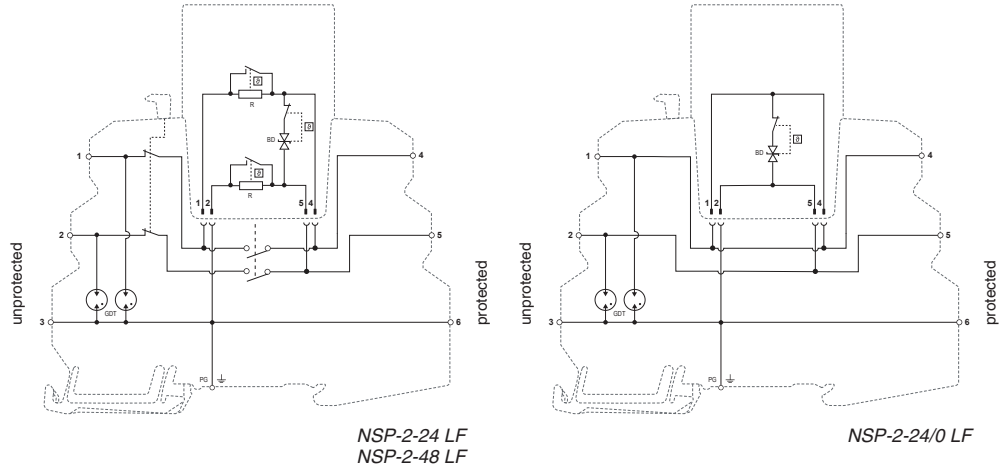
*No UL Certification.

RayDat NSP-2 LF Series

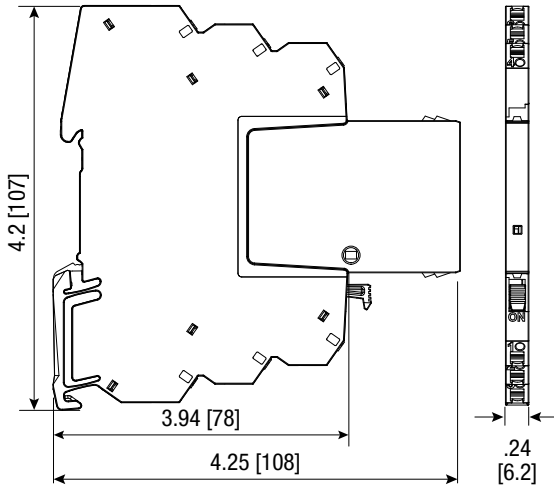
Configuration

Legend

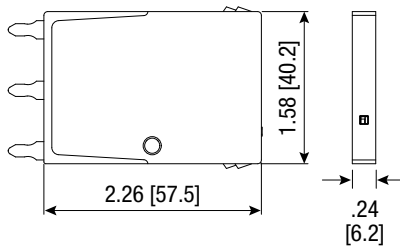
- BD Bi-directional TVS Diode
- GDT Gas Discharge Tube
- PG Protective Grounding
- R Resistor



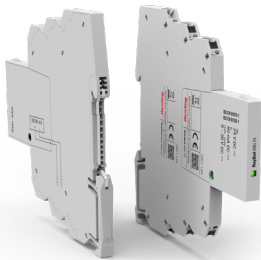
Dimensions & Packaging



| 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.

