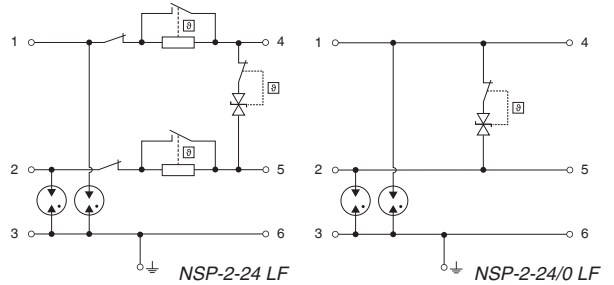


# DATA SHEET

## 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

#### Electrical

		24	24/0
Lines Protected		1 (2 Conductors)	
Nominal Operating Voltage (DC)	$U_n$	24V	24V
Maximum Continuous Operating Voltage (DC)	$U_c$	30V	30V
Rated Load Current at 40 °C	$I_L$	800 mA	12 A
Rated Load Current at 70 °C	$I_L$	600 mA	10 A
C2 Nominal Discharge Current (8/20 $\mu$ s)	(Line-Line) $I_n$	10 kA	250 A
	(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) $U_p$	140V	-
	(Line-Ground)	950V	950V
C3 Voltage Protection Level (1 kV/ $\mu$ s)	(Line-Line) $U_p$	60V	60V
	(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 - 49V	33V - 51V
	(Line-Ground)	184V - 286V	184V - 286V
Response Time Overvoltage Protection	$t_A$	< 1 ns	
Thermal Protection		Yes	
Insulation Resistance of the Protection	(Line-Line) $R_{iso}$	> 15 M $\Omega$	
Serial Resistance per Path	$R$	1 $\Omega$	0.1 $\Omega$
Capacitance	(Line-Line) $C$	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 <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

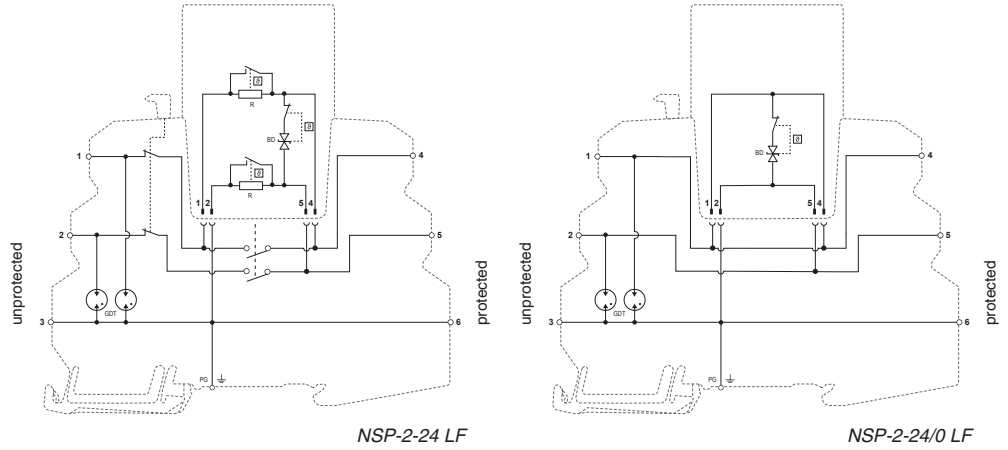
Order Code	24	24/0
NSP-2-xx LF	7088.03	7088.60
NSL-2-xxM LF (module)	7088.04	7088.61

# RayDat NSP-2 LF Series

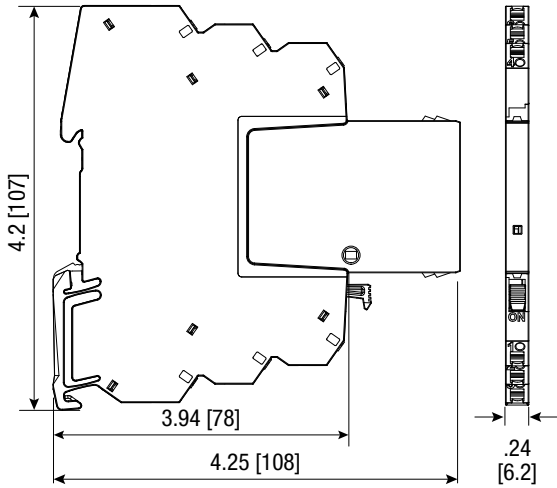
## Configuration

### Legend

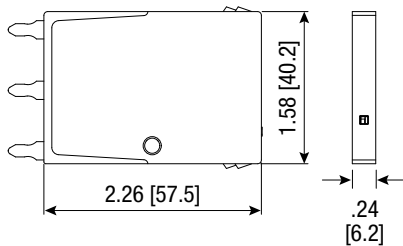
- BD Bi-directional TVS Diode
- GDT Gas Discharge Tube
- PG Protective Grounding
- R Resistor



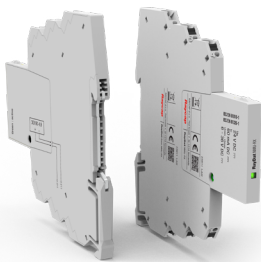
## Dimensions & Packaging



NSP-2 LF Series	24	24/0
<b>Dimensions</b>		
Weight per Unit	2.12 oz [60g]	2.05 oz [58g]
Dimensions DIN 43880	.24" [6.2 mm]	
Packaging Dimensions (Single Unit)	4.45×4.37×0.43" [113×111×11 mm]	
Minimum Package Quantity	15 pieces	



NSP-2-xxxM LF Series	24	24/0
<b>Dimensions</b>		
Weight per Unit	0.56 oz [16g]	0.49 oz [14g]
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]

