

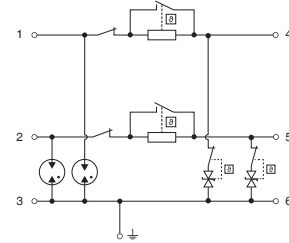
# DATA SHEET

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



IEC/EN Category: D1/C1/C2/C3  
 Voltages: 5, 12, 24V DC  
 Frequency Range: up to 1MHz  
 Housing: Modular Design  
 Compliance: IEC/EN 61643-21  
 UL 497B 4th Edition

Configuration:



### Technical Data

#### RayDat NSL-2-xx LF Series

5

12

24

#### Electrical

Lines Protected	1 (2 Conductors)			
Nominal Operating Voltage (DC)	$U_n$	5V	12V	24V
Maximum Continuous Operating Voltage (DC)	$U_c$	8.5V	15V	30V
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 μs)	(Line-Line) $I_n$		10 kA	
	(Line-Ground)		10 kA	
C2 Total Nominal Discharge Current (8/20 μs)	$I_n$		20 kA	
C2 Voltage Protection Level (10kV/5kA)	(Line-Line) $U_p$	80V	100V	160V
	(Line-Ground)	100V	110V	140V
C3 Voltage Protection Level (1 kV/μs)	(Line-Line) $U_p$	48V	60V	120V
	(Line-Ground)	24V	30V	60V
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)	18V - 46V	32V - 62V	66V - 98V
	(Line-Ground)	9V - 23V	16V - 31V	33V - 49V
Response Time Overvoltage Protection	$t_A$		< 1 ns	
Thermal Protection			Yes	
Insulation Resistance of the Protection	(Line-Line) $R_{iso}$	> 340 kΩ	> 7.5 MΩ	> 15 MΩ
Serial Resistance per Path	$R$		1 Ω	
Capacitance	(Line-Line) $C$	typ. 5 nF	typ. 3 nF	typ. 1.5 nF
	(Line-Ground)	typ. 10 nF	typ. 6 nF	typ. 3 nF
Maximum Frequency	$f_G$	250 kHz	500 kHz	1 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

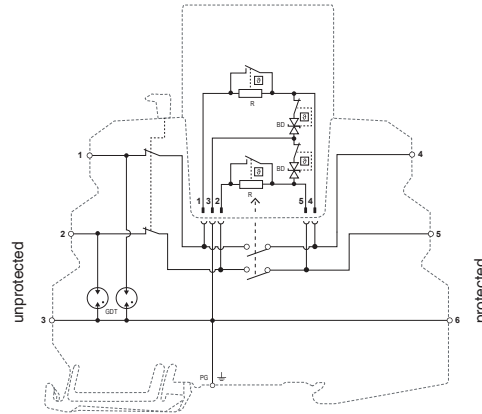
Order Code	5	12	24
NSL-2-xx LF	7088.32	7088.34	7088.36
NSL-2-xxM LF (module)	7088.33	7088.35	7088.37

# RayDat NSL-2 LF Series

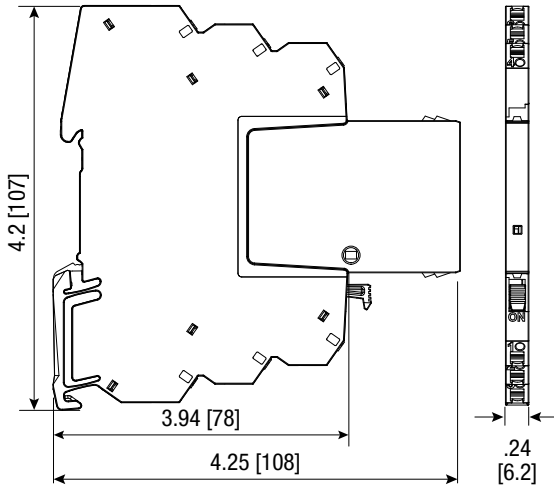
## Configuration

### Legend

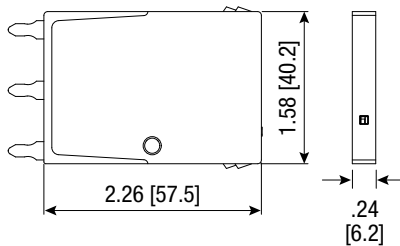
- DB Diode Block
- GDT Gas Discharge Tube
- PG Protective Grounding
- R Resistor



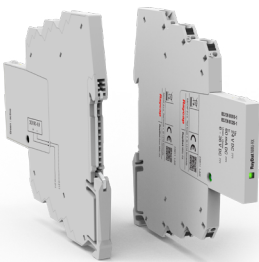
## Dimensions & Packaging



NSL-2-xx LF Series	5	12	24
<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		



NSL-2-xxxM LF Series	5	12	24
<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.

