

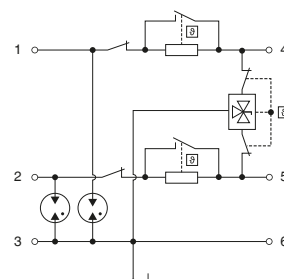
DATA SHEET

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



IEC/EN Category: D1/C1/C2/C3
 Voltages: 5, 12, 24, 48 V DC
 Frequency Range: 120 MHz
 Housing: Modular Design
 Compliance: IEC/EN 61643-21
 UL 497B 4th Edition

Configuration:



Technical Data

RayDat NSL-2-xx Series

		5	12	24	48
Electrical					
Lines Protected		1 (2 Conductors)			
Nominal Operating Voltage (DC)	U_n	5V	12V	24V	48V
Maximum Continuous Operating Voltage (DC)	U_c	8.5V	15V	30V	54V
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	140V	150V	170V	210V
	(Line-Ground)	260V	270V	290V	300V
C3 Voltage Protection Level (1 kV/ μ s)	(Line-Line) U_p	24V	36V	70V	130V
	(Line-Ground)	24V	36V	70V	130V
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)	9V - 25V	16V - 33V	33V - 51V	60V - 81V
	(Line-Ground)	9V - 25V	16V - 33V	33V - 51V	60V - 81V
Response Time Overvoltage Protection	t_A	< 1 ns			
Thermal Protection		Yes			
Insulation Resistance of the Protection	(Line-Line) R_{iso}	> 170 k Ω	> 7.5 M Ω	> 15 M Ω	> 27 M Ω
Serial Resistance per Path	R	1 Ω			
Capacitance	(Line-Line) C	typ. 25 pF			
	(Line-Ground)	typ. 20 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

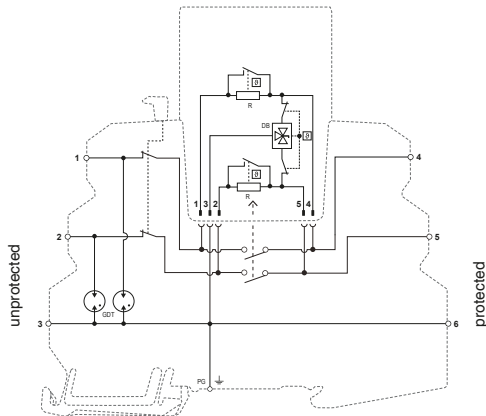
Order Information

Order Code	5	12	24	48
NSL-2-xx	7088.26	7088.28	7088.01	7088.30
NSL-2-xxM (module)	7088.27	7088.29	7088.02	7088.31

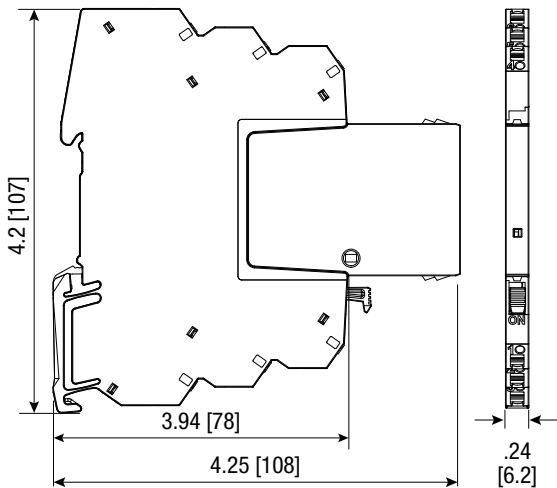
RayDat NSL-2 Series

Configuration

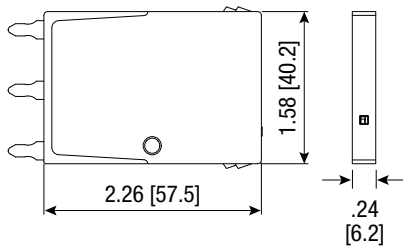
- Legend
- DB Diode Block
 - GDT Gas Discharge Tube
 - PG Protective Grounding
 - R Resistor



Dimensions & Packaging



NSL-2-xx Series	5	12	24	48
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			



NSL-2-xxxM Series	5	12	24	48
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]

