

DATA SHEET

SPD for Explosive Environments

RayDat Ex-2 Series

D1 • C1 • C2 • C3



	Input Power P _i	Temperature Class	Maximum Ambient
U _o = U _i	P _i = 1W	T6	50 °C
I _o = I _i	P _i = 1.3W	T5	55 °C
P _o = P _i	P _i = 2W	T4	60 °C

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

Surge Discharge Ratings: I_n: 5 kA, I_{max}: 10 kA, I_{imp}: 1 kA

Voltages: 12, 24V DC

Max. Operating Voltage: U_c: 15, 28VDC

Terminals: Stranded to 4 mm²

Housing: Modular Design

Compliance: IIEC/EN 61643-21

IEC 60079-0:2011

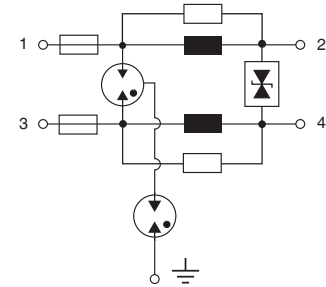
IEC 60079-11:2011

EN 60079-0:2012+A11:2013

EN 60079-11:2012



Configuration:



Technical Data

Ex-2 Series

12

24

Type

Intrinsic Safety Parameters

Explosion Protected II 1G Ex ia IIC T* Ga (-40 °C ≤ Ta ≤ +°C)

Maximum Input Voltage	U _i	16V	29V
Maximum Input Current	I _i	500 mA	
Maximum Input Power	P _i	2W	
Maximum Internal Capacitance	C _i	10 nF	
Maximum Internal Inductance	L _i	0.11 mH	
Number of Protected Pairs		1 (2 Conductors)	

Electrical

Nominal Operating Voltage (DC)	U _n	12V	24V
Maximum Continuous Operating Voltage (DC)	U _c	15V	28V
Rated Load Current at 25°C	I _L	500 mA	
Nominal Discharge Current (8/20 μs)	I _n	5 kA	
Maximum Discharge Current (8/20 μs)	I _{max}	10 kA	
D1 Impulse Current (10/350 μs)	I _{imp}	1 kA	
Residual Voltage at 5 kA (8/20 μs)	U _{res}	< 145V	
Rated Spark Overvoltage (Line-Line)		16-21V	31-37V
(Line-Ground)		584-876V	
Response Time Overvoltage Protection	t _A	< 1 ns	
Insulation Resistance at U _c	R _{iso}	≥ 15 MΩ	≥ 28 MΩ
Insulation Resistance at 500VDC (Line-Ground)		> 1 GΩ	
Serial Resistance per Path	R	< 1 Ω	
Transverse Capacitance	C	< 10 pF	
Cut-off Frequency	f _G	3 MHz	

Mechanical

Terminal Cross Section Multi-strand (max.)	12 AWG [4 mm ²]
Terminal Screw Torque	4.5 lbf-in [0.5 Nm]
Degree of Protection IEC/EN 60529	IP 20 (built-in)
Housing Material	Thermoplastic; Grey; Extinguishing Degree V-0
Mounting IEC/EN 60715	35mm DIN Rail

Order Information

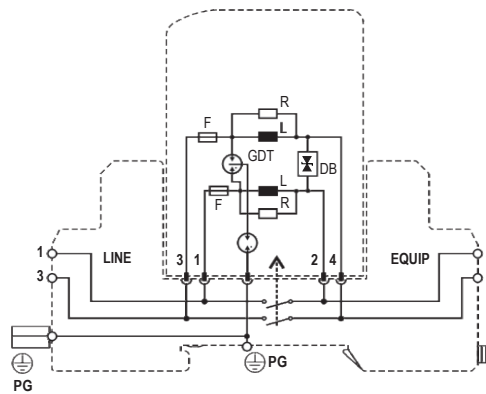
Order Code	12	24
Ex-2-xx	704 120	704 121

RayDat Ex-2 Series

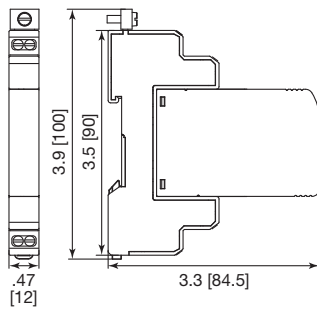
Internal Configuration

Legend

- DB Diode Block
- F Fuse
- GDT Gas Discharge Tube
- L Inductor
- PG Protective Grounding
- R Resistor



Dimensions & Packaging



Ex-2 Series	12	24
Dimensions		
Weight per Unit	3.10 oz [88 g]	
Dimensions DIN 43880	2/3 TE	
Packaging Dimensions (Single Unit)	3.4 x .59 x 4" [87 x 15 x 102 mm]	
Minimum Package Quantity	15 pieces	

inches
[mm]

Information contained in this document is subject to change at any time without notice.



Raycap

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