

DATA SHEET

SPD for Explosive Environments RayDat PLP Ex Series D1 • C1 • C2 • C3



IEC/EN Category: D1/C1/C2/C3
Surge Discharge Ratings: I_{nt} : 10kA, I_{max} : 20kA, I_{imp} : 2.0kA
Voltages: 24, 48, 24/5V DC
Max. Operating Voltage: U_c : 33, 54, 33/7.5V DC
Frequency Range: 30 MHz

Enclosure: Stainless Steel IP54
Terminals: Connecting Cables 1mm²,
250mm length
Housing: Conduit Fitting
Compliance: IEC/EN 61643-21



IEC 60079-0:2011
IEC 60079-11:2011
EN 60079-0:2012+A11:2013
EN 60079-11:2012



UL 60079-0, 6th Edition
UL 60079-11, 6th Edition
CAN/CSA C22.2 No. 60079-0:2015
CAN/CSA C22.2 No. 60079-11:2014



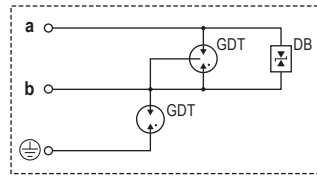
Technical Data

PLPEx	PLP-24Ex	PLP2-24Ex	PLP2-48Ex	PLP-24/5Ex	PLP3L-24Ex	
Type						
Intrinsic Safety Parameters						
IECEX BAS 14.0167X	Ex ia IIC T6 Ga (-30°C ≤ 50°C), Ex ia IIIC T85°C Da (-30°C ≤ 50°C)					
Basefa14ATEX0364X	II 1G Ex ia IIC T6 Ga (-30°C ≤ 50°C), II 1D Ex ia IIIC T85°C Da (-30°C ≤ 50°C)					
SGSNA/18/BAS/00003	Class I, Zone 0 AEx ia IIC T6 Ga (-30°C ≤ 50°C), Ex ia IIC T6 Ga (-30°C ≤ 50°C), Zone 20 AEx ia IIIC T85°C Da (-30°C ≤ 50°C), Ex ia IIIC T85°C Da (-30°C ≤ 50°C)					
Maximum Input Voltage	U_i	50V				
Maximum Input Current	I_i	800mA				
Maximum Input Power	P_i	2W				
Maximum Internal Inductance	L_i	60µH				
Electrical						
Nominal Operating Voltage (DC)	U_n	24V	24V	48V	24V/5V	24V
Maximum Continuous Operating Voltage (DC)	U_c	33V	33V	54V	33V/7.5V	33V
Rated Spark Overvoltage	(Line-Ground)	584-864V	584-864V	584-864V	584-864V	584-864V
	(Line-Line)	36-44V	36-44V	58-68V	36-44V, 9-13V	36-44V
Total Nominal Discharge Current (8/20µs)	I_n	5kA	10kA	10kA	10kA	7.5kA
Total Discharge Current (8/20µs)	I_{max}	10kA	20kA	20kA	20kA	15kA
Total Impulse Current (10/350µs)	I_{imp}	1.0kA	2.0kA	2.0kA	2.0kA	1.5kA
Residual Voltage at I_{max} (8/20µs)	(Line-Ground) U_{res}	<1.3kV	<1.3kV	<1.3kV	<1.3kV	<1.3kV
Response Time Overvoltage Protection	t_A	<1 ns				
Insulation Resistance of the Protection	(Line-Line) R_{iso}	> 32MΩ	> 32MΩ	> 32MΩ	> 32MΩ/75kΩ	> 32MΩ
Insulation Resistance at U (Line-Ground) = 500VDC	R	> 1GΩ				
Transverse Capacitance	C	<30 pF				
Cut-off Frequency	f_G	30MHz				
Mechanical						
Ambient Temperature Range		-22 °F < T_a < +140 °F [-30 °C < T_a < +60 °C]				
Connection Cables	$D \times L$	17 AWG x 9.8" [1 mm ² x 250 mm]				
Degree of Protection IEC/EN 60529		IP 54				
Housing Material		Stainless Steel				
Dimension	Length	3.07" [78 mm]	4.72" [120 mm]	4.72" [120 mm]	4.72" [120 mm]	4.72" [120 mm]
Order Information						
Order Code		PLP-24Ex	PLP2-24Ex	PLP2-48Ex	PLP-24/5Ex	PLP3L-24Ex
1/2" NPT		127 594	127 600	127 597	127 603	127 606
M20 x 1.5		127 595	127 601	127 598	127 604	127 607
G 1/2" (BSP 1/2 inch)		127 596	127 602	127 599	127 605	127 608

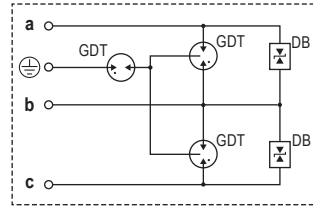
RayDat PLP Ex Series

Internal Configuration

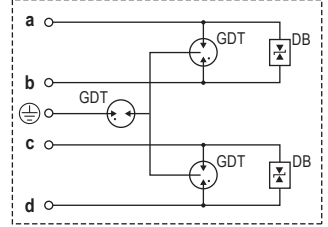
Legend
 DB Diode Block
 GDT Gas Discharge Tube



PLP-24Ex

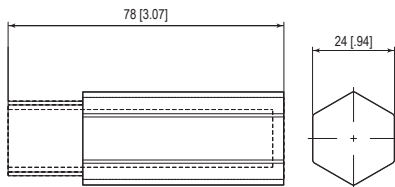


PLP3L-24Ex

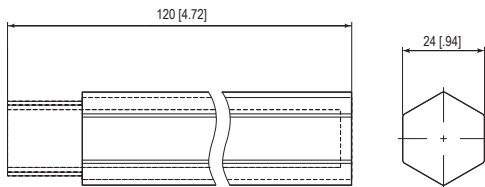


PLP2-24Ex
 PLP2-48Ex
 PLP-24/5Ex

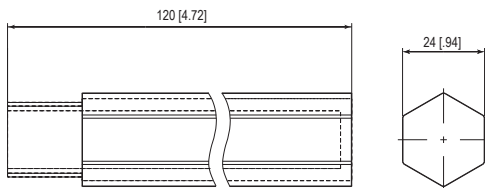
Dimensions & Packaging



PLP-24Ex	PLP-24 Ex 1/2" NPT	PLP-24 Ex M 20 x 1/2"	PLP-24 Ex G 1/2"
Dimensions			
Weight per Unit	5.99 oz [170g]		
Packaging Dimensions (Single Unit)	1.34 x 1.34 x 4.25" [34 x 34 x 108mm]		
Minimum Package Quantity	6 pieces		



PLP2-xxEx	PLP2-xx Ex 1/2" NPT	PLP2-xx Ex M 20 x 1/2"	PLP2-xx Ex G 1/2"
Dimensions			
Weight per Unit	10.22 oz [290g]		
Packaging Dimensions (Single Unit)	1.34 x 1.34 x 5.43" [34 x 34 x 138mm]		
Minimum Package Quantity	6 pieces		



PLP3L-24Ex	PLP3L-24 Ex 1/2" NPT	PLP3L-24 Ex M 20 x 1/2"	PLP3L-24 Ex G 1/2"
Dimensions			
Weight per Unit	10.22 oz [290g]		
Packaging Dimensions (Single Unit)	1.34 x 1.34 x 5.43" [34 x 34 x 138mm]		
Minimum Package Quantity	6 pieces		

inches
[mm]

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

