

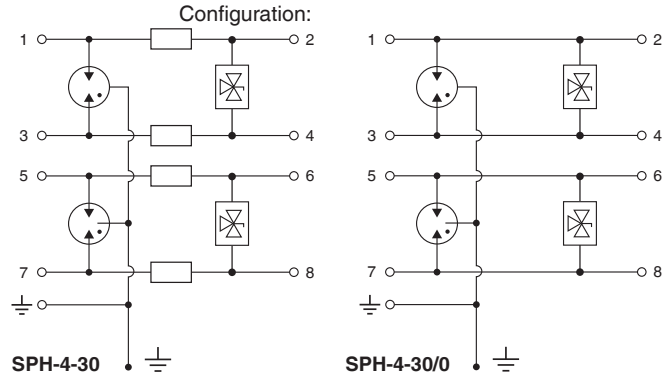
# DATA SHEET

## Modular SPD for Two Pair RayDat SPH-4 Series D1 • C1 • C2 • C3

UL Listed



IEC/EN Category: D1/C1/C2/C3  
Surge Discharge Ratings:  $I_n$ : 10 kA,  $I_{max}$ : 20 kA,  $I_{imp}$ : 5 kA  
Voltages: 30V DC  
Frequency Range: 30 MHz  
Housing: Modular Design  
Compliance: IEC/EN 61643-21  
UL 497B 4th Edition



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30/0

### Technical Data

#### SPH-4 Series

##### Electrical

Lines Protected		2 (4 Conductors)	
Nominal Operating Voltage (DC)	$U_n$	30V	
Maximum Continuous Operating Voltage (DC)	$U_c$	33V	
Rated Load Current at 25°C	$I_L$	1 A	10 A
C2 Nominal Discharge Current (8/20 $\mu$ s)	$I_n$	10 kA	
Maximum Discharge Current (8/20 $\mu$ s)	$I_{max}$	20 kA	
D1 Impulse Current (10/350 $\mu$ s)	$I_{imp}$	5 kA	
Residual Voltage at 5 kA (8/20 $\mu$ s)	(Line-Line) $U_{res}$	< 80V	
Rated Spark Overvoltage	(Line-Ground)	184-276V	
	(Line-Line)	36-44V	
Response Time Overvoltage Protection	(Line-Line) $t_A$	< 1 ns	
	(Line-Ground)	< 100 ns	
Insulation Resistance of the Protection	(Line-Ground) $R_{iso}$	> 1 G $\Omega$ /100V	
	(Line-Line)	$\geq$ 33 M $\Omega$	
Serial Resistance per Path	R	1.6-2.0 $\Omega$	0.1 $\Omega$
Transverse Capacitance	(Line-Line) C	50 pF	
	(Line-Ground)	5 pF	
Cut-off Frequency	$f_G$	30 MHz	

##### Mechanical

Temperature Range	-40 °F to +176 °F [-40 °C to +80 °C]		
Terminal Cross Section Multi-strand (max.)	12 AWG		
	4 mm <sup>2</sup> , 2.5 mm <sup>2</sup> Q Version		
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		

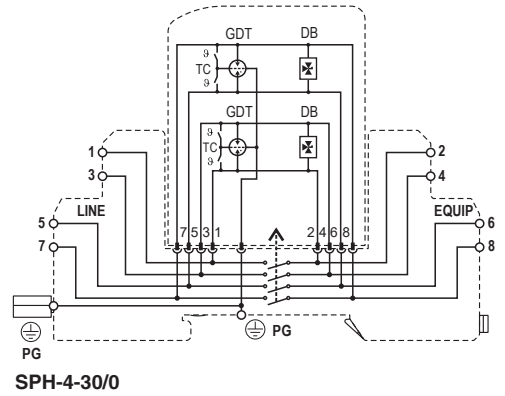
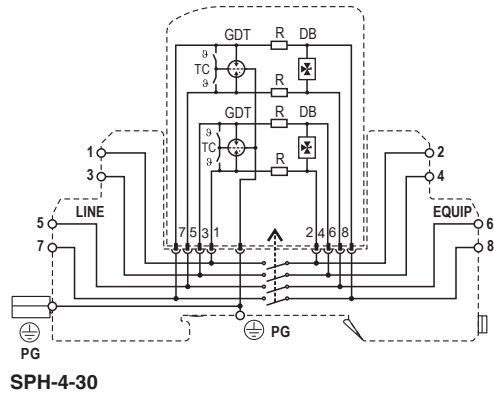
##### Order Information

Order Code	30	30/0
SPH-4-xx	7082.82	7086.89
SPH-4-xxQ (Quick Connect Terminals)	7085.24	7085.28
SPH-4-xxM (module)	7082.83	7085.29

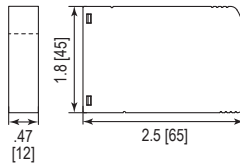
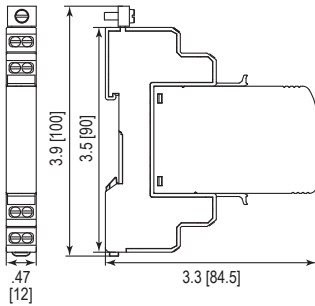
# RayDat SPH-4 Series

## Internal Configuration

- Legend**  
 DB Diode Block  
 GDT Gas Discharge Tube  
 PG Protective Grounding  
 R Resistor  
 TC Thermo-clip



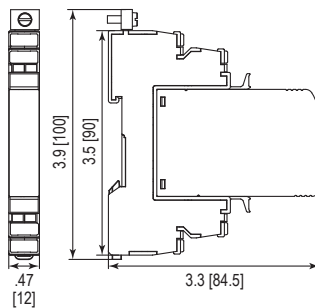
## Dimensions & Packaging



SPH-4 Series	30	30/0
<b>Dimensions</b>		
Weight per Unit	2.32 oz [66g]	2.25 oz [64g]
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	

SPH-4-xxM Series	30	30/0
<b>Dimensions</b>		
Weight per Unit	1.05 oz [30g]	.99 oz [28g]
Packaging Dimensions (Single Unit)	3.4 x .59 x 4" [87 x 15 x 102 mm]	
Minimum Package Quantity	15 pieces	

## Quick Connect Terminals



SPH-4-xxQ Series	30	30/0
<b>Dimensions</b>		
Weight per Unit	2.40 oz [68g]	2.32 oz [66g]
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.

