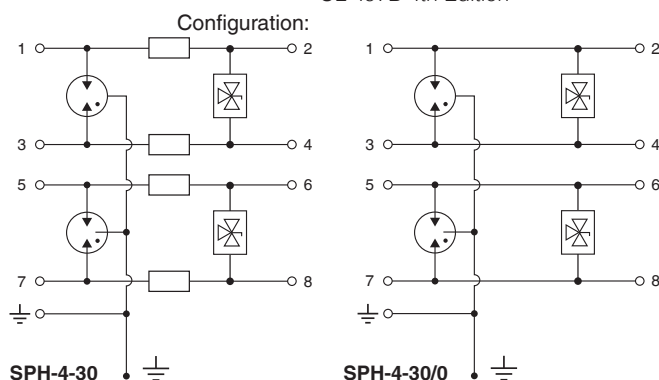




IEC/EN Category: D1/C1/C2/C3
 Surge Discharge Ratings: I_n : 10 kA, I_{max} : 20 kA, I_{imp} : 5 kA
 Voltages: 30 V DC
 Frequency Range: 30 MHz
 Housing: Modular Design
 Compliance: IEC/EN 61643-21
 UL 497B 4th Edition



Technical Data

SPH-4 Series

Electrical

Lines Protected	2 (4 Conductors)		
Nominal Operating Voltage (DC)	U_n	30 V	
Maximum Continuous Operating Voltage (DC)	U_c	33 V	
Rated Load Current at 25°C	I_L	1 A	10 A
C2 Nominal Discharge Current (8/20 μs)	I_n	10 kA	
Maximum Discharge Current (8/20 μs)	I_{max}	20 kA	
D1 Impulse Current (10/350 μs)	I_{imp}	5 kA	
Residual Voltage at 5 kA (8/20 μs)	(Line-Line) U_{res}	< 80 V	
Rated Spark Overvoltage	(Line-Ground)	184-276 V	
	(Line-Line)	36-44 V	
Response Time Overvoltage Protection	(Line-Line) t_A	< 1 ns	
	(Line-Ground)	< 100 ns	
Insulation Resistance of the Protection	(Line-Ground) R_{iso}	> 1 GΩ/100 V	
	(Line-Line)	≥ 33 MΩ	
Serial Resistance per Path	R	1.6-2.0 Ω	0.1 Ω
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 mm², 2.5 mm² 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	35 mm DIN Rail		

Order Information

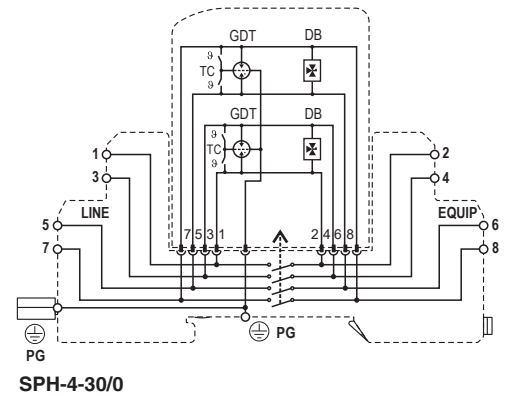
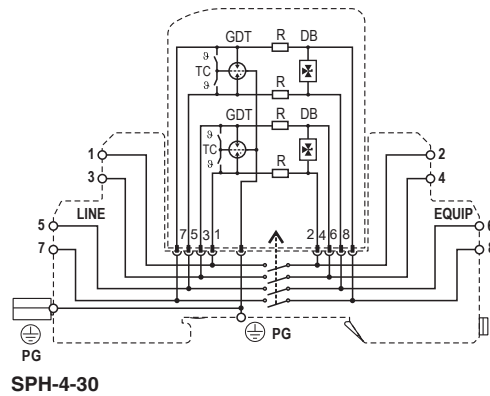
Order Code	30	30/0
SPH-4-xx	7082.82	7086.89
SPH-4-xxQ (Quick Connect Terminals)	7085.24	7085.28
SPH-4-xxM (module)	7082.83	7085.29

RayDat SPH-4 Series

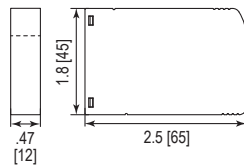
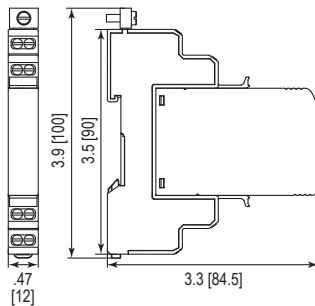
Internal Configuration

Legend

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



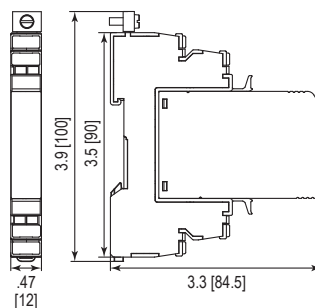
Dimensions & Packaging



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

SPH-4-xxM Series	30	30/0
Dimensions		
Weight per Unit	1.05 oz [30 g]	.99 oz [28 g]
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
Dimensions		
Weight per Unit	2.40 oz [68 g]	2.32 oz [66 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.



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