



Specification sheet

SPIKE-SD

2-in-1 EMI/OverVoltage Spike Module

PRODUCT SPECIFICATION

Unit characteristics:	2 channels Overvoltage Protection
Dimensions:	80,4 mm x 31,4 mm x 23 mm / 3.16" x 1.24" x 0.9"
Voltage range:	9..36VDC
Voltage protection:	
- Transcend voltage:	150V at 2second max, both polarities;
- Under-voltage protection lockout:	7.4V;
- Under-voltage protection relies:	8.2V;
- Over-voltage protection lockout:	44.3V;
- Over-voltage protection relies:	41.6V;
- Reverse connection protection:	80V, not less;
Over current protection:	9A, not less

Performance:

- Filtration DO-160G, chapter 21, Emission of Radio Frequency Energy:
More than 10dB;
- Output current, not less than:
 - Steady: 8A per channel;
 - Pulse 1/3: 9A per channel;
- Output power, not less than:
 - Steady: 8A at 9..36VDC per channel;
 - Pulse 1/3: 9A at 9..36VDC per channel;
- Input power, not more than:
 - Steady: 8A at 9..36VDC per channel;
 - Pulse 1/3: 9A at 9..36VDC per channel;

Warm up time:	0.5sec
Ambient temperature:	-40°C..+85°C
Overheat protection:	+85°C

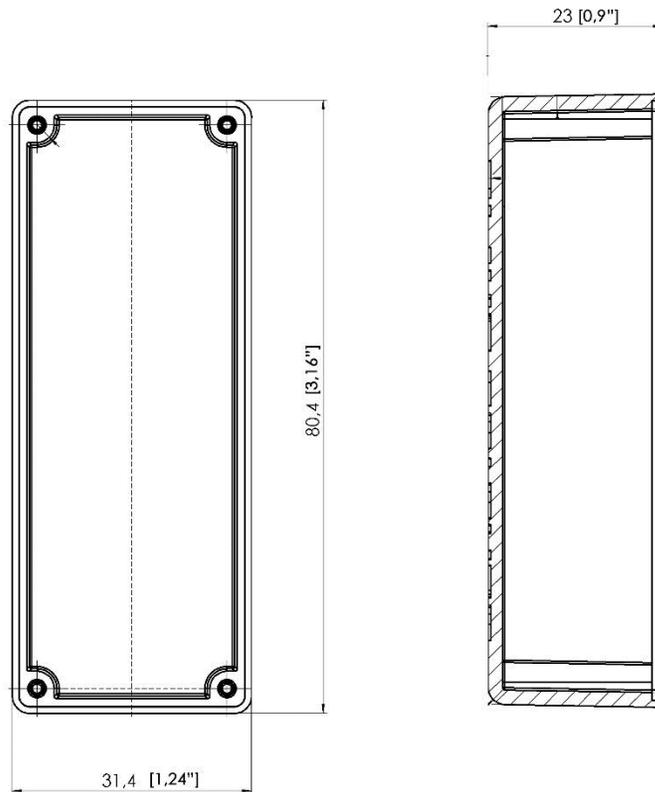
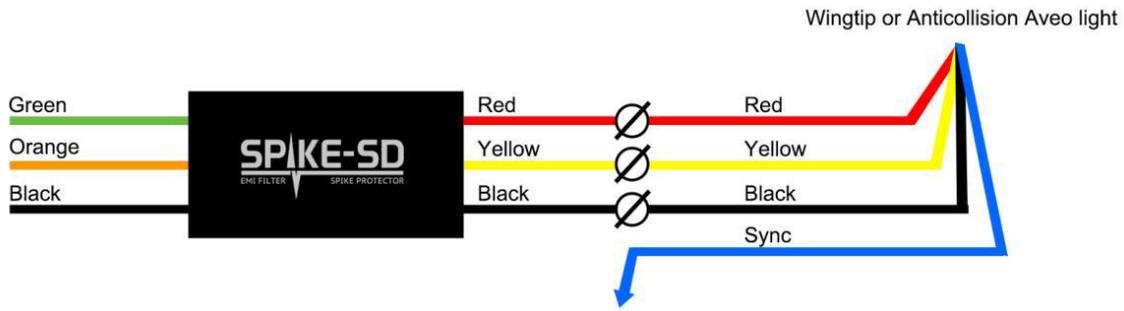
Wiring:

- a. wire type: FEP High Temperature teflon wire, 16 AWG
- b. wire length: min. 10 inch (280mm)

Wire color code:

- 1. Input, power supply side:
 - a. 16AWG Green +9...36V, first channel input
 - b. 16AWG Orange +9...36V, second channel input
 - c. 16AWG Black Common return VRTN to power supply for first and second channel
- 2. Output, light side:
 - a. 16AWG Red +9...36V, first channel output
 - b. 16AWG Yellow +9...36V, second channel output
 - c. 16AWG Black GND light

Please, do not connect black wires from input and output together.



Spike-SD can be use with these AVEO lights:

- HISL
- Hercules, Landing Taxi independent modes:
 - Landing current consumption: 8A at 9VDC
 - Taxi current consumption: 4.6A at 9VDC,
- Samson, Landing Taxi independent modes:
 - Landing current consumption: 6.2A at 18VDC,
 - Taxi current consumption: 4.9A at 18VDC,
- Samson Dual mode.
- Hercules Drop-In, only 18-36VDC input power. Hercules Drop-In has one input with 7A at 18VDC

Hercules Drop-In, 9-18VDC has one input and can not be use with Spike-SD, current consumption is 12.6A at 9VDC, what more than 8A per channel.

Samson Drop-In has one input and can not be use with Spike -SD, current consumption is 11.1A at 18VDC, what more than 8A per channel.

Device RTCA/DO160F qualified:

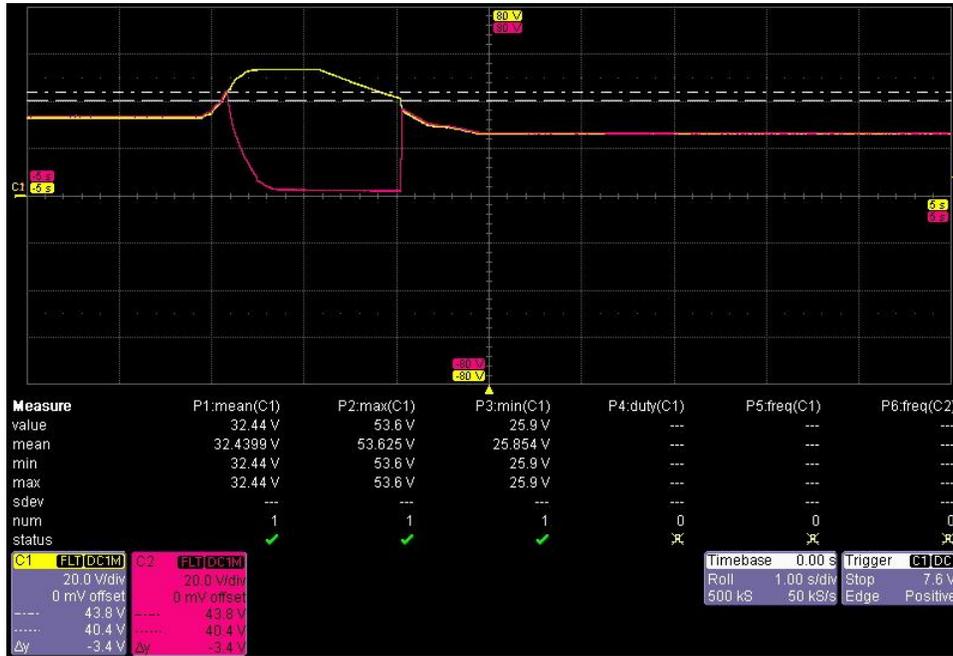
- a. chapter 4, Temperature - Altitude, Category F2
- b. chapter 5, Temperature Variation, Category A
- c. chapter 6, Humidity, Category C
- d. chapter 7, Operational Shocks and Crash Safety, Category C
- e. chapter 8, Vibration, Category R
- f. chapter 9, Explosion proofness, Category H
- g. chapter 10, Waterproofness , Category S
- h. chapter 11, Fluids Susceptibility, Category F
- i. chapter 12, Sand and Dust, Category D
- j. chapter 13, Fungus resistance, Category F
- k. chapter 14, Salt spray, Category T
- l. chapter 15, Magnetic effects, Category Z
- m. chapter 16, Power Input, Category B
- n. chapter 17, Voltage Spike, Category B
- o. chapter 18, Audio Frequency Conducted Susceptibility, Category B
- p. chapter 19, Induced Signal Susceptibility, Category AC
- q. chapter 20, Radio Frequency Susceptibility, Category T
- r. chapter 21, Emission of Radio Frequency Energy, Category H
- s. chapter 22, Lightning induced transient susceptibility test, Category B4
- t. chapter 23, Lightning Direct Effects, Category 2A2A
- u. chapter 24, Icing, Category A
- v. chapter 25, Electrostatic Discharge (ESD), Category A
- w. chapter 26, Fire, Flammability, Category C

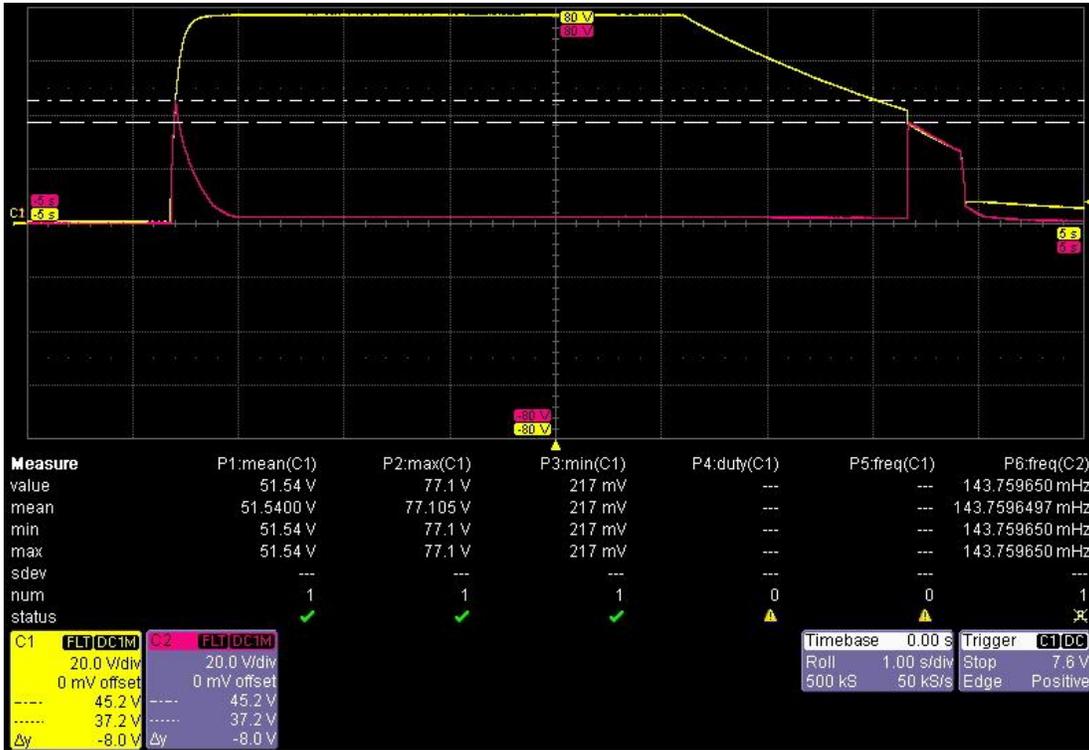
EXAMPLE OF USE

With input voltage below 7.2 and above 44.5 Spike-SD output is disconnected from input.
 With negative polarity Spike-SD output is disconnected from input.

Oscilloscope:

Yellow - input
 Red – output





Device has a filter inside. typical attenuation chart.

RED - without Spike-SD
BLUE - with Spike-SD

