

EM-4310 | Spike Generator



Description

The EM-4310 Spike Generator is a transient event generator designed to create high amplitude, narrow width pulses which are coupled onto AC or DC power lines as specified by Method CS06 and RS02 of MIL-STD-461 and MIL-STD-462.

A typical electrical transient rises quickly to a peak value and then decays exponentially to zero. After the spike voltage decays to zero, the waveforms exhibit a ringing characteristic that depends on the load connected to the spike generator.

The amplitude of the output spike is variable from 0 to 600 V peak. Three different pulse widths are available: 10.0µs, 5.0µs, and 0.15µs. Pulse width is defined as the time required for the output pulse (spike) to rise to a peak value and decay to zero.

The EM-4310 can inject spikes onto AC or DC power lines in variety of modes: asynchronous, synchronized, or single pulse.

Specifications

Electrical

Output: Amplitude Adjustable 0-600 V peak minimum into 5-ohm non-inductive load at rates of 10 PPS or less.

NOTE: Maximum output voltage will decrease at rates greater than 10 PPS.

Output Pulse Widths: 10.0 µs, 5.0 µs, 0.15 µs ±20% into 5-ohm non-inductive load.

NOTE: The polarity of the 0.15 µs pulse is REVERSED with respect to the 10.0 µs and 5.0 µs pulses.

Amplitude Display: LED Display, accuracy ±5%. Indicates peak amplitude of output spike as measured into a 5-ohm non-inductive load.

Pulse Repetition Rate:

SYNC Mode:

Internal/External: 1-10 PPS

Free Run Mode:

Internal: 0.5-50 PPS

External: >0-50 PPS

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Specifications subject to change without notice. Unless otherwise specified, product is manufactured in Johnstown, NY USA.



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Specifications

Electrical

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Single Pulse Mode:

Manually generated, pushbutton.

Pulse Positioning: Positioning range of 1 to 10 PPS pulse is adjustable over 360° range of power frequencies from 50 to 800 Hz when in SYNC mode.

Power Requirements: 115/230 VAC, 50-60 Hz ($\pm 10\%$)
(Factory selectable only)
1.0 A at 115 VAC
0.5 A at 230 VAC

Power Supply:

NOTE: The following voltage/fuse selections are factory selectable only.

Power Requirements:

AC Power Sources:

115 VAC, 50-60 Hz, 1.0 A
230 VAC, 50-60 Hz, 0.5 A

Fuse Specifications:

115 VAC operation: 1.0 A Slow-Blow

230 VAC operation: 0.5 A Slow-Blow

Mechanical

Height: 203 mm (8") with cover

Width: 229 mm (9")
127 mm (5") without cover

Depth: 406 mm (16")

Weight: 7 kg (15.5 lbs.)