



Model OTG117 Induced Lightning System

OPHIR_{EMC} Model OTG117 Induced Lightning System is a two part system designed to cover the latest edition of Mil-Std-461G, CS117 consisting of OTG117.1 Multiple Stroke Generator covering Waveform 1-2 and 4-5 and OTG117.2 Multiple Stroke/Burse Generator covering Waveform 3 and 4. Cables and Probes/cores included with system.

MIL-STD-461G CS117 Waveform 1-2 and 4-5 Multiple Stroke Generator

OPHIR_{EMC} Model OTG117.1 Generator is capable of producing Current Waveform 1, Voltage Waveform 2 or Voltage Waveform 4, and Current Waveform 5A all in the Multiple Stroke format. Single event triggering is also available for engineering testing and level setting. It can produce these Waveforms at both the Internal and External Equipment Levels (see Table 1).

Table 1

<u>Multiple Stroke</u>			
Applicability	Test Description	Internal Equipment Levels**	External Equipment Levels**
All equipment installations	Waveform 2 (WF2)/ Waveform 1 (WF1)	<u>First Stroke</u> $V_L = 300 \text{ V (WF2)}$ $I_T = 600 \text{ A (WF1)}$ $I_T = 60 \text{ A}^*$ <u>Subsequent Strokes</u> $V_L = 150 \text{ V (WF2)}$ $I_T = 150 \text{ A (WF1)}$ $I_T = 30 \text{ A}^*$	<u>First Stroke</u> $V_L = 750 \text{ V (WF2)}$ $I_T = 1500 \text{ A (WF1)}$ $I_T = 150 \text{ A}^*$ <u>Subsequent Strokes</u> $V_L = 375 \text{ V (WF2)}$ $I_T = 375 \text{ A (WF1)}$ $I_T = 75 \text{ A}^*$
Equipment installations routed in areas with composite skin/structure.	Waveform 4 (WF4)/ Waveform 5A (WF5A)	<u>First Stroke</u> $V_L = 300 \text{ V (WF4)}$ $I_T = 1000 \text{ A (WF5A)}$ $I_T = 300 \text{ A}^*$ <u>Subsequent Strokes</u> $V_L = 75 \text{ V (WF4)}$ $I_T = 200 \text{ A (WF5A)}$ $I_T = 150 \text{ A}^*$	<u>First Stroke</u> $V_L = 750 \text{ V (WF4)}$ $I_T = 2000 \text{ A (WF5A)}$ $I_T = 750 \text{ A}^*$ <u>Subsequent Strokes</u> $V_L = 187.5 \text{ V (WF4)}$ $I_T = 400 \text{ A (WF5A)}$ $I_T = 375 \text{ A}^*$

Output: Waveforms 1-2 and 4-5, adjustable amplitude up to External Equipment Levels

Output Connector(s): 7/16 DIN Connector

Coupling Device: Lightning Injection Transformer/Core

Control Interface: 7" LCD Touchscreen Display

Safety Features: Door Interlock, Emergency shut-off switch, shunt resistor for generator discharge

Input Power: 208 volts, 20 amps

Dimensions: TBD

MIL-STD-461G CS117 Waveform 3 and 6 Multiple Stroke/Burst

Generator

OPHIR_{EMC} Model OTG117.2 Generator is capable of producing Waveform 3 (1MHz & 10MHz) Multiple Stroke and Multiple Burst, as well as Waveform 6 Multiple Burst. Single event triggering is also available for engineering testing and level setting. It can produce these Waveforms at both the Internal and External Equipment Levels (see Table 2).

Table 2

<u>Multiple Stroke</u>			
Applicability	Test Description	Internal Equipment Levels	External Equipment Levels
All equipment installations	Waveform 3 (WF3) – 1 MHz and 10 MHz	<u>First Stroke</u> $V_T = 600 \text{ V (WF3)}$ $I_L = 120 \text{ A (WF3)}$ $I_L = 24 \text{ A}^*$ <u>Subsequent Strokes</u> $V_T = 300 \text{ V (WF3)}$ $I_L = 60 \text{ A (WF3)}$ $I_L = 12 \text{ A}^*$	<u>First Stroke</u> $V_T = 1500 \text{ V (WF3)}$ $I_L = 300 \text{ A (WF3)}$ $I_L = 60 \text{ A}^*$ <u>Subsequent Strokes</u> $V_T = 750 \text{ V (WF3)}$ $I_L = 150 \text{ A (WF3)}$ $I_L = 30 \text{ A}^*$
<u>Multiple Burst</u>			
Applicability	Test Description	Internal Equipment Levels	External Equipment Levels
All equipment installations	Waveform 3 (WF3) – 1 MHz and 10 MHz	$V_T = 360 \text{ V (WF3)}$ $I_L = 6 \text{ A (WF3)}$	$V_T = 900 \text{ V (WF3)}$ $I_L = 15 \text{ A (WF3)}$
Equipment installations that utilize short, low impedance cable bundle installations.	Waveform 6 (WF6)	$V_L = 600 \text{ V (WF6)}$ $I_T = 30 \text{ A (WF6)}$	$V_L = 1500 \text{ V (WF6)}$ $I_T = 75 \text{ A (WF6)}$

Output: Waveforms 3 (1 & 10MHz) and 6, adjustable amplitude up to External Equipment Levels

Output Connector(s): N Connector

Coupling Device: Lightning Injection Transformer/Core

Control Interface: 7" LCD Touchscreen Display

Safety Features: Door Interlock, Emergency shut-off switch, shunt resistor for generator discharge

Input Power: 115 volts, 20 amps

Dimensions: TBD

Optional Voltage/Current Reducer for Level 1 & 2

OPHIR_{EMC} Model OTG117.3 Voltage/Current Reducer is an adapter to reduce the output levels of Model OTG117.1 generator to the level 1 and level 2 requirements of Mil-Std-461G, CS117.



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