

what's **NEW** in Avionics Test Equipment

Solutions for Indirect Lightning test.



Airbus



Boeing



Specialist



Custom

EMC -
PARTNER



The largest range of impulse test equipment up to 100kV and 100kA
sales@emc-partner.ch www.emc-partner.com

Airbus Specific Equipment

The philosophy at Airbus is slightly at variance with DO-160. This can be seen in the Indirect Lightning and Voltage Spike requirements. Particularly for the new A350 jet liner.

Indirect Lightning

ABD0100.1.2

A test system is required with fixed impedances, including the impulse generator and coupler. Three waveforms are requested for indirect testing:

WF2 maximum 1600V 15ohm and 25ohm

WF3 maximum 1500V 25ohm

WF5A maximum 2000V 1ohm

EMC PARTNER offer an extension to the existing MIG0600MS and MIG-OS-MB-EXT DO-160 equipment to meet this new requirement.



Voltage Spikes

ABD0100.1.8

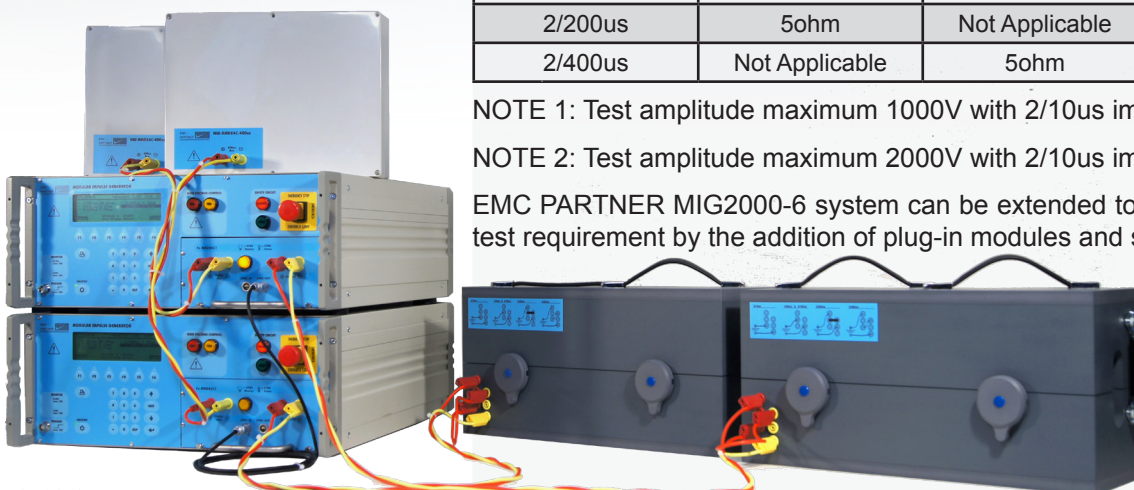
As an extension of the DO-160 section 17 test, Airbus has added 4 additional impulses and extended the test criteria as in the table.

Impulse	28Vdc	115Vac ^{NOTE 1}	230Vac ^{NOTE 2}
2/10us	50ohm	50ohm	100ohm
2/50us	5ohm	5ohm	10ohm
2/100us	5ohm	5ohm	10ohm
2/200us	5ohm	Not Applicable	Not Applicable
2/400us	Not Applicable	5ohm	10ohm

NOTE 1: Test amplitude maximum 1000V with 2/10us impulse

NOTE 2: Test amplitude maximum 2000V with 2/10us impulse.

EMC PARTNER MIG2000-6 system can be extended to include this special test requirement by the addition of plug-in modules and specialist couplers.



Special Couplers for Large Cables

Some cable bundles are too large to be coiled through the DO-160 couplers. Cables up to 8cm diameter pass straight through the EMC PARTNER couplers.

Current Injection Transformer

CN-CI-I1

One only CN-CI-I1 with MIG0600MS can be used for:

Waveform 1 Single Stroke to Level 4 (1500A)

Waveform 1 Multiple Stroke to Level 5 (1600A)

Waveform 5A Single Stroke to Level 4 (2000A)

Waveform 5A Multiple Stroke to Level 5 (2000A)

Waveform 5B Single Stroke to Level 5 (5000A)

Waveform 5B Multiple Stroke to Level 5 (2000A)

One only CN-CI-I1 with MIG0618SS can be used for:

Waveform 1 Single Stroke to Level 5 (3200A)

Waveform 5A Single Stroke to Level 5 (5000A)



Voltage Injection Transformer

CN-CI-V1

One only CN-CI-V1 with MIG0600MS can be used for:

Waveform 4 Single Stroke to Level 3 (300V)

Waveform 4 Multiple Stroke to Level 1 (25V)

Waveform 5A Single Stroke to Level 3 (300V)

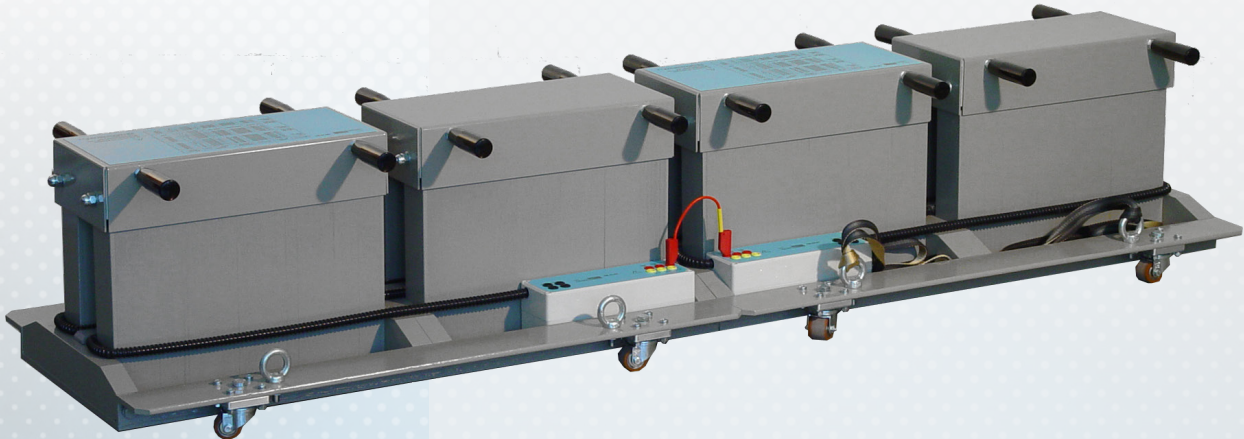
Waveform 5A Multiple Stroke to Level 1 (20V)



Custom Applications

For higher test levels, multiple CN-CI-V1 couplers can be connected in series. Some examples are as follows:

Voltage Injection with 2 x CN-CI-V1



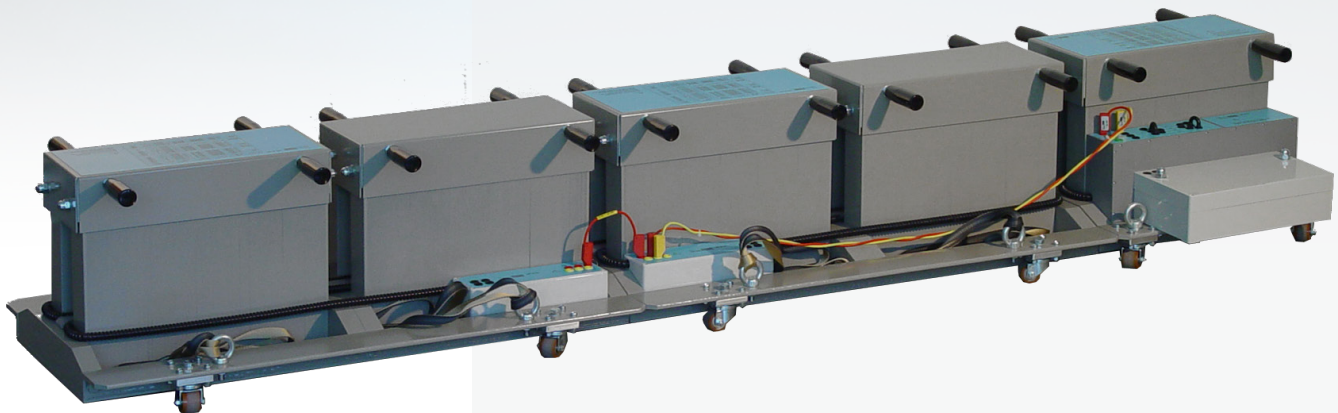
This combination with MIG0600MS:

- Waveform 4 Single Stroke to Level 4 (750V)
- Waveform 5A Single Stroke to Level 4 (750V)
- Waveform 5B Single Stroke to Level 2 (125V)
- Waveform 5B Multiple Stroke to Level 1 (20V)

With MIG0618SS, these can be extended to :

- Waveform 4 Single Stroke to Level 5 (1600V)
- Waveform 5A Single Stroke to Level 4 (750V)

Voltage Injection with 2 x CN-CI-V1 + CN-CI-I1



This combination with MIG0600MS as follows:

- Waveform 4 Multiple Stroke to Level 5 (800V)
- Waveform 5A Multiple Stroke to Level 5 (640V)
- Waveform 5B Multiple Stroke to Level 3 (300V)

Last Update: 12.April 2012