



Specifications

Model 515 RMS to DC Converter

Part Number: 10-100-1515

Specification Revision: 1

Revision Date: July 27, 2009

A. Overview:

The Model 515 is an RMS to DC converter used to convert the voltage signal from a charge amplifier into a DC voltage while passing the raw signal on for dynamic processing. This model is suitable for use with any of the ACES Systems 510-x line of charge converters.

B. Electrical Connections:

Connector 1:

Type: 6-pin MS Connector # MS3112E10-6S

Mating Connector: MS3116F10-6P

Pin A: -Voltage supply (-9 to -15V)

Pin B: GND

Pin C: +Voltage supply (+9 to +15V)

Pin D: Input Signal

Connector 2:

Type: 6-pin MS Connector # MS3116R10-6P (flying lead connector)

Mating Connector: MS3112E10-6S

Pin A: -Voltage supply (-9 to -15V)

Pin B: GND

Pin C: +Voltage supply (+9 to +15V)

Pin D: Copy of Input Signal

Connector 3:

Type: Female BNC

Mating Connector: Male BNC

Center Pin: DC Signal proportional to RMS signal on input

Outer Shell: GND

C. Power Requirements

+/- 9 V standard supply voltage input on connector 2. In typical applications the +/-9V power is provided from the ACES Analyzer.

D. Signal Processing

High Pass Filter: 11.1Hz

Low Pass Filter: 25kHz, n=8 (-160dB/dec filter rolloff)

Gain: 0.04V/g

Therefore a 200g signal would result in 8V dc output on the BNC.

Integration: No

E. Temperature Range

-40 to 85 °C

F. Accuracy

Calibrated to +/-2%

The calibration procedure adjusts the transfer function /sensitivity function of the Model 515 RMS to DC converter to 0.04V/g (25g/V) to within the manufacturer's tolerance of $\pm 2\%$.

ACES Systems confirms that all calibrated units have been inspected and calibrated to the same accuracy parameters as used during correlation testing of the engines by Pratt & Whitney Canada.

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