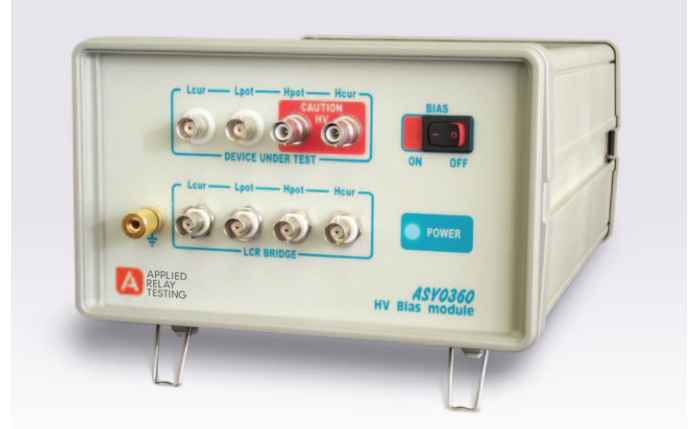
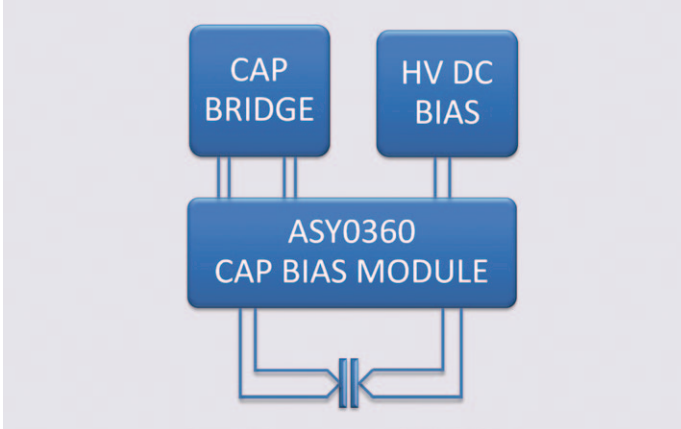


ASY0360 HV BIAS MODULE

Capacitor Test



The ASY0360 offers capacitor designers, users & manufacturers the ability to simultaneously apply a high voltage DC bias whilst measuring capacitor values using a standard capacitance bridge. The unit is available either with 2 kV or 5 kV bias voltage capability.

Key Features

- Capacitance with DC Bias voltages to 5,000 V DC
- Isolates bridge from bias voltage
- Allows existing capacitor bridges to be used
- Use with customers' existing H.V. bias power supply
- Compact, portable instrument
- All metal construction - excellent electrical screening characteristics
- Optional cable pack provides all the necessary interface cables

Overview

Capacitor value can be seriously altered in the presence of high bias voltages. Measurement of this parameter is becoming increasingly important as higher stress levels are reached within the component as the size of chip and ceramic capacitors reduce.

Using the ASY0360 a bias of up to 5,000 Volts DC can be safely applied to the capacitor using a conventional low-voltage capacitance bridge and High-Voltage power supply, to quickly and accurately measure capacitance value under real world conditions. The four-wire measurement connection is maintained throughout from the bridge to the capacitor.

Capacitance measurements are made with the bridge in the normal way, after the applied DC voltage level has been set.

Model	ASY0360	ASY0360-5
Operating range	0 - 2 kV dc	0 - 5 kV dc
Recommended capacitance range	0 - 6 μ F	0 - 3 μ F
Recommended test conditions	0.1 - 3 Vrms @ 1 kHz	
Supply	115 / 230 Vrms, 50 / 60 Hz, 5W	
Dimensions	34 x 21 x 13 cm (13 1/4 x 8 x 5 1/4")	

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Product Features

Device connections

Connections to the device under test contacts are made using the two SHV coaxial connectors labelled Hpot and Hcur and the upper two BNC connectors labelled Lcur and Lpot.

The lower four BNC connectors are used to make connection to the capacitance bridge. A 4 mm jack connects to the ground connection of the capacitance bridge.



Simplified block diagram

Bias switch (not ASY0360-5 version)

When 'OFF' the HV bias module circuitry is bypassed directly connecting the device under test to the capacitance bridge. Note that in this mode voltage clamping diodes are still present. When the bias switch is 'ON', the bias circuitry is active. A red 'BIAS' indicator will flash alongside the bias switch.

HV monitor

A rear panel BNC output provides a 1000:1 attenuated output of the HV bias voltage. This permits a standard voltmeter to be used to indicate the applied capacitor bias voltage.

System power

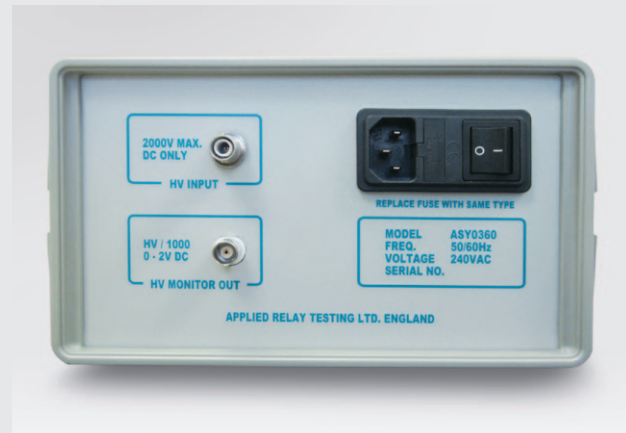
The unit can be configured for use at 115 Vac or 230 Vac line voltages. Please specify at time of purchase. The system is fitted with a fused standard 3 pin IEC inlet.

Calibration

There are no internal adjustments on the unit and no calibration is required, it is only necessary to follow the capacitor bridge manufacturer's standard calibration procedure.

Signal quality

The earth bonded all-steel construction provides a high level of screening. Additionally all parametric signals are fully screened to optimise signal quality in electrically noisy environments. A separate 4 mm terminal mounted on the front panel should be connected to the capacitor bridge ground terminal.



Rear panel view

DC bias power supply

The unit has been designed to work with any standard H.V. power supply. Care should be taken to ensure the upper voltage limit of the supply does not exceed the capability of the unit.

Cable pack (optional)

The ASY0360 cable pack option provides cables to connect the unit to a standard capacitance bridge and to remaining front and rear panel connectors.

Order codes:

ASY0360 with 2 kV bias - order code: ASY0360
 ASY0360 with 5 kV bias - order code: ASY0360-5
 Cable pack - order code: ASY0360-CP



See also:
 Reflex 901B HV DWV,
 IR test system