

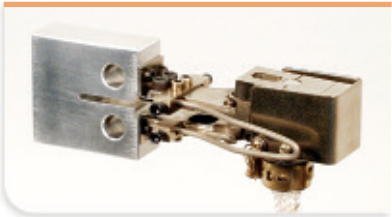
Special Model 3641 with heat shields

Designed for fracture mechanics tests in environmental chambers

where the entire gage must be exposed to the heat. These

capacitive sensor based clip-on gages (or COD gages) may be used

up to 540 °C (1000 °F) without any cooling.



Model 3641-0010-020 with 0.100 inch gauge length and +0.200 inch of measuring range

These gages are designed for testing at elevated temperatures, much higher than strain gage based clip-on designs. They can be used for E1820 testing for JIC and R-curve determination. Special configurations are available to meet the requirements of ASTM E399 for

fracture toughness (*please consult the factory for these configurations*). The Model 3641 uses a high temperature capacitive sensor and can operate without any cooling at the upper temperature limit of most environmental chambers used in materials testing.

High temperature nickel alloy springs are used to create the force to hold the gage in place on the knife edge contacts. Stiff arms with a flexure design at the rear eliminates potential problems of high temperature creep experienced with other designs.

The clip-on gages are supplied with signal conditioning electronics. The gage and electronics are factory calibrated. The analog output voltage is typically calibrated for 0 to 10 VDC (other ranges are available on request). This can be used directly by data acquisition systems. It usually can be routed to a DC input channel on most test machine controllers as well.

Features

- Capacitive signal conditioner and power supply included. Provides high level DC voltage output with low noise. Easily interfaced to test controllers, data acquisition boards and chart recorders.
- Shipped fully calibrated with electronics(traceable to NPL (UK)) with user specified voltage output.
- All standard units meet existing ASTM E1820 requirements for accuracy.
- Special models available for ASTM E399 accuracy requirements.
- Sharp grooves per ASTM E1820, E813, and E399 for improved stability when mounted.
- Includes high quality foam lined case.

SPECIFICATIONS

- Input:** Includes power supply for your country (specify)
- Output:** User specified, +/-5 VDC or +/-10VDC typical
- Linearity:** ≤0.15% of full scale measuring range, depending on model
- Temperature Range:** Elevated temperature use to 540 °C (1000 °F)
- Cable:** Triaxial ceramic fiber insulated cable 2 ft (0.6 m) plus 10 ft (3 m) room temperature extension cable
- Operating Force:** Exerts 2 to 3 lbs (9 to 14 N), depending on model
- Environment:** Recommended for elevated temperature testing in air or some other gases
- Maximum Operating Frequency:** Dependent on model configuration; consult factory.

OPTIONS

- Bolt on knife edges for attaching to test samples
- Connectors to interface to nearly any brand test equipment

ORDERING INFORMATION

**Model 3641 Available Versions:** Note that other gauge lengths and measuring ranges available on special order, and special configurations are available for dynamic testing. Other configurations may be available with special order; please contact Epsilon to discuss your requirements.

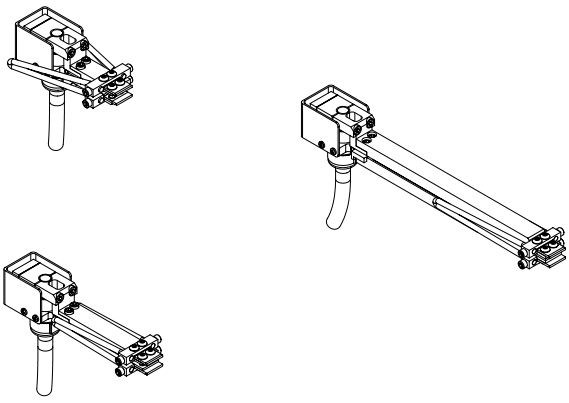
Gauge Length		Measuring Range	
U.S.A.		U.S.A.	
-0020	0.200"	-100T <sup>1</sup>	+0.100"
-0025	0.250"	-150T <sup>1</sup>	+0.150"
-0030	0.300"	-250T	+0.250"
-0047	0.475"	-500T	+0.500"
-0050	0.500"		
METRIC		METRIC	
-003M	3.0 mm	-025M <sup>1</sup>	+2.5 mm
-006M	6.0 mm	-030M <sup>1</sup>	+3.0 mm
-010M	10.0 mm	-040M <sup>1</sup>	+4.0 mm
-012M	12.0 mm	-060M	+6.0 mm
-0125M	12.5 mm	-100M	+10.0 mm
		-120M	+12.0 mm
		-125M	+12.5 mm

Model Number 3641- - - - -

<sup>1</sup> Available with special configuration to meet the requirements of ASTM E399. Please consult the factory.

**Example:** 3641-010M-100M: 10.0 mm gauge length, +10.0 mm measuring range

Visit our website at [www.epsilontech.com](http://www.epsilontech.com)  
Contact us for your special testing requirements.



MODEL 3641 EXAMPLES

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