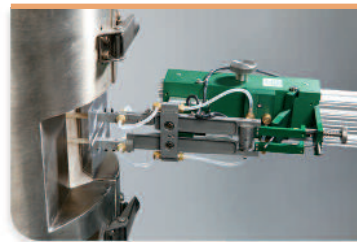


This model was designed for low strain applications for use with split type materials testing furnaces or induction heaters. It features very low specimen contact force and includes a slide bracket for mounting. Water cooling allows use to 1200 °C (2200 °F) standard or 1600 °C (2900 °F) with the high temperature option.

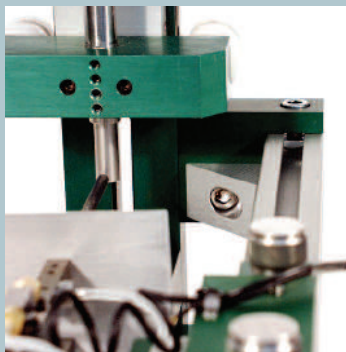


Model 3648 with 1 inch gauge length

These extensometers use a high temperature capacitive sensor in combination with an innovative design to achieve high accuracy strain measurements in low measuring ranges not possible with other high temperature extensometers. They mount on a slide bracket (included) that can attach to

the load frame of your test system; optional load frame mounting brackets are available. The standard temperature version (to 1200 °C) is supplied with high purity alumina rods. The high temperature option is furnished with alpha grade silicon carbide rods. Rods are made to order to the length required for your furnace. These units are made to order in many different gauge lengths and measuring ranges.

The extensometer comes with a signal conditioner. The output is an analog DC voltage, factory calibrated with the extensometer to 0 to ±10 VDC typically. They are readily interfaced with most existing test controllers, and may be directly connected to data acquisition systems and chart recorders. Bringing the signal into a spare DC input channel (or external input) on the test controller allows the extensometer to be used for strain controlled tests like low cycle fatigue.



Model 3648 extensometer



Model 3648 with 1 inch gauge length



Model 3648 with 1 inch gauge length

**Features**

- May be left on through specimen failure.
- Designed for those applications requiring ±0.10 inches (±2.5 mm) full scale measuring range or less. For applications requiring greater measuring ranges, see Model 3549 (page 30).
- A signal conditioner and power supply included. Provides high level DC voltage output with exceptionally low noise (typical 0.1 mV on 10VDC output). Easily interfaced to test controllers, data acquisition boards, and chart recorders.
- Shipped fully calibrated with electronics (traceable to NPL) with user specified voltage output.
- All models can measure in both tension and compression and can be used for cyclic testing.
- Mechanical overtravel stops in both directions.
- All standard units meet existing ASTM class B-1 and ISO 9513, class 0,5 requirements for accuracy.
- Includes high quality foam lined case and a spare set of ceramic rods.
- Innovative slide mount allows the extensometer to engage the specimen once the test temperature has been achieved.
- Low strain range, high resolution versions available.

**SPECIFICATIONS**

- Input:** Includes power supply for your country (specify)
- Output:** User specified, +/-5 VDC or +/-10 VDC typical
- Linearity:** 0.15% of full scale measuring range (rod length dependent)
- Resolution:** 0.001% of full scale
- Temperature Range:** Standard (-ST) is to 1200 °C (2200 °F), optional (-HT) 1600 °C (2900 °F)
- Cable:** Integral, ultra-flexible cable, 8 ft (2.5 m) standard
- Contact Force:** Adjustable up to 150 g (30-50 g typically used)
- Operating Force:** <10 g typical

**OPTIONS**

- Model 2050 constant temperature water re-circulating bath
- High temperature option (-HT suffix) for use to 1600 °C
- Load frame mounting brackets
- Specify rod tip style desired. Available choice are:
  - Straight chisel, vee chisel, conical tip

**Model 2050 Constant Temperature Re-Circulation Bath**

This bath provides the controlled temperature flow for water-cooled extensometers. Capable of cooling or heating the water, temperature is maintained within 0.1 °C.

These units are ideal for obtaining the maximum stability of any water-cooled extensometer.



**ORDERING INFORMATION**

**Model 3648 Available Versions:** ANY combination of gauge length and measuring range listed below is available, except as noted. Ceramic rod lengths are made to fit furnaces as required. Please provide furnace dimensions at the time of order. Other configurations may be available with special order; please contact Epsilon to discuss your requirements.

Gauge Length <sup>1</sup>		Measuring Range	
U.S.A.		DESIGNATION	% STRAIN
-0050	0.500"	-0005	±0.5%
-0100	1.000"	-001	±1%
-0200	2.000"	-005	±5%
METRIC		-010 <sup>2</sup>	±10%
-010M	10.0 mm	-020 <sup>2</sup>	±20%
-0125M	12.5 mm		
-025M	25.0 mm		
-050M	50.0 mm		

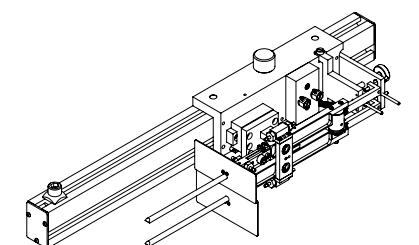
Model Number 3648- \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Temperature Range	
-ST	Ambient to 1200 °C (RT to 2200 °F)
-HT	Ambient to 1600 °C (RT to 2900 °F)

<sup>1</sup> Please consult the factory for specific gauge length requirements.  
<sup>2</sup> ±2.5 mm (±0.10 inch) maximum allowable measuring range for any given gauge length.

**Example:** 3648-010M-003-ST: 10.0 mm gauge length, ±3.0% (±0.30 mm) measuring range, standard temperature option (room temperature to 1200 °C)

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



MODEL 3648 EXAMPLE

Visit our website at [www.epsilontech.com](http://www.epsilontech.com)