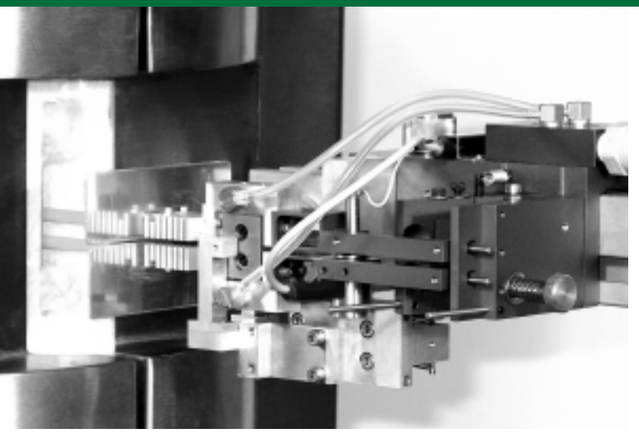
Epsilon Technology Corp



Model 3648 extensometer shown with furnace.

These extensometers feature very low specimen contact force and are available in low strain ranges for use in split type materials testing furnaces or with induction heating. Water-cooled and mounted to a slide bracket, these are for use to 1200 °C (2200 °F). The high temperature option allows use to 1600 °C (2900 °F).

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. These extensometers 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 gage lengths and measuring ranges. The maximum travel available for any gage length is ±2.5 mm (±0.10 inches); the minimum is ±0.25 mm (±0.01 inches).

The extensometer comes with the Model 3603 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.

Contact Epsilon for help with configuring a system to meet your needs.

Epsilon also offers the Model 2050 constant temperature water re-circulating bath.

Features

- **May be left on through specimen failure.**
- 3603 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 NIST) 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	0.10% of full scale measuring range
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

High temperature option (-HT suffix) for use to 1600 °C
Model 2050 constant temperature water re-circulating bath
Load frame mounting brackets
Specify rod tip style desired. Available choice are:
- Standard chisel, vee-chisel, and conical point (see page 97)

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 gage 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.*

Gage Length[1]

U.S.A.	
-0050	0.500"
-0100	1.000"
METRIC	
-010M	10.0 mm
-025M	25.0 mm

Measuring Range[2]

MAXIMUM LIMITS
-0.10" to 0.10"
-2.5 mm to 2.5 mm

Model Number 3648 - __ __ __ __ - __ __ __ __ - __ __

Temperature Range

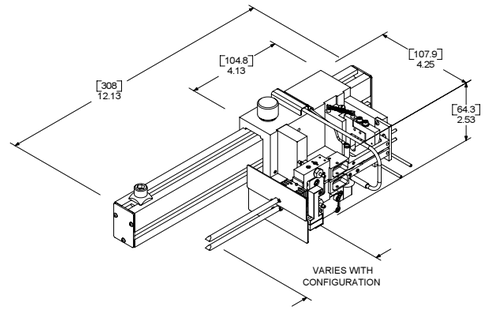
-ST	Ambient to 1200 ˚C (Ambient to 2200 ˚F)
-HT	Ambient to 1600 ˚C (Ambient to 2900 ˚F)

1 *Please consult the factory for specific gage length requirements.*

2 *Can be configured to a large variety of measuring ranges within these specified limits. Please consult the factory for your requirements.*

Example: *3648-010M-002-ST: 10.0 mm gage length, ±2.5% (±0.25 mm) measuring range, standard temperature option (room temperature to 1200 °C)*

Signal Conditioning Electronics.
Model 3603 included with all Model 3648 extensometers.



TYPICAL MODEL 3648 EXTENSOMETER DIMENSIONS: [mm] inches