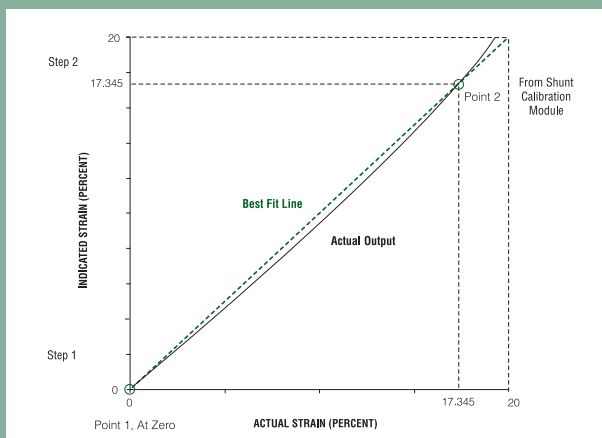


The Shunt Calibration Module (SCM) makes setting up your electronics with Epsilon's strain gaged extensometers a quick and easy process.

What are they?

Shunt calibration is a common method of calibrating electronics for use with strain gaged transducers. The SCM provides a means of transferring Epsilon's transducer calibration to the user's electronics so the output reads correctly. The SCM also provides a quick means to check that the electronics are properly set and have not shifted. The SCM is a resistor that connects across one arm of the sensor bridge, which when used causes the output of the sensor to shift. With a properly chosen resistor, the shifted output will simulate an output whose value may be precisely measured and reported. In order to set the electronics properly, it must read zero when the extensometer is at zero. It must also have the proper amplification (gain) so that non-zero readings are correct.

The SCM works for any of Epsilon's strain gaged extensometers and with nearly any electronics. As shown in the photo, the module is a simple plug-in device containing the shunt resistor. It plugs into a miniature connector extending out the back of the extensometer connector. When plugged in, it shunts across one arm of the sensor and shifts the output to a precise value recorded on the extensometer's calibration certificate.



Calibration requires only these two simple steps:

1. Mount the extensometer on a sample. Adjust the output to read zero. This sets point "1" on the example graph shown.
2. Plug in the SCM. Adjust the output readings by adjusting the gain or amplification to precisely the value indicated on the extensometer's calibration sheet. This sets point "2" on the example graph.

That's all it takes. This process works for almost every combination of extensometer and electronics, and it works even if the test controls have internal shunt capability. It is useful for digital systems that read strain directly, as well as for older systems and stand alone signal conditioning electronics. For controls that only allow for one extensometer, it provides the ability to quickly switch from one extensometer to another. For systems with multiple calibration ranges, as common in materials testing, multiple SCM's may be ordered for each of the ranges specified.

The extensometer and SCM may be returned to Epsilon Technology for periodic re-calibration.

Calibration



**Shunt
Calibration
Module**