

# Extensometer Calibration Certificate

25 mm

Model: 3542-025M-020-ST Date: 17-Jan-03  
 Extensometer S/N: E82139  
 Gage Length: 25 mm Travel (Tens): +5.0mm Compression: -5.0mm

| Travel (mm) | Output (mV) |         |
|-------------|-------------|---------|
|             | UP          | DOWN    |
| 0.000       | -0.181      | -0.185  |
| 1.000       | -3.812      | -3.799  |
| 2.000       | -7.834      | -7.812  |
| 3.000       | -11.870     | -11.851 |
| 4.000       | -15.916     | -15.905 |
| 5.000       | -19.970     | -19.970 |

$$y(\text{mV}) = 0.248x + 0.0518$$

↑  
V<sub>01</sub>+

|                             |                   |
|-----------------------------|-------------------|
| Linearity (best fit)=       | 0.137 % F.S.      |
| Full Scale Span (best fit)= | 20.158 millivolts |
| Full Scale Span (best fit)= | 2.016 mV/V        |
| Max Hysteresis =            | -0.109 % F.S.     |
| Slope =                     | 4.032 mV/mm       |
| Intercept =                 | -0.209 mV         |
| Zero Output (with pin In):  | -0.18 mV          |
| Tension Span (end pt):      | 2.015 mV/V        |
| Compression span (ep):      | -1.976 mV/V       |
| Excitation Voltage:         | 10.000 VDC        |

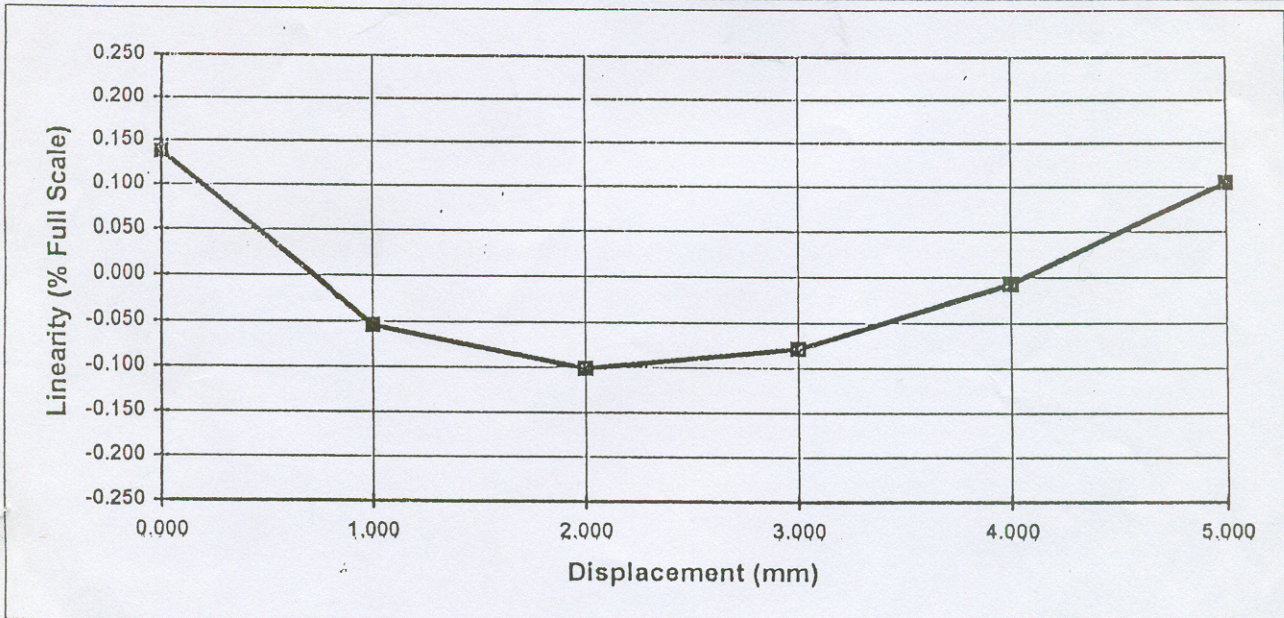
Connections for + output on tension:

| FUNCTION       | PIN  | COLOR |
|----------------|------|-------|
| Excitation (+) | NA 5 | Red   |
| Excitation (-) | NA 7 | Black |
| Output (+)     | NA 2 | Green |
| Output (-)     | NA 4 | White |
| Shield         | NA 6 |       |

no connector

|                                       |                 |
|---------------------------------------|-----------------|
| Shunt Calibration Data:               |                 |
| Shunt Resistor:                       | 70,000 ohms     |
| Shunted Reading:                      | 1.247 mV/V      |
| Shunted Reading:                      | 12.374 % strain |
| (Resistor between RED and GREEN pins) |                 |

|                             |              |      |         |
|-----------------------------|--------------|------|---------|
| Meter:                      | Fluke 8840A  | S/N: | 6155009 |
| Calibrator:                 | Epsilon 3590 | S/N: | A3761   |
| Traceable to NIST standards |              |      |         |



Calibrated by: MP Date: 1/17/03

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