Series 4 digital force gauges are designed for tension and compression force testing in numerous applications across virtually every industry, with capacities from 0.12 lb to 500 lb (0.5 N to 2500 N). The gauges feature a sampling rate of 3,000 Hz, producing accurate results under a wide range of test conditions. Accuracy is ±0.2% of full scale, and resolution is 1/2000. A large, backlit graphics LCD displays large, legible characters, while the simple menu navigation allows for quick access to the gauges’ many features and configurable parameters. Data can be transferred to a PC or data collectors via USB, RS-232, Mitutoyo (Digimatic), or analog outputs.

On-board data memory for up to 50 readings is included, as are statistical calculations with output to a PC. Integrated set points with indicators and outputs are ideal for pass-fail testing and for triggering external devices such as an alarm, relay, or test stand. The gauges are overload protected to 200% of capacity, and an analog load bar is shown on the display for graphical representation of applied force.

An ergonomic, reversible aluminum design allows for hand held use or test stand mounting for more sophisticated testing requirements. Series 4 digital force gauges are directly compatible with Mark-10 test stands, grips, and software.

Series 4 gauges include MESUR™ Lite data acquisition software. MESUR™ Lite tabulates continuous or single point data from Series 5 and 4 gauges. Data saved in the gauge’s memory can also be downloaded in bulk. One-click export to Excel button easily allows for further data manipulation.

**Features**

- 3,000 Hz sampling rate
- USB, RS-232, Mitutoyo, and analog outputs
- Large backlit graphic display
- 50-point data memory with statistics and outputs
- Live load bar graph with set point markers
- Programmable set points, with indicators and outputs
- Peak readings and set points always displayed
- Configurable audio alarms and key tones
- 5 selectable units of measurement
- MESUR™ Lite data collection software included
- Analog load bar w/set point markers
- Tension / compression indicator
- Peak readings
- Current reading
- Measurement mode
- Units of measurement
- Number of saved data points
- Battery indicator
- Pass/fail indicators
- Set points
Focus on Engineering: Reversible Housing

Display and keypad are upright

Shaft down

Housing separates into reversible halves, electrically connected by gold-plated spring contacts.

Shaft up

Reversible housing allows the gauge to be handheld or mounted to a test stand.

The display and keypad remain upright.

Specifications

*DDVSBZ  ±0.2% of full scale
4BQNMJH36BF  3,000 Hz, pulse response of 1/1,500 sec. minimum
1PXF  AC or rechargeable battery. Multi-step low battery indicator is displayed, gauge shuts off automatically when power is too low.
9BUFSZM6GF  Backlight on / off: up to 7 / 24 hours of continuous use

Accuracy:

0VUQVUT  6404 Configurable up to 115,200 baud.
1UVUFZ0%JNBUD Serial BCD suitable for all Mitutoyo SPC-compatible devices.
*OBMPH  ±1 VDC, ±0.25% of full scale at capacity.
(FOF86M QVSQPTF Three open drain outputs, one input.
4FUQP)OUT Three open drain lines.

Power:

2POGRVSBNCF TFUJ60HT  Digital filters, outputs, automatic shut off, default settings, key tones, audio alarms, calibration

4BGFPWFSMPBE  2000% of full scale (display shows “OVER” at 110% and above)

BFHIU  1.0 lb [0.45 kg]
1.2 lb [0.54 kg]

Safe overload:

-PBDFMMEfQDUG  All models 0.010 [0.25], except 0.005 [0.13] for M4-012
6OWJSPQF0DBMSFRV)SFNFOUT  40 – 100°F, max. 96% humidity, non-condensating

Battery life:

8SSBOUZ  3 years (see individual statement for further details)

Outputs:

USB / RS-232: Configurable up to 115,200 baud.
Mitutoyo (Digimatic): Serial BCD suitable for all Mitutoyo SPC-compatible devices.
Analog: ±1 VDC, ±0.25% of full scale at capacity.

Set points:

General purpose: Three open drain outputs, one input.
Configurable settings: Digital filters, outputs, automatic shutoff, default settings, key tones, audio alarms, calibration

Dimensions in [mm]

Weight:

M4-012 - M4-100: 1.0 lb [0.45 kg]
M4-200 - M4-500: 1.2 lb [0.54 kg]

Load cell deflection:

Environmental requirements:

40 - 100°F, max. 96% humidity, non-condensating

Warranty:

3 years (see individual statement for further details)

Specifications subject to change without prior notice.
### In The Box

Series 4 force gauges are shipped as shown at left, and include the following accessories:

1. Extension rod *
2. Hook *
3. Cone *
4. Chisel *
5. V-Groove *
6. Flat *
7. Coupling *
8. Carrying case
9. USB cable
10. AC adapter
11. Battery
12. Resource CD (USB driver, MESUR® Lite software, MESUR®gauge software demo, and user’s guide)
13. Certificate of calibration with data

* The specific accessory depends on the force gauge model. Refer to the website for details.

### Capacity & Resolution

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity &amp; Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>M4-012</td>
<td>0.12 x 0.00005, 2 x 0.001, 50 x 0.02, 0.5 x 0.0002, L/ N/</td>
</tr>
<tr>
<td>M4-025</td>
<td>0.25 x 0.0001, 4 x 0.002, 100 x 0.05, 1 x 0.0005, 1000 x 0.5</td>
</tr>
<tr>
<td>M4-05</td>
<td>0.5 x 0.0002, 8 x 0.005, 250 x 0.1, 2.5 x 0.001, 2500 x 1</td>
</tr>
<tr>
<td>M4-2</td>
<td>2 x 0.001, 32 x 0.02, 1000 x 0.5, 10 x 0.005, -</td>
</tr>
<tr>
<td>M4-5</td>
<td>5 x 0.002, 80 x 0.05, 2500 x 1, 25 x 0.01, -</td>
</tr>
<tr>
<td>M4-10</td>
<td>10 x 0.005, 160 x 0.1, 5000 x 2, 50 x 0.02, -</td>
</tr>
<tr>
<td>M4-20</td>
<td>20 x 0.01, 320 x 0.2, 10000 x 5, 100 x 0.05, -</td>
</tr>
<tr>
<td>M4-50</td>
<td>50 x 0.02, 800 x 0.5, 25000 x 10, 250 x 0.1, -</td>
</tr>
<tr>
<td>M4-100</td>
<td>100 x 0.05, 1600 x 1, 50000 x 20, 500 x 0.2, -</td>
</tr>
<tr>
<td>M4-200</td>
<td>200 x 0.1, 3200 x 2, 10000 x 0.5, 1000 x 0.5, 1 x 0.0005, -</td>
</tr>
<tr>
<td>M4-500</td>
<td>500 x 0.2, 8000 x 5, 2500 x 1, 2500 x 1, 2.5 x 0.001, -</td>
</tr>
</tbody>
</table>

All models include 110V AC adapters.

Add suffix 'E' for euro plug (220V), 'U' for UK plug (220V) or 'A' for Australian plug (220V).

Ex: M4-05E, M4-100U, M4-500A.