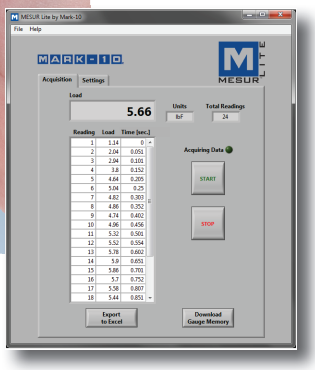


▶ MESUR® Lite data acquisition software is included with Series 5 gauges

Series 5 advanced 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 an industry-leading sampling rate of 7,000 Hz, producing accurate results even for quick-action tests. 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 1,000 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.

▲ Shown with an ES03 test stand and G1008 film & paper grips

The Series 5's averaging mode addresses the need to record the average force over time, useful in applications such as peel testing, while external trigger mode makes switch activation testing simple and accurate. An ergonomic, reversible aluminum design allows for hand held use or test stand mounting for more sophisticated testing requirements. Series 5 force gauges are directly compatible with Mark-10 test stands, grips, and software.

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

Features

- **High-speed 7,000 Hz sampling rate**
- **USB, RS-232, Mitutoyo, and analog outputs**
- **Large backlit graphic display**
- **1,000-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**
- **Averaging mode - calculates average readings over time**
- **External trigger mode - for switch contact testing or remotely stopping display update**
- **Automatic data output via USB/RS-232**
- **5 selectable units of measurement**
- **Configurable audio alarms and key tones**
- **Password protection, configurable for individual keys and calibration**

Display Indicators

Set points
Pass/fail indicators
Automatic output indicator
Battery indicator
Number of saved data points
Tension / compression indicator
Peak readings
Current reading
Measurement mode
Units of measurement
Analog load bar w/set point markers

MARK-10®

Mark-10 Corporation ■ **www.mark-10.com** ■ **info@mark-10.com**
Toll-free: 888-MARK-TEN ■ **Tel: 631-842-9200** ■ **Fax: 631-842-9201**

3 YEAR WARRANTY

Specifications subject to change without prior notice

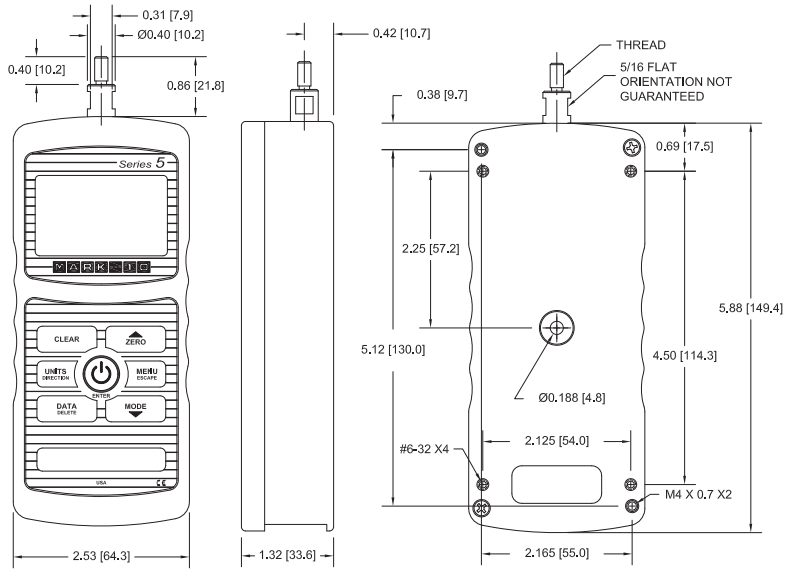
Focus on Engineering: Reversible Housing

Specifications

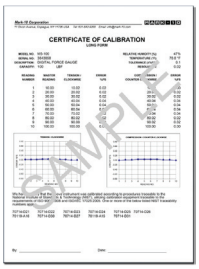
Accuracy:	±0.1% of full scale
Sampling Rate:	7,000 Hz
Power:	AC adapter: 100-240VAC, 50-60 Hz, 0.3 A Battery: Rechargeable 8.4V NiMH Low battery indicator appears when battery level is low, and gauge powers off automatically when power reaches critical stage.
Battery life:	Backlight on / off: up to 7 / 24 hours of continuous use
Outputs:	**USB / RS-232:** Configurable up to 230,400 baud. Includes Gauge Control Language 2 for full computer control. **Mitutoyo (Digimatic):** Serial BCD suitable for all Mitutoyo SPC-compatible devices. **Analog:** ±1 VDC, ±0.25% of full scale at capacity, **General purpose:** Three open drain outputs, one input. **Set points:** Three open drain lines, 40 VDC max., 100 mA DC max.
Configurable settings:	Digital filters, outputs, automatic output (via USB/RS-232), automatic shutoff, default settings, averaging mode, external trigger, passwords, key tones, audio alarms, backlight, calibration
Safe overload:	200% of full scale (display shows "OVER" at 110% and above)
Weight (lb [kg]):	**M5-012 - M5-100:** 1.0 [0.45] **M5-200 - M5-500:** 1.2 [0.54]
Load cell deflection:	All models 0.010 [0.25], except 0.005 [0.13] for M5-012, at full scale
Environmental requirements:	40 - 100°F, max. 96% humidity, non-condensating
Warranty:	3 years (see individual statement for further details)

Dimensions in [mm]

	Thread
M5-012 - M5-100	#10-32M UNF
M5-200 - M5-500	5/16-18M UNC



In The Box



Series 5 force gauges are shipped as shown at left, and include the following accessories:

(1) Extension rod *
(1) Hook *
(1) Cone *
(1) Chisel *
(1) V-Groove *
(1) Flat *
(1) Coupling *
(1) Thread adapter *
(1) Carrying case
(1) USB cable
(1) AC adapter
(1) Battery
(1) Certificate of calibration with data

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

Capacity & Resolution

Model	lbF	ozF	kgF	gF	N	kN	mN
M5-012	0.12 x 0.00002	2 x 0.0005	-	50 x 0.01	0.5 x 0.0001	-	500 x 0.1
M5-025	0.25 x 0.00005	4 x 0.001	-	100 x 0.02	1 x 0.0002	-	1000 x 0.2
M5-05	0.5 x 0.0001	8 x 0.002	-	250 x 0.05	2.5 x 0.0005	-	2500 x 0.5
M5-2	2 x 0.0005	32 x 0.01	1 x 0.0002	1000 x 0.2	10 x 0.002	-	-
M5-5	5 x 0.001	80 x 0.02	2.5 x 0.0005	2500 x 0.5	25 x 0.005	-	-
M5-10	10 x 0.002	160 x 0.05	5 x 0.001	5000 x 1	50 x 0.01	-	-
M5-20	20 x 0.005	320 x 0.1	10 x 0.002	10000 x 2	100 x 0.02	-	-
M5-50	50 x 0.01	800 x 0.2	25 x 0.005	25000 x 5	250 x 0.05	-	-
M5-100	100 x 0.02	1600 x 0.5	50 x 0.01	50000 x 10	500 x 0.1	-	-
M5-200	200 x 0.05	3200 x 1	100 x 0.02	-	1000 x 0.2	1 x 0.0002	-
M5-300	300 x 0.1	4800 x 2	150 x 0.05	-	1500 x 0.5	1.5 x 0.0005	-
M5-500	500 x 0.1	8000 x 2	250 x 0.05	-	2500 x 0.5	2.5 x 0.0005	-

For Models M5-1000 and M5-2000, refer to their respective data sheet

Alternative AC Adapter Prongs

AC1120

AC1121

AC1122

All instruments include a 110V AC adapter with US prong style.
Select an alternative prong adapter (if required) from the table below.

Model	Description
AC1120	Prong for AC adapter, 220V EUR
AC1121	Prong for AC adapter, 220V UK
AC1122	Prong for AC adapter, 220V AUS