



Series 2 digital force gauges are designed for basic tension and compression force testing applications up to 500 lbf (2,500 N). Peak tension and compression readings are reliably captured via the gauges' $\pm 0.5\%$ accuracy and 500 Hz sampling rate. A backlit graphic LCD displays the current, peak tension, or peak compression reading.

The gauges are overload protected to 200% of capacity. An ergonomic, reversible aluminum housing allows for hand held use or fixture mounting, rugged enough for applications in both production and laboratory environments. Series 2 gauges are directly compatible with Mark-10 test stands and grips.



< Shown with the included cushioned shipping carton and optional accessories

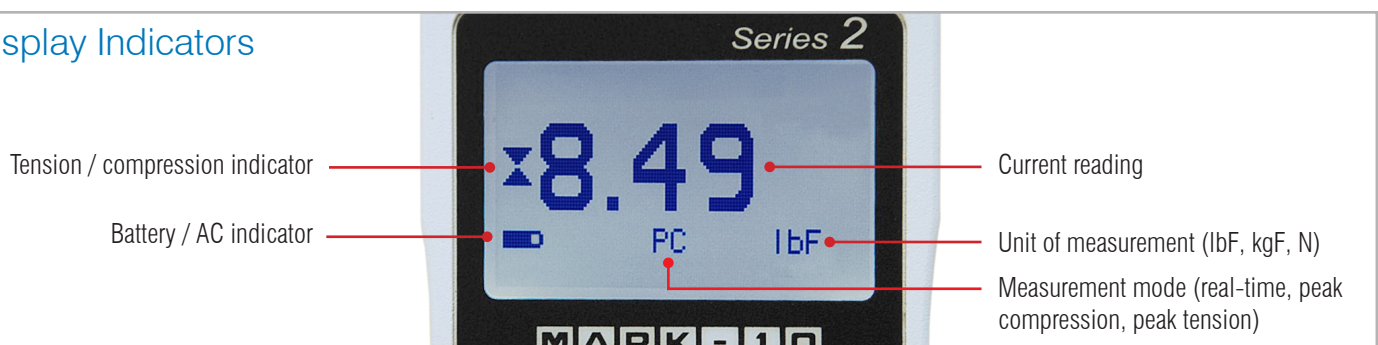


> Shown with an ES20 test stand with G1061 wedge grips

Features

- Calculates peak tension and compression values
- 3 selectable units of measurement
- Ultra-compact, ergonomic housing
- Configurable default measurement unit and mode
- 500 Hz sampling rate
- Large, backlit graphic display with auto-dimming
- Powered by rechargeable battery or AC adapter
- Reversible housing for alternate load cell orientation

Display Indicators

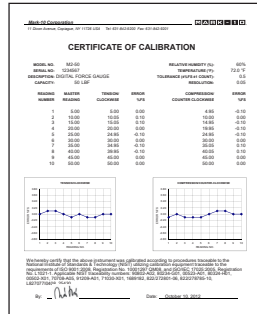


Optional Items



Carrying case

Cushioned hard plastic carrying case provides storage space for the gauge, AC adapter, and attachments.



Certificate of calibration

Includes 10 data points in the tension and compression directions. NIST-traceable.



Attachments

Available individually or as kits. Select from hooks, flats, cones, chisels, v-grooves, and extension rods.

Ordering Information - Gauges

Model	Capacity x Resolution		
	lbF	kgF	N
M2-2	2 x 0.002	1 x 0.001	10 x 0.01
M2-5	5 x 0.005	2.5 x 0.002	25 x 0.02
M2-10	10 x 0.01	5 x 0.005	50 x 0.05
M2-20	20 x 0.02	10 x 0.01	100 x 0.1
M2-50	50 x 0.05	25 x 0.02	250 x 0.2
M2-100	100 x 0.1	50 x 0.05	500 x 0.5
M2-200	200 x 0.2	100 x 0.1	1000 x 1
M2-500	500 x 0.5	250 x 0.2	2500 x 2

In The Box



Series 3 force gauges are shipped as shown above, and include the following accessories (see below table for details):

- | | | |
|-------------------|-------------------|-----------------|
| (1) Extension rod | (1) V-Groove | (1) USB cable |
| (1) Hook | (1) Flat | (1) AC adapter |
| (1) Cone | (1) Coupling | (1) Resource CD |
| (1) Chisel | (1) Carrying case | |

Ordering Information - Optional Items

For All Series 2 Gauges	
CERT	Certificate of calibration with data
12-1049	Carrying case

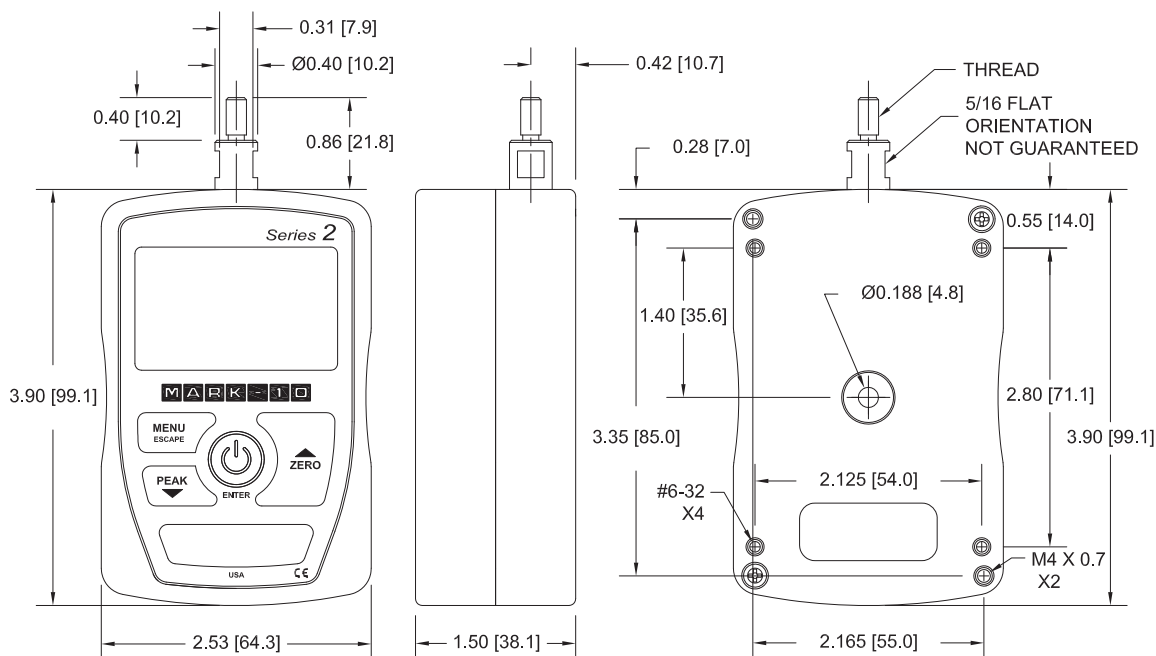
For M2-2 - M2-100 Gauges	
G1038	Medium hook, #10-32M (requires G1039)
G1039	Coupling, #10-32F/F
G1029	Flat head, #10-32F
G1026	Cone, #10-32F
G1025	Chisel point, #10-32F
G1027	V-groove, #10-32F
G1024	Extension rod, 5", #10-32F
23-1031-2	Attachments kit (qty. 1 of G1038 through G1024)

For M2-200 - M2-500 Gauges	
G1035	Large hook, 5/16-18M (requires G1037)
G1037	Coupling, 5/16-18F/F
G1036	Flat head, 5/16-18F
G1033	Cone, 5/16-18F
G1032	Chisel point, 5/16-18F
G1034	V-groove, 5/16-18F
G1031	Extension rod, 5", 5/16-18F
23-1031-3	Attachments kit (qty. 1 ea. of G1035 through G1031)

Specifications

Accuracy:	±0.5% of full scale
Sampling Rate:	500 Hz
Power:	AC or rechargeable battery, with multi-step low battery indicator.
Battery life:	Backlight on: Up to 7 hours of continuous use Backlight off: Up to 24 hours of continuous use
Safe overload:	200% of full scale (display shows "OVER" at 110% and above)
Weight:	M2-2 – M2-100: 0.7 lb [0.33 kg] M2-200 – M2-500: 0.9 lb [0.41 kg]
Included items:	AC adapter, battery, quick-start guide, resource CD, certificate of conformance
Environmental requirements:	40 - 100°F, max. 96% humidity, non-condensing
Warranty:	3 years (see individual statement for further details)

Dimensions in [mm]



	Thread
M2-2 – M2-100	#10-32 UNF
M2-200 – M2-500	5/16-18 UNC



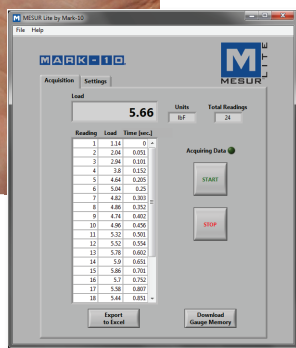
Series 3 digital force gauges are designed for tension and compression force testing in numerous applications from 0.12 lbF to 500 lbF (0.5 N to 2500 N). The gauges feature a sampling rate of 2,000 Hz, producing accurate results under a wide range of test conditions. A backlit graphic LCD displays large characters, and a menu is available to access the gauges' features and configurable parameters. USB output is provided for data collection purposes.

Set point indicators are provided for pass-fail testing. The gauges are overload protected to 150% of capacity, and an analog load bar is shown on the display for graphical representation of applied force.

An ergonomic, reversible aluminum housing allows for hand held use or test stand mounting for more sophisticated testing requirements. Series 3 digital force gauges are directly compatible with Mark-10 test stands, grips, and software.

The gauges include MESUR™ Lite data acquisition software. Currently displayed readings may be sent to MESUR™ Lite for tabulation and one-click export to Excel for further data manipulation.

MESUR Lite data acquisition software is included with Series 3 gauges

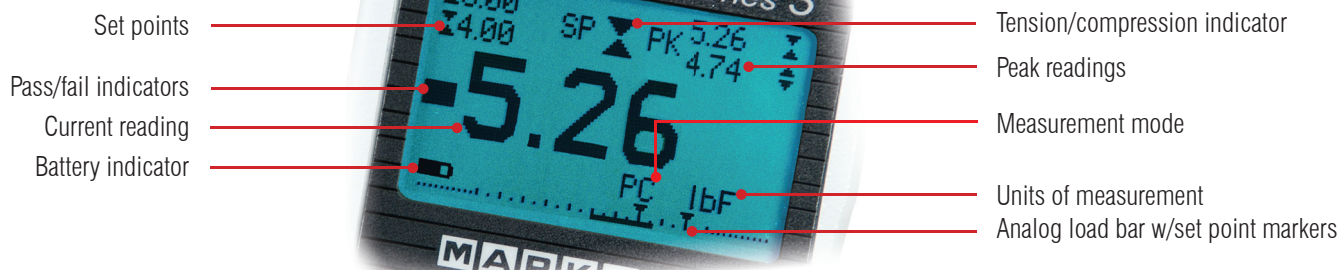


Shown with an ES20 test stand and G1061 wedge grips

Features

- High-speed 2,000 Hz sampling rate
- USB data output
- Ultra-compact size
- Large backlit graphic display
- Programmable set points with pass/fail indicators
- Live load bar graph with set point markers
- Peak readings and set points always displayed
- Configurable audio alarms and key tones
- 4 selectable units of measurement
- MESUR™ Lite data collection software included

Display Indicators

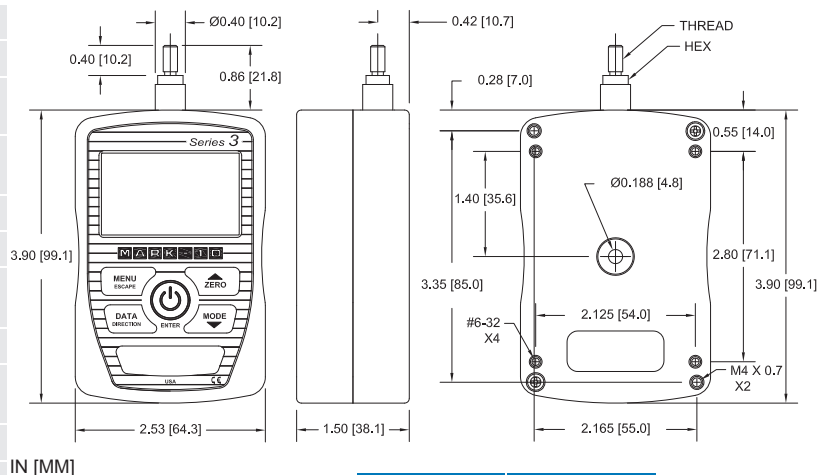


Focus on Engineering: Reversible Housing



Specifications

Accuracy:	±0.3% of full scale ±1 digit
Sampling Rate:	2,000 Hz
Power:	AC or rechargeable battery. Multi-step low battery indicator is displayed, gauge shuts off automatically when power is too low.
Battery life:	Backlight on: up to 7 hours of continuous use Backlight off: up to 24 hours of continuous use
Measurement Units:	lbF, gF, kgF, N (depending on model)
USB Output:	By pressing DATA key only. Configurable up to 115,200 baud.
Configurable settings:	Digital filters, USB output, automatic shutoff, default settings, key tones, audio alarms, calibration.
Safe overload:	150% of full scale (display shows "OVER" at 110% and above)
Weight (gauge only):	M3-012 - M3-100: 0.7 lb [0.33 kg] M3-200 - M3-500: 0.9 lb [0.41 kg]
Load cell deflection:	All models 0.010 [0.25], except 0.005 [0.13] for M3-012
Included items:	Carrying case with chisel, cone, V-groove, hook, flat, extension rod, universal voltage AC adapter, battery, quick-start guide, USB cable, resource CD (USB driver, MESUR™ Lite software, MESUR™ gauge DEMO software, and user's guide), and NIST-traceable certificate of calibration (certificate with data is available for an additional charge).
Warranty:	3 years (see individual statement for further details)



IN [MM]

	Thread	Hex
M3-012 - M3-100	#10-32 UNF	5/16" [7.94 mm]
M3-200 - M3-500	5/16-18 UNC	11/32" [8.73 mm]

Capacity & Resolution

Model	Capacity				Resolution			
	lbF	kgF	gF	N	lbF	kgF	gF	N
M3-012	0.12		50	0.5	0.0001		0.05	0.0005
M3-025	0.25		100	1	0.0002		0.1	0.001
M3-05	0.5		250	2.5	0.0005		0.2	0.002
M3-2	2	1		10	0.002	0.001		0.01
M3-5	5	2.5		25	0.005	0.002		0.02
M3-10	10	5		50	0.01	0.005		0.05
M3-20	20	10		100	0.02	0.01		0.1
M3-50	50	25		250	0.05	0.02		0.2
M3-100	100	50		500	0.1	0.05		0.5
M3-200	200	100		1000	0.2	0.1		1
M3-500	500	250		2500	0.5	0.2		2

Certificate of calibration with data is available. Part no. is: CERT.

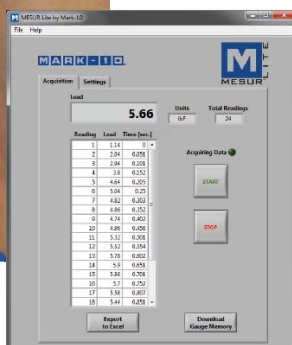
All models include 110V AC adapters, unless ordered as below:

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

Example: M3-05E, M3-100U, M3-500A



MESUR Lite data acquisition software is included with Series 4 gauges



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 $\pm 0.2\%$ of full scale ± 1 digit, 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 150% 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.



Shown with an ESM301 test stand and G1061 wedge grips

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

Display Indicators

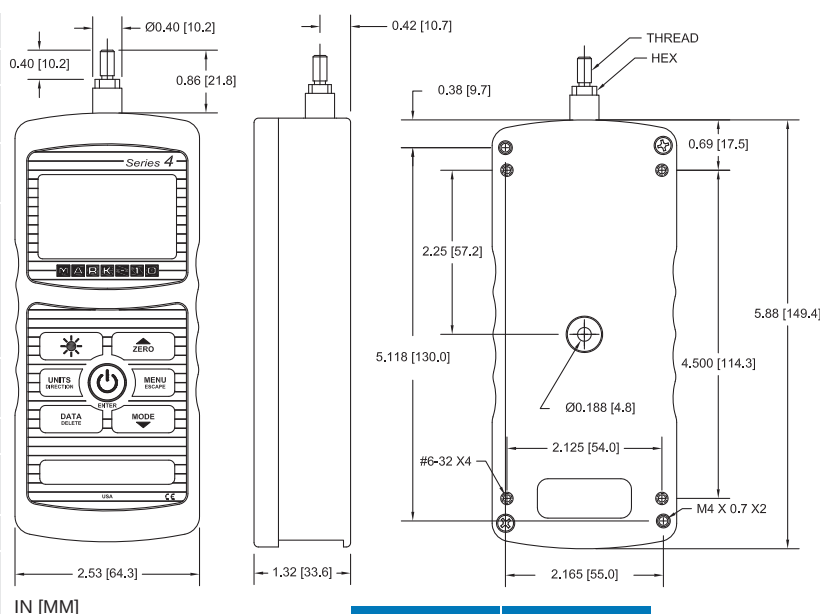


Focus on Engineering: Reversible Housing



Specifications

Accuracy:	±0.2% of full scale ±1 digit
Sampling Rate:	3,000 Hz, pulse response of 1/1,500 sec. minimum
Power:	AC or rechargeable battery. Multi-step low battery indicator is displayed, gauge shuts off automatically when power is too low.
Battery life:	Backlight on: up to 7 hours of continuous use Backlight off: up to 24 hours of continuous use
Outputs:	USB / RS-232: Configurable up to 115,200 baud. Mitutoyo (Digimatic): Serial BCD suitable for all Mitutoyo SPC-compatible devices. Analog: ±1 VCD, ±0.25% of full scale at capacity. General purpose: Three open drain outputs, one input. Set points: Three open drain lines.
Configurable settings:	Digital filters, outputs, automatic shutoff, default settings, key tones, audio alarms, calibration
Safe overload:	150% of full scale (display shows "OVL" at 110% and above)
Weight (gauge only):	M4-012 - M4-100: 1.0 lb [0.45 kg] M4-200 - M4-500: 1.2 lb [0.54 kg]
Load cell deflection:	All models 0.010 [0.25], except 0.050 [0.13] for M4-012
Included items:	Carrying case with chisel, cone, V-groove, hook, flat, extension rod, universal voltage AC adapter, battery, quick-start guide, USB cable, resource CD (USB driver, MESUR Lite software, MESURgauge DEMO software, and user's guide), and NIST-traceable certificate of calibration with data.
Warranty:	3 years (see individual statement for further details)



IN [MM]

	Thread	Hex
M4-012 - M4-100	#10-32 UNF	5/16" [7.94 mm]
M4-200 - M4-500	5/16-18 UNC	11/32" [8.73 mm]

Capacity & Resolution

Model	lbF	ozF	kgF	gF	N	kN	mN	lbF	ozF	kgF	gF	N	kN	mN
M4-012	0.12	2		50	0.5		500	0.00005	0.001		0.02	0.0002		0.2
M4-025	0.25	4		100	1		1000	0.0001	0.002		0.05	0.0005		0.5
M4-05	0.5	8		250	2.5		2500	0.0002	0.005		0.1	0.001		1
M4-2	2	32	1	1000	10			0.001	0.02	0.0005	0.5	0.005		
M4-5	5	80	2.5	2500	25			0.002	0.05	0.001	1	0.01		
M4-10	10	160	5	5000	50			0.005	0.1	0.002	2	0.02		
M4-20	20	320	10	10000	100			0.01	0.2	0.005	5	0.05		
M4-50	50	800	25	25000	250			0.02	0.5	0.01	10	0.1		
M4-100	100	1600	50	50000	500			0.05	1	0.02	20	0.2		
M4-200	200	3200	100		1000	1		0.1	2	0.05		0.5	0.0005	
M4-500	500	8000	250		2500	2.5		0.2	5	0.1		1	0.001	

All models include 110V AC adapters.

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

Ex: M4-50E, M4-200U



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Specifications subject to change without prior notice



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. Accuracy is $\pm 0.1\%$ of full scale ± 1 digit, and resolution is 1/5000. 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 other data collector 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 and output to a PC. Integrated set points with indicators 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 150% of capacity, and an analog load bar is shown on the display for graphical representation of applied force.

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.



Shown with an ESM301 test stand and G1061 wedge grips

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 alarms 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

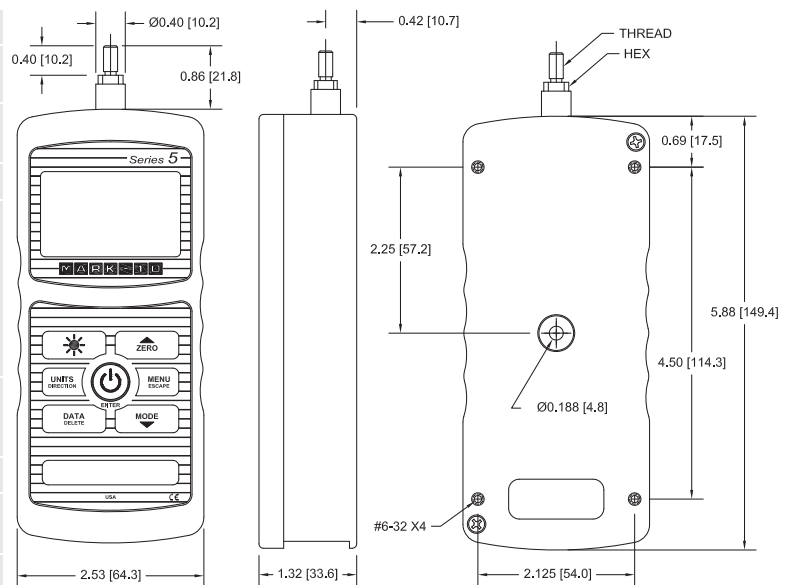


Focus on Engineering: Reversible Housing



Specifications

Accuracy:	$\pm 0.1\%$ of full scale ± 1 digit
Power:	AC or rechargeable battery. Multi-step low battery indicator is displayed, gauge shuts off automatically when power is too low.
Battery life:	Backlight on: up to 7 hours of continuous use Backlight off: up to 24 hours of continuous use
Measurement units:	lbF, ozF, gF, kgF, N, kN, mN (depending on model)
Outputs:	USB / RS-232: Configurable up to 115,200 baud. Includes Gauge Control Language 2 for full computer control. Mitutoyo (Digimatic): Serial BCD suitable for all Mitutoyo SPC-compatible devices. Analog: ± 1 VCD, $\pm 0.25\%$ of full scale at capacity. General purpose: Three open drain outputs, one input. Set points: Three open drain lines.
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:	150% of full scale (display shows "OVLD" at 110% and above)
Weight (gauge only):	M5-012 - M5-100: M5-012 - M5-100: 1.0 lb [0.45 kg] M5-200 - M5-500: 1.2 lb [0.54 kg]
Load cell deflection:	All models 0.010 [0.25], except 0.050 [0.13] for M5-012
Included items:	Carrying case with chisel, cone, V-groove, hook, flat, extension rod, universal voltage AC adapter, battery, quick-start guide, USB cable, resource CD (USB driver, MESURgauge DEMO software, and user's guide), and NIST-traceable certificate of calibration with data.
Warranty:	3 years (see individual statement for further details)



IN [MM]

	Thread	Hex
M5-012 - M5-100	#10-32	5/16
M5-200 - M5-500	5/16-18	11/32

Capacity & Resolution

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

All models include 110V AC adapters.

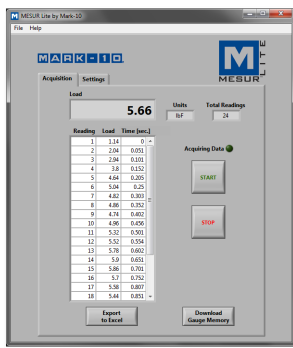
Add suffix 'E' for euro plug (220V) or 'U' for UK plug (220V).

Ex: M5-50E, M5-200U



Series 7 professional digital force gauges are designed with a number of sophisticated features for the most demanding tension and compression measurement applications, up to 500 lbf (2500 N). The gauges feature $\pm 0.1\%$ accuracy and a blazingly fast, industry-leading sampling rate of 14,000 Hz, producing reliable results for extremely quick-action tests.

Series 7 gauges include all the functions of Series 5 gauges, with several additional features, including high speed continuous data capture and storage, with memory for up to 5,000 readings at an acquisition rate of up to 14,000 Hz. The gauges also feature programmable footswitch sequencing, break detection, and 1st / 2nd peak detection. Series 7 includes a coefficient of friction unit of measurement and user-defined unit of measurement. For productivity enhancement, the gauges also feature automatic data output, data storage, and zero functions upon the completion of break detection, averaging, external trigger, and 1st / 2nd peak detection.



MESUR™ Lite data acquisition software is included with Series 7 gauges



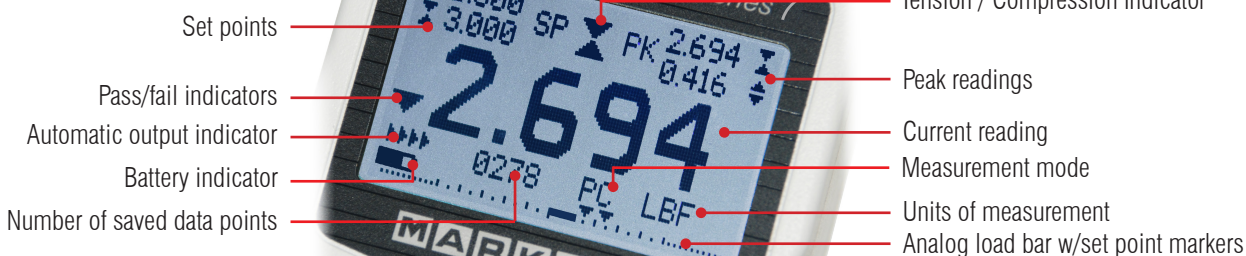
Shown with an ESM301 test stand and G1061 wedge grips

Series 7 force gauges are directly compatible with Mark-10 test stands, including the ESM301/ESM301L, to permit functions such as break testing, tensile testing, compression testing, dynamic load holding, PC control capability, and many other applications.

Features

- High-speed 14,000 Hz sampling rate
- Continuous data capture of up to 5,000 data points, at up to 14,000 Hz, downloadable to a PC
- Individual data point memory for up to 5,000 readings, downloadable to a PC
- USB, RS-232, Mitutoyo, and analog outputs
- Sample break detection with auto functions, including stopping movement of an ESM301/ESM301L test stand
- Automatic output / data storage / zeroing upon various event completions
- 1st / 2nd peak detection
- 5 units of measurement, plus Coefficient of Friction and user-defined unit with configurable name
- Programmable footswitch command string
- Programmable set points, with indicators and outputs
- Averaging mode - calculates average readings over time
- External trigger mode - for switch contact testing or remotely stopping display update
- Password protection, configurable for individual keys and calibration

Display Indicators



Focus on Engineering: Specialized Gauge Functions

Series 7 gauges feature several functions typically found in more complex instruments, such as materials testers, data acquisition systems, and PLCs. The following unique features are highlighted:

High Speed Data Capture & Storage

> Series 7 can capture and store up to 5,000 continuous data points at a rate of up to 14,000 readings per second. This unique function is ideal for capturing switch activation forces, sharp breaks, and other short-duration applications. Configurable start and stop triggers are provided. The data acquisition rate is variable and can be slowed to also capture longer events, such as structure relaxation, material expansion, and others.

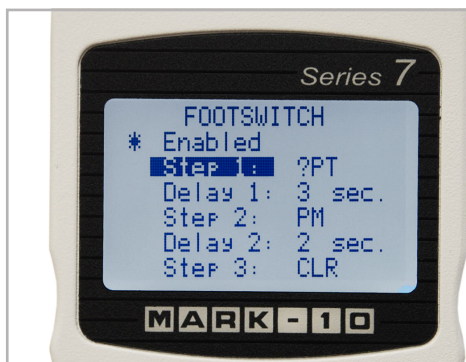
Data from the storage buffer can be exported to data collection software such as MESUR™ gauge for further analysis and graphing. Using a Series 7 gauge could replace cumbersome and expensive data acquisition hardware and software.



Footswitch Command String

> Integrate your footswitch / automation system with a Series 7 gauge to improve testing ergonomics and efficiency; no need for multiple key presses. Up to three steps may be programmed for a single footswitch activation.

Select from several commands, including request peak reading, zero the display, save to memory, and others. Time delays can be inserted between each step.



Automatic Data Output / Save / Zero / I/O Pin Toggle

> Upon completion of several event types, Series 7 can perform the following automatic functions: (1) Save the peak reading to memory, (2) Transmit the peak reading via USB, RS-232, or Mitutoyo output, (3) Zero the display, and (4) Toggle an I/O pin, for example to stop movement of an ESM301/ESM301L test stand.

Applicable events include:

- (1) Sample break detection (also applicable to samples which slip, click, or otherwise reach a peak, then fall),
- (2) Completion of an averaging sequence,
- (3) External trigger (ex. switch activation), and
- (4) 1st / 2nd peak capture (ex. tensile testing).

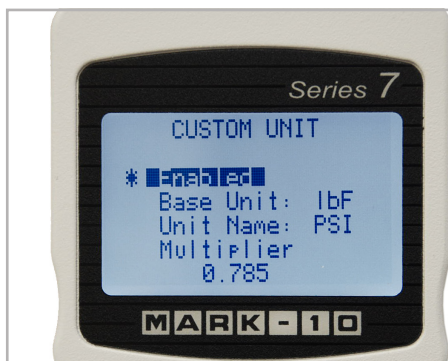


User-defined Unit of Measurement

> Series 7 gauges display 6 standard units of measurement. One additional user-defined unit is provided for unique applications. A base unit is specified, along with a multiplier, and 5-character name.

Typical applications:

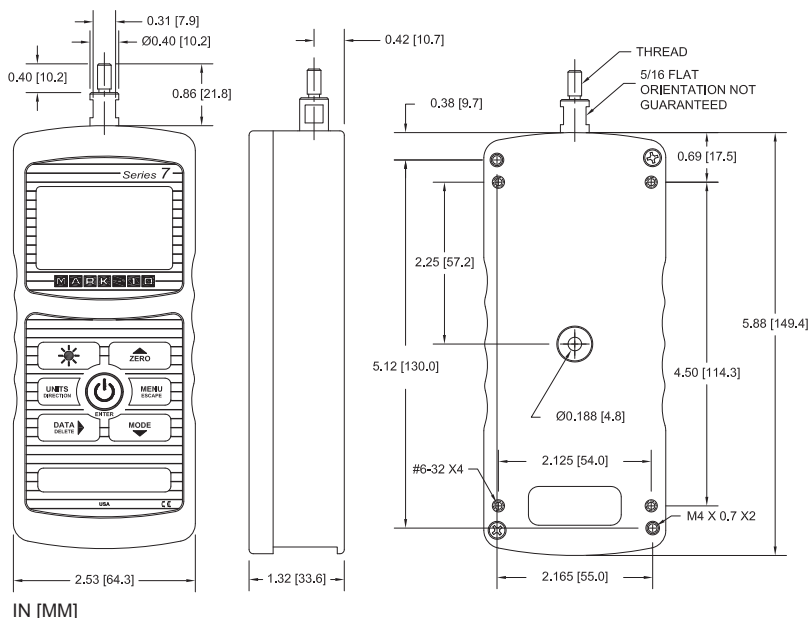
- (1) To measure the torque produced by pressing on a lever in a mechanical assembly, configure the multiplier based on the length of the lever, thereby converting a unit such as N into Ncm.
- (2) To measure the pressure produced by a circular compression plate on a foam sample, configure the multiplier based on the area of the plate, thereby converting a unit such as lbF into psi.



Specifications

Accuracy:	±0.1% of full scale
Sampling Rate:	14,000 Hz, pulse response of 1/7,000 sec. minimum
Power:	AC or rechargeable battery. Multi-step low battery indicator is displayed, gauge shuts off automatically when power is too low.
Battery life:	Backlight on / off: up to 7 / 24 hours of continuous use
Outputs:	USB / RS-232: Configurable up to 115,200 baud. Automatic output available up to 250 Hz. Includes Gauge Control Language 2 for full computer control. Mitutoyo (Digimatic): Serial BCD suitable for all Mitutoyo SPC-compatible devices. Analog: ±1 VCD, ±0.25% of full scale at capacity, General purpose: Three open drain outputs, one input. Set points: Three open drain lines.
Safe overload:	150% of full scale (display shows "OVER" at 110% and above)
Weight:	M7-012 - M7-100: 1.0 lb [0.45 kg] M7-200 - M7-500: 1.2 lb [0.54 kg]
Load cell deflection:	All models 0.010 [0.25], except 0.005 [0.13] for M7-012
Included items:	Carrying case with chisel, cone, V-groove, hook, flat, extension rod, universal voltage AC adapter, battery, quick-start guide, USB cable, resource CD (USB driver, MESUR™ Lite software, MESUR™ gauge DEMO software, and user's guide), and NIST-traceable certificate of calibration with data.
Environmental requirements:	40 - 100°F, max. 96% humidity, non-condensating
Warranty:	3 years (see individual statement for further details)

Dimensions



	Thread
M7-012 - M7-100	#10-32M UNF
M7-200 - M7-500	5/16-18M UNC

Capacity x Resolution

Model	lbF	ozF	kgF	gF	N	kN	mN
M7-012	0.12 x 0.00002	2 x 0.0005	-	50 x 0.01	0.5 x 0.0001	-	500 x 0.1
M7-025	0.25 x 0.00005	4 x 0.001	-	100 x 0.02	1 x 0.0002	-	1000 x 0.2
M7-05	0.5 x 0.0001	8 x 0.002	-	250 x 0.05	2.5 x 0.0005	-	2500 x 0.5
M7-2	2 x 0.0005	32 x 0.01	1 x 0.0002	1000 x 0.2	10 x 0.002	-	-
M7-5	5 x 0.001	80 x 0.02	2.5 x 0.0005	2500 x 0.5	25 x 0.005	-	-
M7-10	10 x 0.002	160 x 0.05	5 x 0.001	5000 x 1	50 x 0.01	-	-
M7-20	20 x 0.005	320 x 0.1	10 x 0.002	10000 x 2	100 x 0.02	-	-
M7-50	50 x 0.01	800 x 0.2	25 x 0.005	25000 x 5	250 x 0.05	-	-
M7-100	100 x 0.02	1600 x 0.5	50 x 0.01	50000 x 10	500 x 0.1	-	-
M7-200	200 x 0.05	3200 x 1	100 x 0.02	-	1000 x 0.2	1 x 0.0002	-
M7-500	500 x 0.1	8000 x 2	250 x 0.05	-	2500 x 0.5	2.5 x 0.0005	-

Coefficient of friction and user-defined units are excluded from the above chart.

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: M7-05E, M7-100U, M7-500A