

32-1041 REV 0



The Series BG Digital Force Gauge is an advanced force measurement instrument, with sophisticated measurement capabilities, data outputs, computer control capabilities, and a long list of features and configurable settings.

Specifications

| | |
|----------------------------------|---|
| Accuracy: | ±0.2% of full scale ±1 digit |
| Sampling rate: | 65 readings/s |
| Display rate: | 2.5 updates/s in normal mode / 65 updates/s in peak mode |
| Power: | AC or rechargeable battery with Intelligent Power Management System (IPM), a 3-step system that warns the user via a "LO BAT" indicator and then powers off the gauge. |
| Battery life: | 8-10 hours of continuous use |
| Selectable units of measurement: | lbF, N, kg/g (depending on model) |
| Outputs: | Standard |
| RS-232 | Fully configurable up to 9600 baud. Includes Gauge Control Language (GCL) for full computer control of all functions. |
| Mitutoyo (Digimatic) | Serial BCD suitable for all Mitutoyo SPC-compatible devices |
| Analog | ±1 VCD, ±0.25% of full scale at capacity. + for compression, - for tension. |
| General purpose I/O | Three open collector outputs and one input (utilizing Mitutoyo lines) |
| Set points | Three open collector lines (utilizing Mitutoyo lines) |
| Configurable settings: | Analog filter, digital filters, RS-232, outputs selection (other than RS-232), automatic output (RS-232), automatic shutoff, initial (default), averaging mode, calibration |
| Load cell deflection: | 0.010 in [0.25 mm] at full capacity |
| Safe overload: | 150% of full scale (display shows "----" at 110% and above) |
| Weight (gauge only): | BG012 - BG200: 0.95 lb [0.4 kg], BG500: 1.12 lb [0.5 kg] |
| Environmental requirements: | 40° F - 100° F [5°C - 45°C], <96% humidity (non-condensating) |
| Thermal effects: | Zero: 0.03% of full scale/°C, Span: 0.01% of full scale/°C |
| Housing construction: | Aluminum |
| Included accessories: | Chisel, cone, V-groove, hook, flat, extension |
| Warranty | 3 years (see individual statement for further details) |

Features

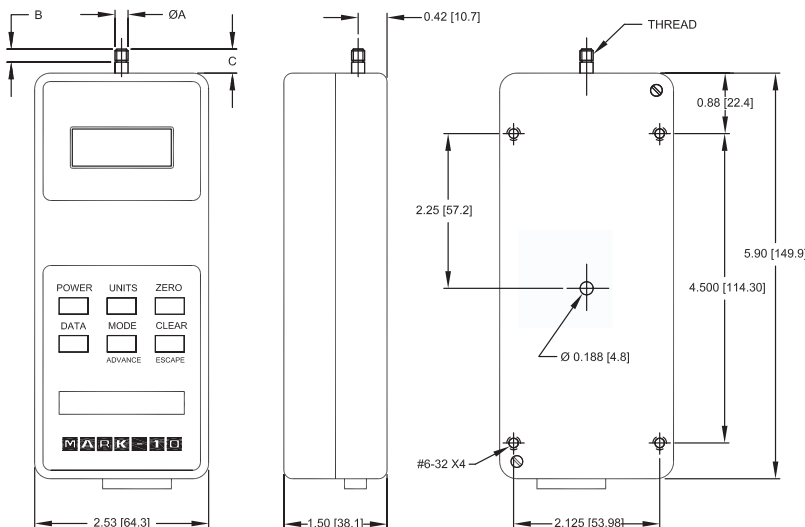
| | |
|--------------------|--|
| Data outputs | RS-232, Mitutoyo (Digimatic), and analog outputs. Automatic timed output (RS-232) included. |
| Set points | Programmable high and low force set points for triggering external devices (ex. motorized test stand, alarm, etc). |
| Data averaging | Calculates average force over a specified time (programmable) |
| External trigger | Useful for contact or switch activation force testing and data capture |
| Reversible housing | Housing can be reversed for handheld or test stand use |

Optional Equipment

| | |
|------------------------------------|--|
| Output cables | Various data output cables are available |
| Hi / lo limits indicator 11-1022 | Set limit conditions for a test - the indicator will display red lights for high and low limits, and a green light to indicate passing. |
| Overload protection module 11-1042 | Protects the force gauge against overloads during motorized tests. Adjustable from 10% to 150% of gauge's full capacity. For use with motorized test stands. |
| Set point cable 09-1090 | Stops test stand travel at programmable high and low set points for tension and compression forces. For use with motorized test stands. |

Dimensions

in [mm]



| | BG012 - BG200 | BG500 |
|--------|---------------|-------------|
| ØA | 0.200 [5.8] | 0.375 [9.5] |
| B | 0.19 [4.8] | 0.44 [11.2] |
| C | 0.35 [8.9] | 0.68 [17.3] |
| Thread | #10-32 | 5/16-18 |

Ordering Information

| Model No. | Capacity x Resolution |
|-----------|---|
| BG012 | 0.12 x 0.00005 lbF, 50 x 0.02 gF, 0.5 x 0.0002 N, 110V |
| BG025 | 0.25 x 0.0001 lbF, 100.00 x 0.05 gF, 1 x 0.0005 N, 110V |
| BG05 | 0.5 x 0.0002 lbF, 250 x 0.1 gF, 2.5 x 0.001 N, 110V |
| BG2 | 2 x 0.001 lbF, 1 x 0.0005 kgF, 10 x 0.005 N, 110V |
| BG5 | 5 x 0.002 lbF, 2.5 x 0.001 kgF, 25 x 0.01 N, 110V |
| BG10 | 10 x 0.005 lbF, 5 x 0.002 kgF, 50 x 0.02 N, 110V |
| BG20 | 20 x 0.01 lbF, 10 x 0.005 kgF, 100 x 0.05 N, 110V |
| BG50 | 50 x 0.02 lbF, 25 x 0.01 kgF, 250 x 0.1 N, 110V |
| BG100 | 100 x 0.05 lbF, 50 x 0.02 kgF, 500 x 0.2 N, 110V |
| BG200 | 200 x 0.1 lbF, 100 x 0.05 kgF, 1000 x 0.5 N, 110V |
| BG500 | 500 x 0.2 lbF, 250 x 0.1 kgF, 2500 x 1 N, 110V |

For 220V operation, add suffix E to model number. Example: BG10E