Data Sheet High Capacity Digital Force Gauges Series CG

32-1045 REV 0

The rugged Series CG Digital Force Gauge is an advanced force measurement instrument for testing up to 1,000 lbF of compressive or tensile forces. The gauge includes all the features of Series BG gauges, including sophisticated measurement capabilities, data outputs, computer control capabilities, 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 operation / 65 updates/s in peak mode
Power:	AC or rechargeable battery with Intelligent Power Management System (IPM). IPM warns the user via a "LO BAT" indicator and then will power off the gauge
Battery life:	8-10 hours of continuous use
Selectable units of measurement:	lbF, kg, N
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 filters, 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):	1.8 lb [0.8 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, thread adapter
Warranty	3 years (see individual statement for further details)

Features

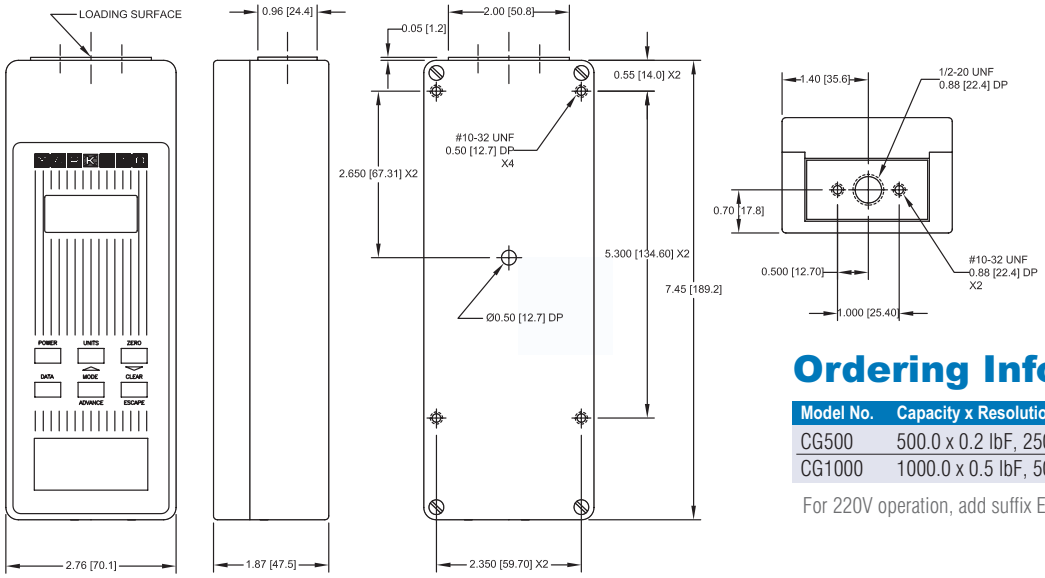
Data outputs	RS-232, Mitutoyo (Digimatic), and analog outputs. Automatic timed output (RS-232) included.
Set points	Programmable high and low force set points for triggering external devices (ex. motorized test stand, alarm, etc).
Data averaging	Calculates average force over a specified time (programmable)
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 - 150% of gauge's full capacity. For use with the ESM motorized test stand.
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]



Ordering Information

Model No.	Capacity x Resolution
CG500	500.0 x 0.2 lbF, 250.0 x 0.1 kgF, 2500 x 1 N, 100V
CG1000	1000.0 x 0.5 lbF, 500.0 x 0.2 kgF, 5000 x 2 N, 100V

For 220V operation, add suffix E to model number. Example: CG1000E

MARK-10

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3 YEAR WARRANTY