



FlexiForce[®]

Economical Load and Force Measurement[™] (ELF)



The ELF System is a user-friendly, cost-effective load measurement system. This system combines FlexiForce sensors, USB-interface electronics, and Windows-compatible software*, turning your PC or laptop into a force measurement instrument.

* Compatible with Windows 7, 8, XP, and Vista

* Software v 4.3 and above is not compatible with previous wired handles starting with serial#125 (see back of handle)

KEY FEATURES

- Real-time data capture
- ASCII output to data analysis software
- Simple and storable calibration
- Adjustable sensitivity
- Multiple handle capability available
- Displays in strip chart, column graph, or digital readout
- **Connector compatible with FlexiForce sensor model: B201**
- Movie recording & saving
- Multi-point calibration
- Capability to tare a load
- Internal load triggering
- Sampling rates up to 200 Hz
- High-Speed version available, up to 6000 Hz

SYSTEM PERFORMANCE

ELF System	Sampling Rate	Max. # of Handles	Includes:
Single Handle	Up to 200 Hz	1	<ul style="list-style-type: none"> • (1) Handle • (3) B201 Sensors • ELF Software
Single Handle High-Speed	Up to 6,000 Hz	1	<ul style="list-style-type: none"> • (1) Handle • (3) B201 Sensors • High-Speed ELF Software
Multi-Handle**	Up to 200 Hz	Up to 16	<ul style="list-style-type: none"> • (1) Handle • (3) B201 Sensors • Multi-Handle ELF Software
Multi-Handle High-Speed**	Up to 6,000 Hz	Up to 16	<ul style="list-style-type: none"> • (1) Handle • (3) B201 Sensors • Multi-Handle High-Speed ELF Software

**Additional Handles available for purchase.

PHYSICAL PROPERTIES OF B201 SENSOR

Thickness	0.203 mm (0.008 in.)
Length	228.6 mm (9 in.) End-to-end
Width	14 mm (.55 in.)
Sensing Area	9.53 mm (0.375 in.) diameter
Connector	Interface to ELFTM data acquisition system handle (handle connects to USB port)
Substrate	Polyester (ex: Mylar)

✓ ROHS COMPLIANT

RECOMMENDED MAXIMUM FORCE (variable gain feature of the ELF System enables adjustable force ranges)

Sensor	High Gain Maximum Force	Low Gain Maximum Force
B201-L	4.4 N (0 - 1 lb)	111 N (0 - 25 lb)
B201-M	111 N (0 - 25 lb)	667 N (0 - 150 lb)
B201-H	667 N (0 - 150 lb)	4448 N (0 - 1,000 lb)

	Typical Performance	Evaluation Conditions
Linearity (Error)	< ±3%	Line drawn from 0 to 50% load
Repeatability	< ±2.5% of full scale	Conditioned sensor, 80% of full force applied
Hysteresis	< 4.5 % of full scale	Conditioned sensor, 80% of full force applied
Drift	< 5% per logarithmic time scale	Constant load of 111 N (25 lb)
Operating Temperature	-40°C - 60°C (-40°F - 140°F)	

- Force reading change per degree of temperature change = $\pm 0.36\%/^{\circ}\text{C}$ ($0.2\%/^{\circ}\text{F}$)

