

Wireless ELF™

Freedom in Force Sensing



Hub with USB Interface

Wireless *ELF* is a user-friendly force measurement system, enabling your laptop or PC to quickly capture and store force data from an event **up to 200 feet away**. This revolutionary system offers greater flexibility for countless applications, including sports equipment testing, safety assessment, medical procedures, industrial R&D, and much more. This system combines *FlexiForce* sensors with a USB hub, Wireless transmitter, and Windows-compatible software*, turning your PC or laptop into a force measurement instrument. **Key software features include:**

- Real-time data capture
 - Movie recording & saving
 - ASCII output to data analysis software
 - Simple and storable calibration
 - Adjustable sensitivity
 - Internal triggering
 - Capability to tare a load
- *Compatible with Windows 2000 and XP*



System Components & Physical Properties

- One (1) USB-powered Hub*
- One (1) Battery-operated Transmitter
- Three (3) WB201 sensors (one in each of the available force ranges)
- One (1) Software Installation CD

**Optional multi-channel software version enables up to 16 transmitters & sensors to be used at one time. The USB-powered Hub supports up to eight (8) transmitters. To use more than eight (8) transmitters at a time, an additional Hub is required.*



Wireless transmitter and sensor

WB201 Sensor

Thickness	0.008" (0.208 mm)
Length	7.75" (197 mm) End-to-end
Width	0.55" (14 mm)
Sensing Area	0.375" diameter (9.53 mm)
Connector	3-pin male connection to wireless transmitter
Substrate	Polyester (ex: Mylar)

Hub & Transmitter

Thickness	0.75"	(19.05 mm)
Length	3.125"	(79.38 mm)
Width	2.25"	(57.15 mm)
Weight (Hub)	1.9 oz	(53.8 g)
Weight (Transmitter)	3.4 oz	(96.4 g)

Recommended Maximum Force (Variable gain feature of the Wireless *ELF* System enables adjustable force ranges)

Sensor	High Gain	Low Gain
	Maximum Force	Maximum Force
W-B201-L	0 - 1 lb (4.4 N)	0 - 25 lb (111 N)
W-B201-M	0 - 25 lb (111 N)	0 - 150 lb (667 N)
W-B201-H	0 - 150 lb (667 N)	0 - 1000 lb (4448 N)

Typical Performance

Linearity (Error)	< ±3%
Repeatability	< ±2.5% of Full Scale
Hysteresis	< 4.5 % of Full Scale
Drift	< 5% per Logarithmic Time Scale
Sampling Rate	200 Hz
Communication Range	≤200 feet
Battery Life	Approximately 24 hours
Operating Temperature	15°F - 140°F (-9°C - 60°C)*

Evaluation Conditions

Line drawn from 0 to 50% load
 Conditioned sensor, 80% of full force applied
 Conditioned sensor, 80% of full force applied
 Constant load of 25 lb (111 N)
 Up to eight sensors

Continuous use
 Force reading change per degree of temperature change= ±0.2%/°F(0.36%/°C)
 For loads less than 10 lb, the operating temperature can be increased to 165°F



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