

# FX1901-0001

Ultra Low Cost High Reliability Design for OEM, Appliance and Medical Applications

Compression Ranges: 10, 25, 50, 100 lbf

Compact Coin Cell Package

Anti-rotation Mounting Features

Low Cost Connectors Available

## DESCRIPTION

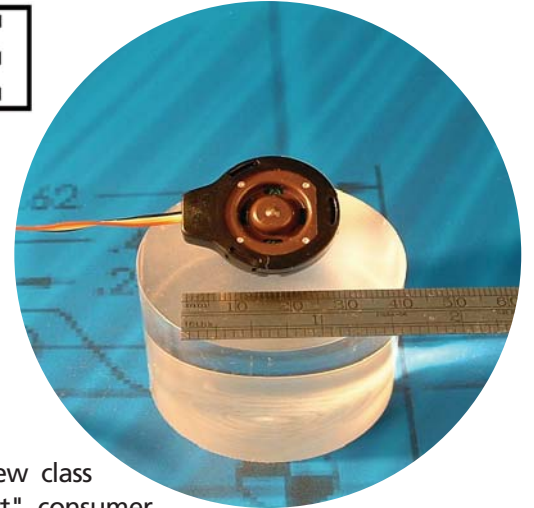
The **FX1901** series establishes a breakthrough price/performance value for compression load cells. With full scale ranges of 10, 25, 50 or 100 lbf compression, the FX1901 is a 1% load cell device at a cost of about \$10 for volumes of 10,000 pieces. This new, low-cost technology will enable force sensing in a

## FEATURES

- ◆ Low Cost
- ◆ Small
- ◆ Low Noise
- ◆ Robust: High Overrange
- ◆ High Reliability
- ◆ Millivolt Output: 20 mV/V Nominal
- ◆ Low Deflection
- ◆ Fast
- ◆ Essentially Unlimited Cycle Life

## APPLICATIONS

- ◆ Assembly Forces
- ◆ Physical Therapy Devices
- ◆ Patient Weight
- ◆ Hand Tool Forces
- ◆ Chiropractic and Exercise Equipment
- ◆ Consumables Monitoring: Copy Equipment and Vending Systems
- ◆ Appliance Payload Monitoring: Washers, Dryers, Water Weight, Extraction Efficiency
- ◆ Appliance Unbalance Monitoring



whole new class of "smart" consumer and medical products that can sense simple user inputs derived from force.

Measurement Specialties' proprietary Microfused™ technology, derived from demanding aerospace applications, employs micro-machined piezoresistive strain gages fused with high temperature glass to a high performance stainless steel force measuring flexure. Microfused™ technology eliminates age-sensitive organic epoxies used in traditional load cell designs, providing excellent long term span and zero stability. Operating at very low strains, Microfused™ technology utilizes strain gages providing gage factors greater than 100, providing an essentially unlimited cycle life expectancy, superior resolution, exceedingly high overrange capabilities (without the need for stops) and a ratiometric span of 20 mV/V. The FX1901-0001-XXX-L has been specifically designed to function reliably in your super cost sensitive applications. The combination of low cost stamped flexures and micro miniaturized MEMs strain gages permits ultra low costs to be achieved in high volume OEM applications ranging from disposable medical devices to durable appliances and exercise equipment. The FX1901-0001 units are intended for use in normal lab, hospital or consumer product applications.

## CE compliant per the following specifications:

IEC61000-4-2	[4KV/4KV (Air/Contact)]
IEC61000-4-3	(3 V/m)
IEC55022	Class A

## performance specifications

All values are typical at 25°C and at 15 Vdc excitation unless otherwise stated. Measurement Specialties, Inc. reserves the right to update and change these specifications without notice.

Maximum over load:	250% of range
Recommended Excitation:	5 Vdc
Full Scale Output span (Bridge Output):	20 mV/V +/- 20%
Output at No Load (Zero Output):	+/- 15 mV/V
Combined Nonlinearity, Hysteresis and Nonrepeatability	+/- 1% FSO
Thermal Zero Shift within Operating Temperature Range	+/- 8% FSO
Thermal Sensitivity Shift:	+/- 0.05% /C
Operating Temperature Range:	0°C to 50°C
Storage Temperature	-40°C to 85°C
Impedance In:	3 K ohm nominal
Impedance Out:	2.2 K ohm nominal
Deflection at Rated Load	< 0.05 mm nominal
Isolation Resistance:	> 50 Megohm nominal at 250 Vdc
Humidity	0 to 90 % RH
Cycle Life Expectancy:	Essentially Unlimited

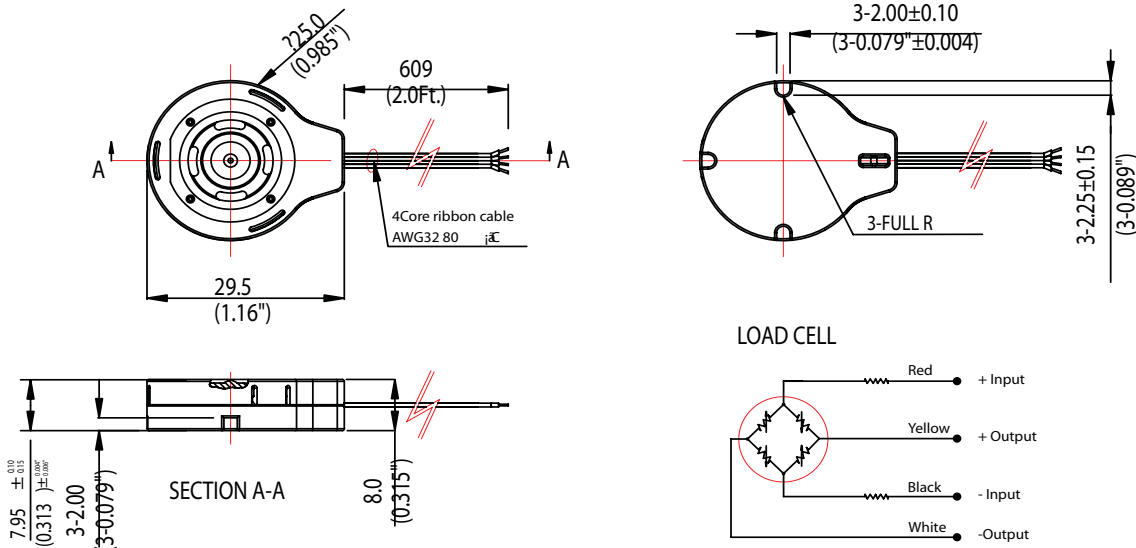
Note: Positive output in compression.

Note: +/- 5% FSO Zero trim available: Consult factory

Note: Low cost connectors available at extra charge for high volume applications: Consult factory.

## dimensions

FX1901-0001-XXXX-L



## ordering information

	Family	Body	Output	Connection	Design	Range	Units
Sample PN:	FX	19	0	1	0001	100	L
			20mV/V	1=Cable output		10, 25, 50 100 lbf compression	L = Lbf