FX19

Compression Load Cell



SPECIFICATIONS

- **High Reliability Design for OEM, Appliance and Medical Applications**
- **10 – 200 lbf Ranges**
- **Compact Coin Cell Package**
- **Anti-Rotation Mounting Features**
- **CE Compliance**

FEATURES

- Small
- Low Noise
- Robust: High Over-Range
- High Reliability
- mV Output: 20mV/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

The **FX19** units are intended for OEM use in laboratory, hospital or consumer product applications, establishing a breakthrough price/performance value for compression load cells. The FX19 is a 1% load cell device with full scale ranges of 10, 25, 50 or 100 and 200lbf compression. This new, low-cost technology enables force sensing in a whole new class of "smart" consumer and medical products.

MEAS' 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 provides an essentially unlimited cycle life expectancy, superior resolution, high over-range capabilities and a ratiometric span of 20mV/V. The combination of stamped flexures and micro miniaturized MEMs strain gages permits low costs to be achieved in high volume OEM applications ranging from disposable medical devices to durable appliances and exercise equipment.

STANDARD RANGES

Range	lbf
0 to 0010	•
0 to 0025	•
0 to 0050	•
0 to 0100	•
0 to 0200	•

PERFORMANCE SPECIFICATIONS

Supply Voltage: 5.0V, Ambient Temperature: 25°C (unless otherwise specified)

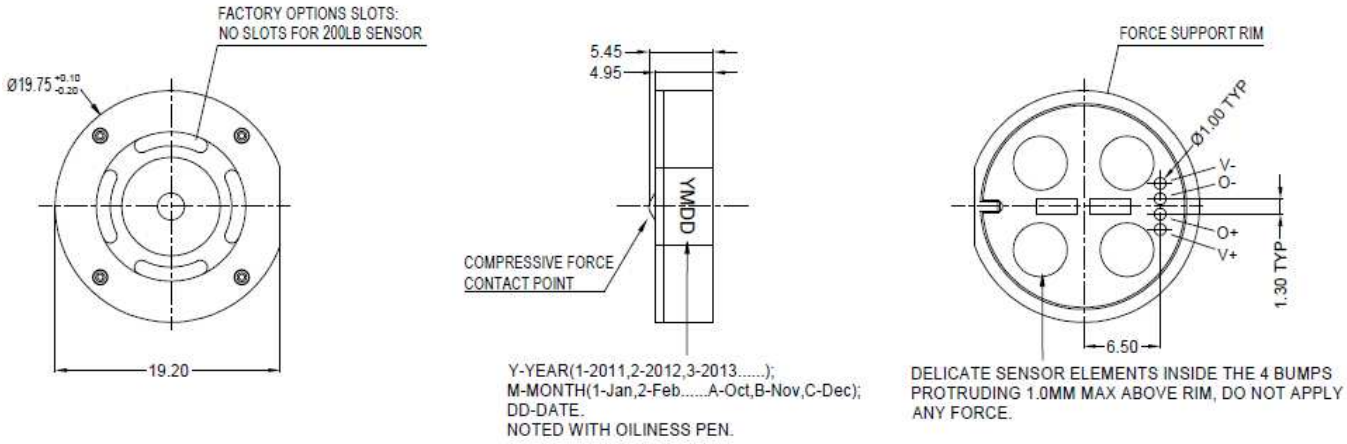
PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
Recommended Excitation		5		V	
Full Scale Output Span	16	20	24	mV/V	
Full Scale Output Span (200lbf)	34.2	36	37.8	mV/V	
Zero Offset	-15		15	mV/V	
Non-Linearity	-1		1	%Span	
Hysteresis	-0.80		0.80	%Span	
Thermal Zero Shift	-0.05		0.05	%Span / °C	
Thermal Sensitivity Shift	-0.05		0.05	%Span / °C	
Insulation Resistance	50			MΩ	@500V_{DC}
Maximum Overload		250		%FS	
Maximum Overload (200lbf)		150		%FS	
Operating Temperature	0		50	°C	
Storage Temperature	-40		+85	°C	
Creeping			0.5	%Span	F.S. span in 3min
Zero Drift			0.5	%Span	Load F.S. 3min
Zero Return	-0.8		0.8	%Span	
Span Repeat	-0.8		0.8	%Span	
Humidity	0		90	%R.H.	
Deflection		0.05		mm	At Rated Load
Input Resistance	2.4	3	3.6	kΩ	
Output Resistance	1.76	2.2	2.64	kΩ	

For custom configurations, consult factory.

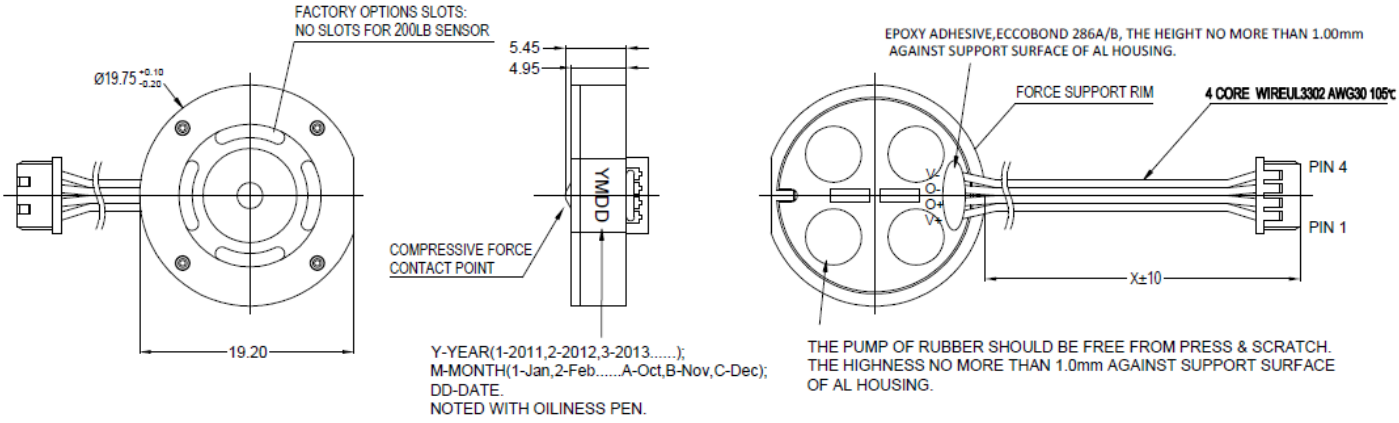
CE Compliance
IEC61000-4-2 [4 kV/ 4 kV (Air/Contact)]
IEC61000-4-3 (3 V/m)
IEC55022 Class A

DIMENSIONS

FX1900-0000



FX1900-XXX1



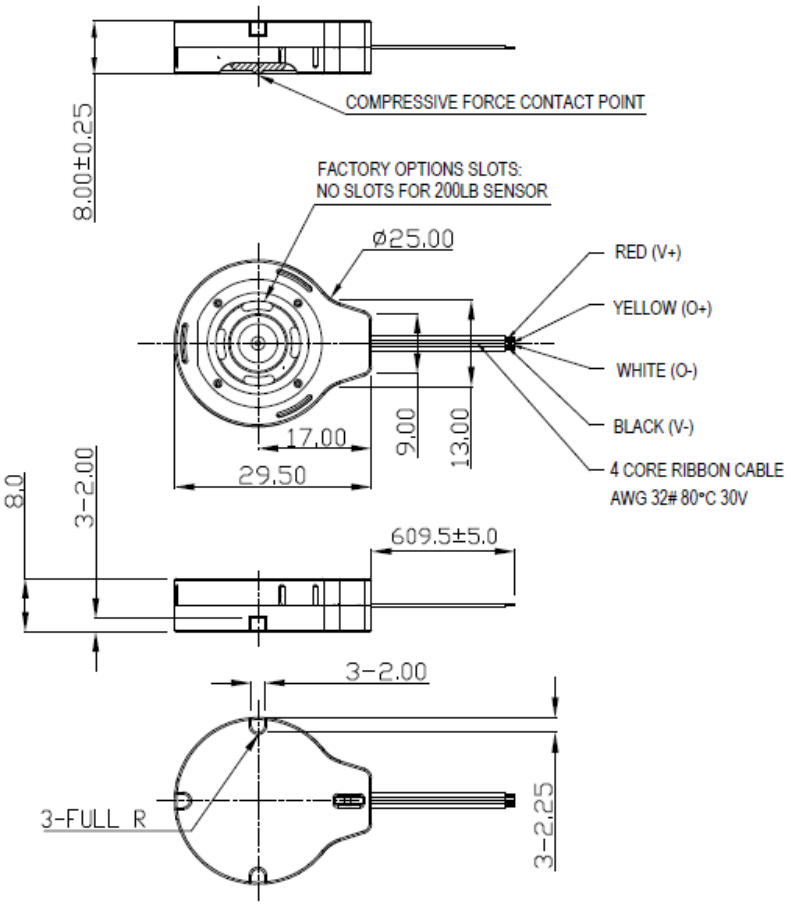
CONNECTOR INFORMATION:

CONNECTOR	PART	DECRIPTION	QTY	UN
MOLEX	HOUSING	MOLEX: 51021-0400 4P FEMAL PITCH: 1.25 NATRUAL	1	EA
	TERIMAL	MOLEX CRIMP TERMINAL 50058-8000 MATE WITH 51021 (MX1.25) AWG 28#-32#	4	EA

WIRE CONNECTION

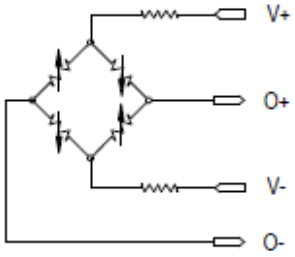
PIN 1	V+ RED
PIN 2	O+ YELLOW
PIN 3	O- WHITE
PIN 4	V- BLACK

FX1901-0001

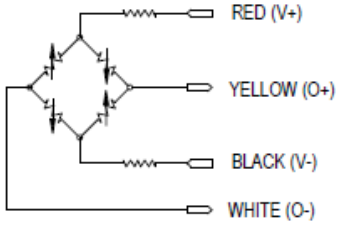


WIRING INFORMATION

FX1900-0000



FX1900-XXX1
FX1901-0001



ORDERING INFORMATION

FX190X----XXXX------XXXX-----L

RANGE
0010
0025
0050
0100
0200

LB

CODE	WITH CABLE
0	NO
1	YES

CODE	CABLE LENGTH	REMARK
XXX	CUSTOMIZE LENGTH	FOR FX1900 OPTION
000	FIXED 609.5 mm LENGTH	FOR FX1901 OPTION
NOTE: FX1901 OPTION IS FIXED 609.5 mm CABLE LENGTH		

CODE	PLASTICS SHELL
0	NO
1	YES

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