



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



NEW

FC21 & FC22 Compression Load Cells

LOW COST

Compression Ranges: 2, 5, 10, 25, 50 and 100 Lbf.

High Level or Millivolt Outputs

Interchangeable

Compact Easy to Fixture Design

DESCRIPTION

The FC21 and FC22 Series Low Cost Compression Force Sensors create new markets previously unrealizable due to cost and performance constraints. This series raises the bar in price and performance. MSI Sensors' proprietary Microfused™ technology, derived from demanding aerospace applications, employs micro-

FEATURES

- ◆ Low cost
- ◆ Small size
- ◆ Low noise
- ◆ Robust: high overrange capability
- ◆ High reliability
- ◆ Low deflection
- ◆ Essentially unlimited cycle Life expectancy
- ◆ Low off center errors
- ◆ Fast response time
- ◆ From 2 to 100 lb ranges

APPLICATIONS

- ◆ Medical infusion pumps
- ◆ Robotics end-effectors
- ◆ Variable force control
- ◆ Load and compression sensing
- ◆ Exercise machines
- ◆ Pumps
- ◆ Contact sensing
- ◆ Weighing
- ◆ Household appliances

internet:www.msisensors.com
 Tel: 1-757-766-1500
 North America Toll Free: 1-800-745-8008
 Fax: 1-757-766-4297
 RevD 5/3/05



machined silicon piezoresistive strain gages fused with high temperature glass to a high performance stainless steel substrate.

Microfused™ technology eliminates age-sensitive organic epoxies used in classical load cell designs providing excellent long term span and zero stability.

Operating at very low strains, Microfused™ technology provides gage factors greater than 100, an essentially unlimited cycle life expectancy, superior resolution, exceedingly high over-range margins without the need for stops and a ratiometric span of up to 4V.

Microfused™ sensors are used in a variety of applications including bathroom scales, paint sprayers and safety-critical automotive brake sensors.

MSI's models FC21 and FC22 are appropriate for use in all types of OEM weighing and force measurement applications where high reliability and accuracy are critical. From appliance controls to biomechanical force feedback, the FC21 and FC22 are the OEM designer's dream-come-true: cost-optimized to bring your OEM products to life whether you need thousands or millions of load cells annually. Although the standard model is ideal for a wide range of applications, our dedicated design team at our Load Cell Engineering Center is ready to provide you with custom designs for your OEM applications. The FC21 and FC22 are fully thermally compensated for changes in zero and span with respect to temperature and offer normalized zero and span for interchangeability. Consult MSI for uncompensated super low cost variants of the FC21 and FC22 instruments.

CE compliant per the following specifications:

| | |
|--------------|---------------------------|
| IEC61000-4-2 | [4 KV/4 KV (Air/Contact)] |
| IEC61000-4-3 | (3 V/m) |



PRELIMINARY

FC21 & FC22 Compression Load Cells

performance specifications

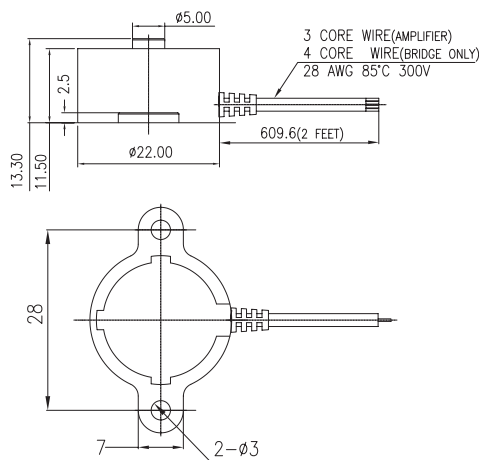
| | |
|---|----------------------------------|
| Standard Ranges: FC21 | 2, 5 Lbf Compression |
| FC22 | 10, 25, 50, 100 Lbf Compression |
| Maximum over load | 250% of range |
| Recommended Excitation Voltage (Amplified) | 3.3 VDC to 5 VDC (1) |
| Recommended Excitation Voltage (Bridge Only) | 5 VDC |
| Full Scale Output Span (FSO) (Amplified/Ratiometric) | 0.5 to 4.5 V at 5 VDC excitation |
| Full Scale Output Span (Bridge Only) | 10 mV/V +/-5% |
| Output at No Load (Zero output) | +/-5% FSO (2) |
| Combined Non-linearity, Hysteresis and Nonrepeatability | < +/- 1% FSO |
| Long Term Stability (1 year) | + /- 1% Span (Typical) |
| Temperature Compensation | 0 - 50° C |
| Thermal Zero Shift | < +/- 0.05%FSO/°C |
| Thermal Sensitivity Shift | < +/- 0.05%/°C |
| Operating and Storage Temperature Range | - 40° C to 85° C |
| Humidity | 0 - 90% RH |
| Input Resistance (Bridge Only) | 8K ohms (nominal) |
| Output Resistance (Bridge Only) | 5K ohms (nominal) |
| Deflection at Rated Load | < 0.05 mm |
| Isolation Resistance | > 50 Mohms@ 250VDC |

1) Higher excitation voltages available on request.

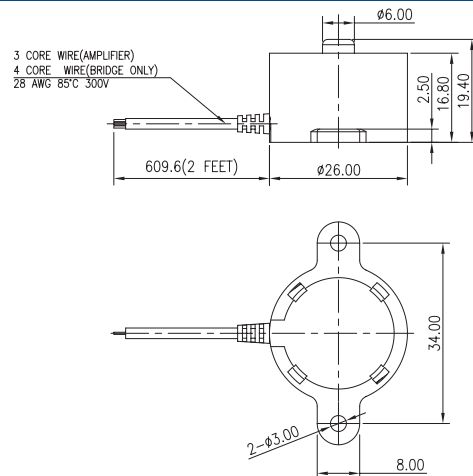
2) Lower trim values available on request.

dimensions

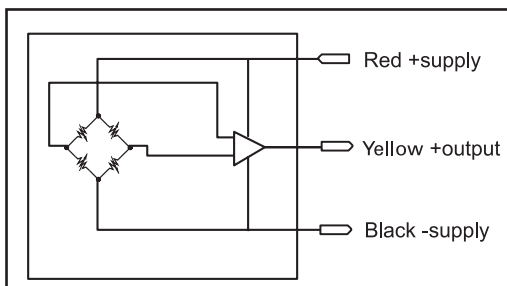
FC21



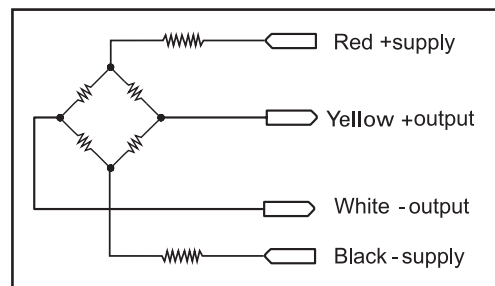
FC22



High Level Amplified Output



Millivolt Bridge Version



ordering information

| Family | Body | Output | Connection | Specials | Range | Multiplier | Units |
|--|------|--------------------------------|-----------------|-----------------------------|---------------------------|------------|-------------|
| Sample PN: FC | 21 | 3 | 1 | 0000 | 0005 | - | L |
| FC21: Compression: Low Range | | 1= 10 mV/V FSO | 1= Cable output | Reserved for custom designs | FC21: 2 and 5 Lbf | none | L = Lbf |
| FC22: Compression: > 5 Lbf (100 Lbf maximum) | | 3= 0.5-4.5 V FSO @ 5 VDC input | | | FC22: 10, 25, 50, 100 Lbf | | N = Newtons |