



## XFL212R

### Compression Miniature Load Cell

#### SPECIFICATIONS

- Ranges from 0-5 to 0-500N [0-1.12 to 112 lbf]
- Extremely Flat 3,5 mm [0.14"]
- Diameter Only 12 mm [0.49"]
- Integrated Spherical Load Button

The **XFL212R** series is an extraordinarily thin miniature load cell with a temperature compensation module integrated into the output cable. This design allows TE CONNECTIVITY to manufacture extremely small sensors without sacrificing thermal zero and sensitivity performance.

The **XFL212R** measures strain during compression in static and dynamic applications. Unlike sensors with flat force application surfaces, the **XFL212R** incorporates a spherical load button, which assures more precise loading and in return more accurate measurements.

The sensing element is fitted with a fully temperature compensated Wheatstone bridge equipped with high stability micro-machined silicon strain gages. The use of silicon strain gages optimizes its performance at low ranges and frequencies. The sensor is available in aluminum alloy or stainless steel, depending on the full scale range and can withstand considerable overloads.

On request, Instruction documents can be provided to ease the selection and use of our sensors and provide helpful tips."

#### FEATURES

- Load Washer Model
- Flat sensor
- High Stiffness
- Integrated Spherical Load Button
- Other designs available on request

#### APPLICATIONS

- Strain table measurement
- Micro component assembly tools
- Mechanical switches control
- Laboratory
- Robotic

**PERFORMANCE SPECIFICATIONS** (typical values at temperature 23°C)

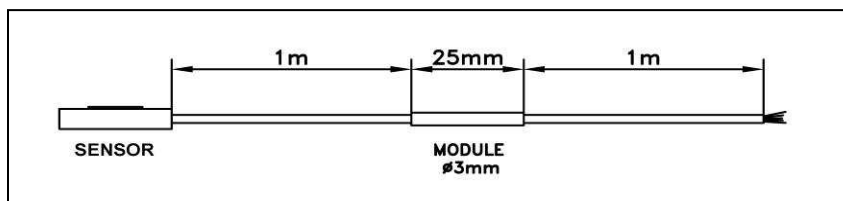
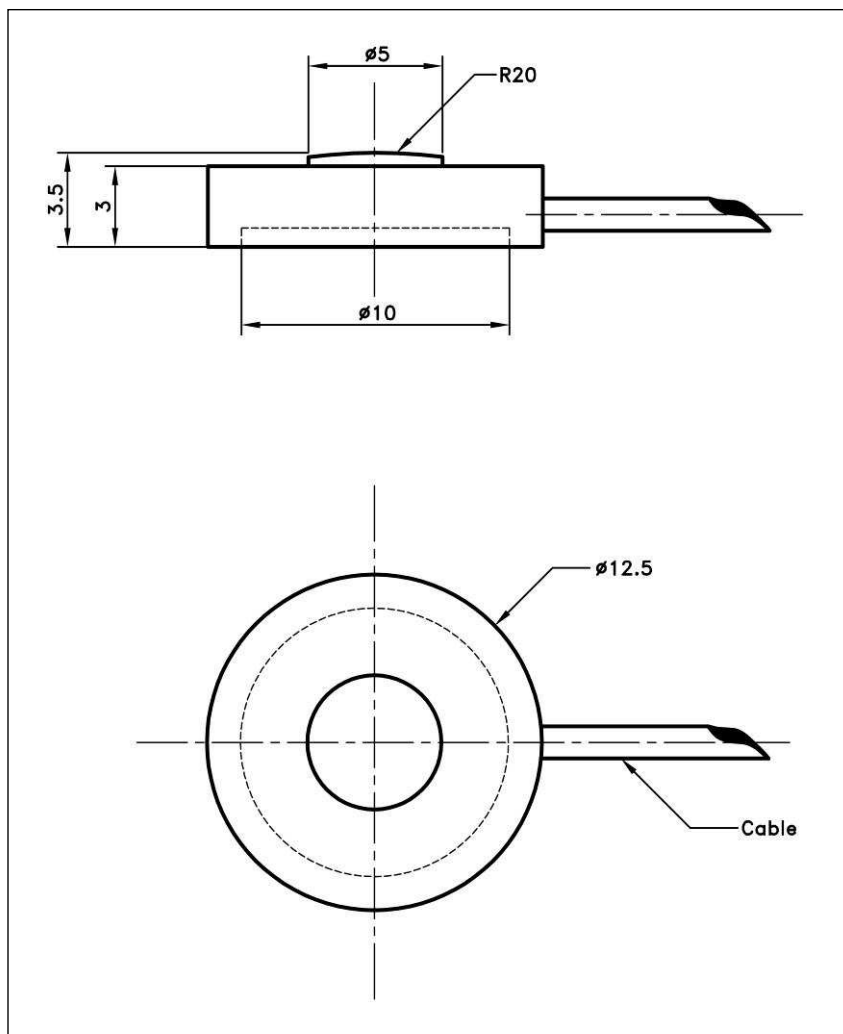
Ranges (FS)	5 N	10 N	20 N	50 N	100 N	200 N	500 N
Ranges (lbf)	1.12	2.25	4.5	11.2	22.5	45	112
Material	Aluminium					Stainless Steel	
Stiffness (N/m)	8.7E+05	1.9E+06	4.2E+06	1.1E+07	2.0E+07	4.0E+07	5.6E+07
Stiffness (lbf/ft)	6.0E+04	1.3E+05	2.9E+05	7.5E+05	1.4E+06	2.7E+06	3.8E+06
Sensitivity (FSO)	120 mV						150 mV

Specifications	
Power supply	10Vdc
Overrange Without Damage	2 x FS
Overrange Without Destruction	3 x FS
Offset	<±10 mV
Input Impedance	1500 ohms
Output Impedance	500 ohms
Linearity	< ±1% de l'EM
Hysteresis	< ±1% de l'EM
Operating Temperature Range (OTR)	-40°C to +120°C (-40 to 250°F)
Compensated Temperature Range (CTR)	0°C to +60°C (32 to 140°F)
Thermal Zero Shift in CTR	< 2% de l'EM/50°C
Thermal Sensitivity Shift in CTR	< 2%/50°C
Insulation	> 100 Mohms
Protection Index	IP50

**Notes**

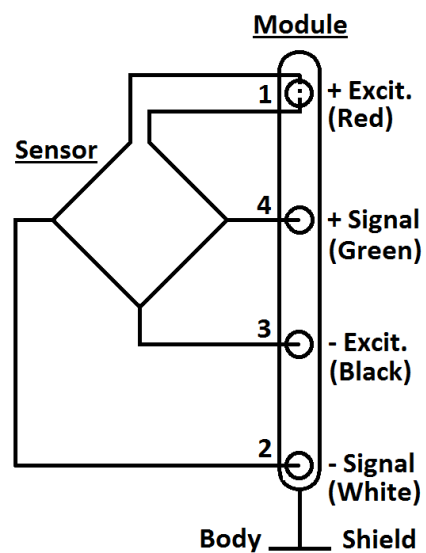
1. Signal goes negative in compression with standard wiring configuration
2. Electrical Termination: Shielded cable with 4 wires (AWG36/28), standard length 2 m [6.5 ft] with strain relief spring
3. Material: Body in stainless steel or aluminum alloy
4. Protection Index: IP50
5. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1

## DIMENSIONS & WIRING SCHEMATIC (METRIC)



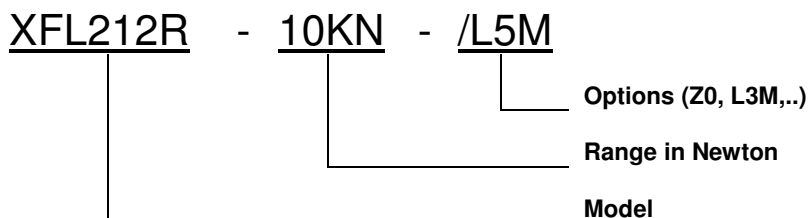
Dimensions in mm [inch]

### Wiring Schematic



**OPTIONS**

Z0	CTR -40°C to +20°C (-40°F to 68°F)
Z04	CTR -40°C to +90°C (-40°F to 194°F)
Z1	CTR -20°C to +40°C (-4°F to 104°F)
Z3	CTR +20°C to +80°C (68°F to 176°F)
Z35	CTR +20°C to +120°C (68°F to 248°F)
L5M,L10M,L15M	Special total cable length (ex: "L05M= 5m length).(Standard total cable length = 2m)
M0.25M , M0.5M	Special distance between sensor and module(ex:M0.5M=0.5m) .(Standard distance =1m)

**ORDERING INFO**

神州融安科技（北京）有限公司

电话：010-62127688、82057633

地址：北京市海淀区花园路2号牡丹科技楼B座三层B308室

网址：www.ronganchina.cn

**NORTH AMERICA**

Measurement Specialties, Inc.,  
a TE Connectivity Company  
Phone: +1 800 522 6752  
Email: [customercare.frm@te.com](mailto:customercare.frm@te.com)

**EUROPE**

Measurement Specialties (Europe), Ltd.  
a TE Connectivity Company  
Phone: +31 73 624 6999  
Email: [customercare.lcsb@te.com](mailto:customercare.lcsb@te.com)

**ASIA**

Measurement Specialties (China), Ltd.,  
a TE Connectivity Company  
Phone +86 400 820 6015  
Email: [customercare.shzn@te.com](mailto:customercare.shzn@te.com)

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