





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

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."

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 Stainles					ss 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

Signal goes negative in compression with standard wiring configuration
Electrical Termination: Shielded cable with 4 wires (AWG36/28), standard length 2 m [6.5 ft] with strain relief spring
Material: Body in stainless steel or aluminum alloy

04/2019

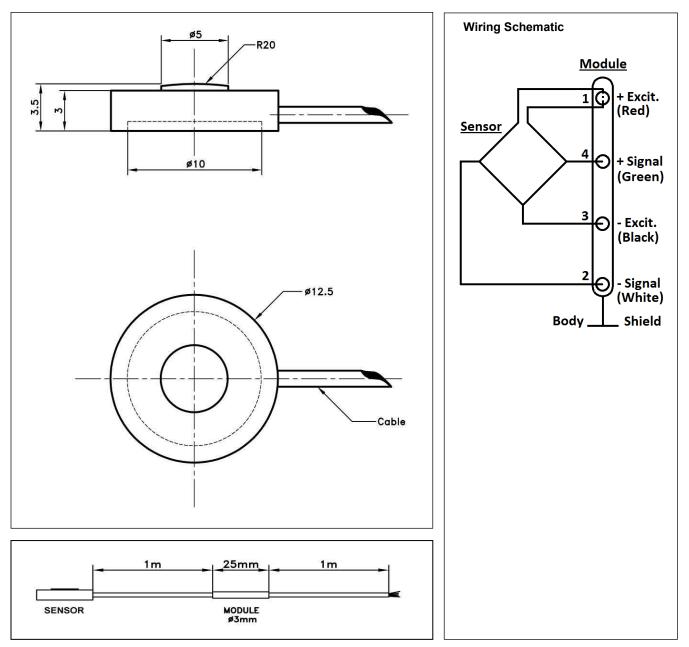
4. Protection Index: IP50

5. CE conformance according to EN 61010-1, EN 50081-1, EN 50082-1



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DIMENSIONS & WIRING SCHEMATIC (METRIC)



Dimensions in mm [inch]

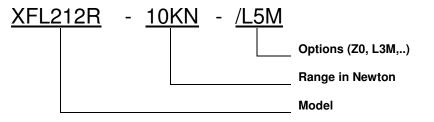


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OPTIONS

ZO	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



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