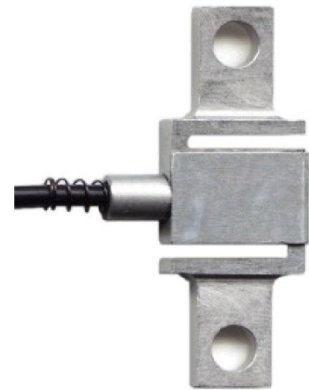


## Tension/compression force transducer Miniature, for small forces (tension measuring plate)



### Description

This force transducer is suitable for the measurement of tensile forces and can be supplied for measuring ranges of 10 to 200 N.

The field of application for this force transducer lies in innumerable applications where high accuracy, simple installation, low space requirement and favourable price play a decisive role.

The force transducer is easy to use due to the simple way that force is applied.

The force is centrally applied on the force transducer axis.

Bending moments and torques can lead to permanent damage to the force transducer.

### Note

In order to avoid overloading, it is advantageous to connect the load cell electrically during installation and to monitor the measured value.

The force to be measured must be applied concentrically and free of transverse force.

The load cells are to be mounted on a level surface.

### Features

- for tension force measurements
- simple force introduction
- compact small dimensions
- simple installation
- low installation height
- Protection class IP 60
- Accuracy 0.16% of full scale value

### Measuring ranges

- 10 N ... 200 N

### Applications

- Plant engineering
- Laboratory applications and precision engineering
- Measurement and monitoring facilities
- Test benches and production lines

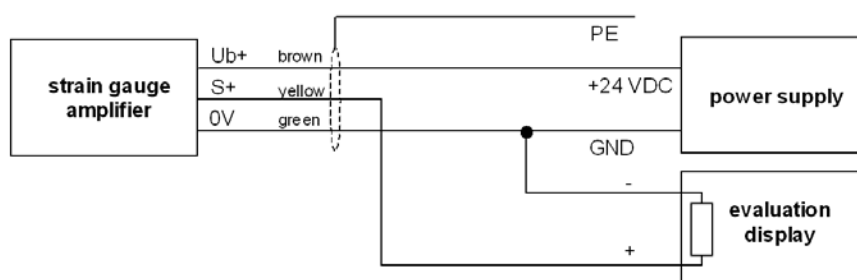
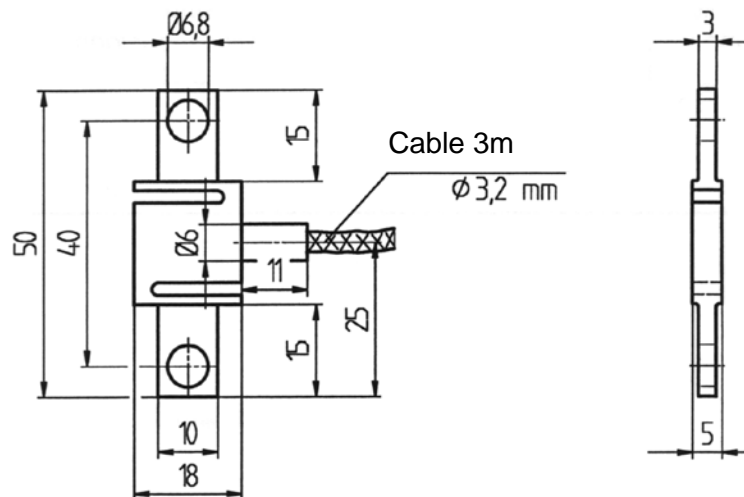
**Model: F2212**

## Technical data

Model	F2212	Options
Nominal load $F_{nom}$	10, 20, 50, 100, 200 N	
Accuracy class	tension 0.2% of F.S. tension and compression 0.3% of F.S.	
Limit load	150% $F_{nom}$	
Ultimate load	>200% $F_{nom}$	
Combined error	$\leq \pm 0.3\%$ of F.S.	$\leq \pm 0.16\%$ of F.S., with tension force only
Max. dynamic load	$\pm 70\%$ $F_{nom}$ acc. to DIN 50 100	
Creep, 30 min. at $F_{nom}$	$< \pm 0.1\%$ of F.S.	
Nominal deflection	$< 0.15$ mm	
Nominal temperature range	5 bis $+45^{\circ}\text{C}$	
Service temperature range	$-10$ bis $+70^{\circ}\text{C}$	
Storage temperature range	$-30$ bis $+80^{\circ}\text{C}$	
Reference temperature	$23^{\circ}\text{C}$	
Temperature effect	- span $\leq \pm 0.2\%$ of F.S./ 10K - zero $\leq \pm 0.2\%$ of F.S./ 10K	
Protection type (acc. to EN 60 529/IEC 529)	IP 60	
Insulation resistance	$> 2$ G $\Omega$	
Analogue output		1 mV/V
- Output signal	0.8 ... 1.2 mV/V	
- Bridge resistance	350 $\Omega$	
- Option	Cable integrated amplifier 0 (4) ... 20 mA, 0 ... 10 V DC	
- Tolerance of span	$\leq \pm 0.1\%$ of F.S.	
- Excitation voltage	2 ... 8 V (max. 8 V), 12 ... 28 V DC for cable integrated amplifier	
- Electrical connection	Cable 3 m / 4-wire	
Material of measuring device	Aluminium	
Weight (kN)		
- 10-50	0,04 kg	
- 100-200	0,05 kg	

of F.S. = full scale value

## Dimensions



Electr. connection	
Supply (-)	green
Supply (+)	brown
Sign. (+)	yellow
Sign. (-)	white
Control	grey
Screen	Screen

Pin assignment for cable integrated amplifier

Subject of technical changes