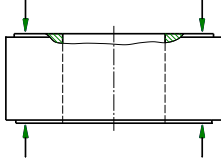


## Ring force transducer for bold forces



### Description

These load cells are specially designed with small external dimensions. As a result of their compactness, these load cells can be used in a wide variety of industrial and laboratory applications. Their compact dimensions make them particularly suitable for service in extremely constricted structures where prestress and compression forces are to be measured.

These load cells are designed to measure compression and prestress forces in ranges from 0...15 kN to 0...500 kN.

They are suitable for numerous applications, where simple installation with a wide contact surface are of evident importance.

The load cells can be installed easily due to their simple force introduction.

The force introduction has to be upright to the force transducers' axis.

### 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 plain surface.

### Features

- for compression and prestress
- force measurements
- simple force introduction
- measuring washer
- adapter disk
- compact and small dimensions
- simple installation
- very low installation height
- protection class IP 65
- accuracy 1% or 3% of full scale value

### Measuring ranges

- 15 kN ... 500 kN

### Applications

- Measuring of pretensioning forces
- Plant engineering
- Screw and pin assembly
- Cutting tools
- Measurement and inspection equipment
- Test setups

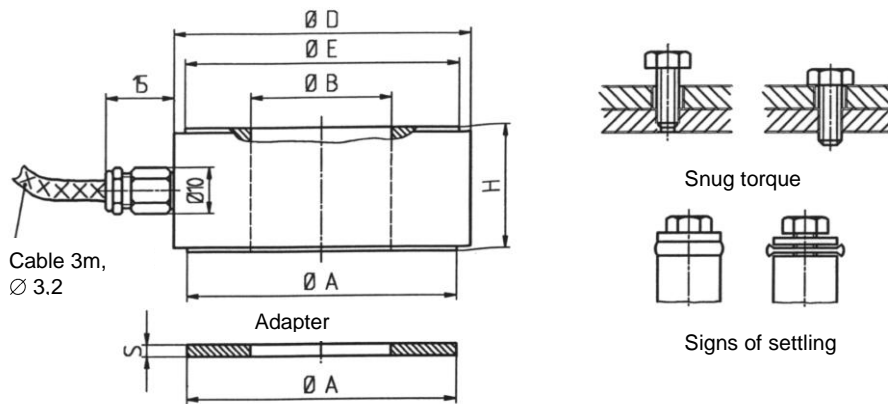
**Model: F6210**

## Technical data

Model	F6210
Nominal load $F_{nom}$ in kN	15, 30, 60, 80, 120, 160, 350, 500
Diameter of thread	M6, M8, M10, M12, M16, M20, M24, M30
Accuracy class with compression force measurement	1% of F.S.
Accuracy class with pretensioning force measuring	3% of F.S.
Limit load	150% $F_{nom}$
Ultimate load	> 300% $F_{nom}$
Combined error	$\pm 0.1\%$ of F.S. with compression force measurement in pretensioning force measuring 3%
Max. dynamic load	$\pm 70\%$ $F_{nom}$ acc. to DIN 50100
Creep, 30 min. at $F_{nom}$	$\leq \pm 0.1\%$ of F.S.
Nominal deflection	<0.1 mm
Nominal temperature range	5 ... +55°C
Service temperature range	-20 ... +70°C
Storage temperature range	-30 ... +80°C
Reference temperature	23°C
Temperature influence -span -zero	$\leq \pm 0.3\%$ of F.S. / 10K $\leq \pm 0.3\%$ of F.S. / 10K
Protection type (acc. to EN 60529/IEC 529)	IP 65
Analogue output - Output signal - Bridge resistance - Option  - Excitation voltage  - Electrical connection	0.8 ... 1.2 mV/V 350 $\Omega$ Cable integrated amplifier 0 (4) ... 20 mA, 0 ... 10 V DC 2 ... 8 V (max. 8 V) 12 ... 28 V DC for cable integrated amplifier Cable 3 m
Material of measuring device	Stainless steel
Weight (kN) - 15 - 30 - 60 - 80 - 120 - 160 - 350 - 500	0,05 kg 0,06 kg 0,07 kg 0,08 kg 0,1 kg 0,12 kg 0,5 kg

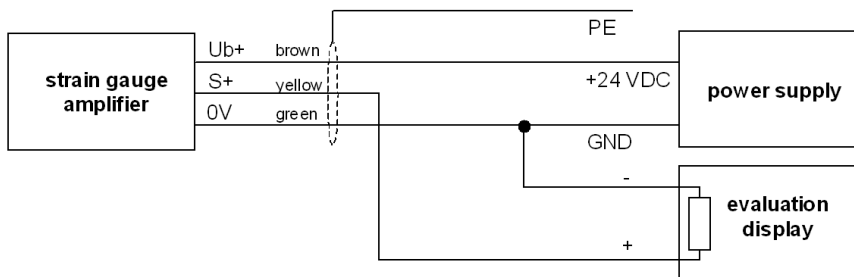
of F.S. = full scale value

## Dimensions



Nominal load [ kN ]	Dimensions in [mm]						
	for screws	ØA	ØB	ØD	ØE	H	S
15	M 6	10.5	6.3	18	11	12	2
30	M 8	15	8.3	22	16	12	2
60	M 10	17	10.3	24	17.8	12	2
80	M 12	22.5	12.3	28	22.5	15	2.5
120	M 16	27.6	16.3	32	28	15	2.5
160	M 20	37.5	20.3	46	38	15	3
350	M 24	47	24.5	54	48	22	3
500	M 30	59	30.8	65	60	27	3

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



Pin assignment for cable integrated amplifier