

# Compression force transducer with raised accuracy, up to 500 kN

with electrical output



## Description

This sensor is especially suited to the measurement of static and quasi-static compressive forces.

Its very robust and compact form make it suitable for use both in industrial environments and in the laboratory and testing bays.

The sensor is in all respects ideal for the ranges of rated values 0...0,25 kN bis 0...500 kN.

The sensor is protected against splash water and works with very great reliability under extreme conditions.

## 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

- Simple force introduction
- Robust design
- Simple installation
- Protection class IP 67
- Accuracy 0.1% of full scale value

## Measuring ranges

- 0.25 kN ... 500 kN
- 25 kg ... 50t

## Applications

- Apparatus engineering;
- Production lines;
- Measuring and test equipment;
- Special mechanical engineering applications;
- Rope strength measurement

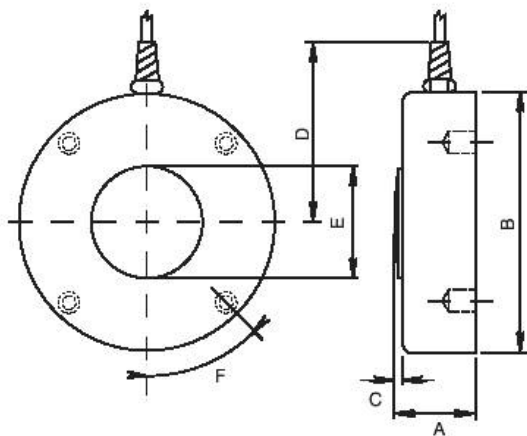
Model: F1280

## Technical Data

Model	F1280
Nominal load $F_{nom}$ kN t	<b>0.25, 0.5, 1, 2.5, 5, 10, 25, 50, 100, 250, 500</b> 0.025, 0.05, 0.1, 0.5, 1, 2.5, 5, 10, 25, 50
Accuracy class	0,1% of F.S.
Limit load	150% $F_{nom}$
Breaking load	>300% $F_{nom}$
Combined error	$\leq \pm 0.2\%$ of F.S.
Max. dynamic load	$\pm 60\%$ $F_{nom}$ acc. to DIN 50100
Creep, 30 min. at $F_{nom}$	$\leq \pm 0.07\%$ of F.S.
Nominal deflection	<0,5 mm
Nominal temperature range	-10 ... +50°C
Service temperature range	-30 ... +85°C
Storage temperature range	-50 ... +90°C
Reference temperature	23°C
Temperature effect - span - zero	$\leq \pm 0.01\%$ of F.S. / 10 K $\leq \pm 0.07\%$ of F.S. / 10 K
Protection type (acc. to EN 60529/IEC 529)	IP 67
Non repeatability	0,07 %
Insulation resistance	> 1 G $\Omega$
Output Resistance	351 $\Omega$ nominal
Input Resistance	410 $\Omega$ nominal
Analogue output	
- Output signal	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 ... 20 V (max. 25 V)
- Option	16 ... 32 V DC for cable integrated amplifier
- Electrical connection	Cable 3 m / 4-wire $\leq 2.5$ t Cable 5 m / 6-wire $\leq 10$ t Cable 10 m / 6-wire $\leq 50$ t
Mounting equipment	see sep. Datasheet
Material of measuring device	High alloy steel, galvanised

of F.S. = full scale value

## Dimensions



Nominal load [ kN ]	Dimensions in [mm]						
	A	$\phi B$	C	D	$\phi E$	F	LK $\phi$
0.25..10	22	52	4	30	10	M5	44
25	25	52	4	30	10	M5	44
50	30	100	5	95	20	M6	85
100	35	100	5	95	20	M6	85
250	50	115	10	100	32	M12	90
500	55	155	12	125	45	M12	130

Electr. Connection	
Supply voltage(+)	red
Sense (+)	brown
Supply voltage (-)	black
Sense (-)	blue
Signal (+)	green
Signal (-)	white
screen	screen

Subject of technical changes