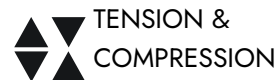
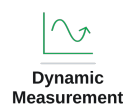


TENSION AND COMPRESSION FORCE TRANSDUCER



- CAPACITY 5 ... 100 kN
- ISO 376 · CLASS 00 ... 1
- STAINLESS STEEL · IP67
- FOR TESTING MACHINES



NOMINAL LOAD (FS)

Capacity	Class 00	Class 0.5	Class 1	Thread
5 kN	·	·	·	M20 × 1.5
10 kN	·	·	·	M20 × 1.5
25 kN	·	·	·	M20 × 1.5
50 kN	·	·	·	M30 × 2
75 kN	·	·	·	M30 × 2
100 kN	·	·	·	M30 × 2

Accuracy classes to ISO 376. b', fc and u in % of reading, from 1/10 of the nominal load. Classification to ASTM E74 on request.



OVERVIEW

Tension and compression force transducer for testing machines from 5 to 100 kN, accuracy classes 00, 0.5 and 1 to ISO 376.

The stainless steel body is protected to IP67 and has a female thread M20 × 1.5 (5 ... 25 kN) or M30 × 2 (50 ... 100 kN) at both ends. With loading head and spherical loading head it measures compression, with knuckle joints tension; dynamic loads up to 50 % of the nominal load. Classification to ASTM E74 is available on request.

5 ... 100 kN

capacities

00 · 0.5 · 1

classes ISO 376

2 mV/V

nominal sensitivity

IP67

protection class

MEASUREMENT

- tension and compression, also dynamic
- class 00, 0.5 or 1 to ISO 376
- linearity ± 0.03 % F.S.
- nominal sensitivity 2 mV/V

DESIGN

- stainless steel, IP67
- female thread M20 × 1.5 or M30 × 2
- 5 m cable, MIL6M or M12 option
- accessories for tension and compression



TECHNICAL DATA

PRECISION ISO 376 (CLASS 00 · 0.5 · 1)

Repeatability 0°/120°/240° (b')	± 0.050 · 0.085 · 0.150 %
Interpolation (fc)	± 0.020 · 0.040 · 0.055 %
Reversibility (u)	± 0.070 · 0.135 · 0.250 %
Zero (f0), F.S.	± 0.010 · 0.020 · 0.020 %
Linearity	± 0.03 % F.S.
Hysteresis	± 0.03 % F.S.
Temperature effect on zero (10 °C)	± 0.030 % F.S.
Temperature effect on sensitivity (10 °C)	± 0.011 % F.S.

MECHANICAL PROPERTIES

Material	stainless steel
Displacement at nominal load	max. 0.3 mm
Weight	1.45 ... 4.45 kg
Protection class (EN 60529)	IP67

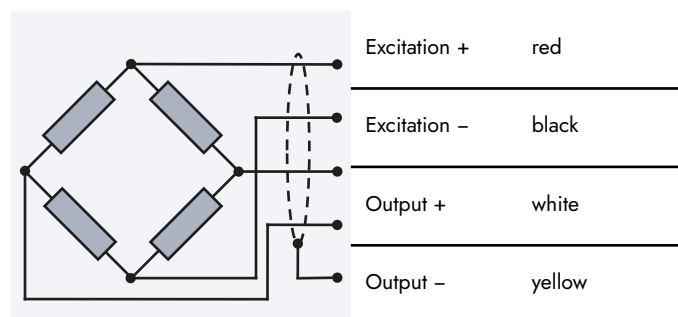
ELECTRICAL PROPERTIES

Nominal sensitivity	2 mV/V
Sensitivity tolerance	± 0.1 % F.S.
Input resistance	440 ± 20 Ω
Output resistance	352 ± 2 Ω
Insulation resistance	> 5 GΩ
Zero balance	± 1 % F.S.
Recommended supply voltage	10 V
Nominal supply voltage	1 ... 15 V
Maximum supply voltage	18 V
Cable	PVC 105 °C, shielded, Ø 5.2 mm, 4 × 0.35 mm², 5 m

TEMPERATURE

Reference temperature	+23 °C
Nominal temperature range	-10 ... +40 °C
Service temperature	-10 ... +70 °C
Storage temperature	-20 ... +80 °C

ELECTRICAL CONNECTION



MECHANICAL LIMITS (REFERRED TO NOMINAL LOAD)

Service load	120 %
Max. permissible load	150 %
Breaking load	> 300 %
Max. transverse load	50 %
Max. permissible dynamic load	50 %

CONNECTORS (OPTION)

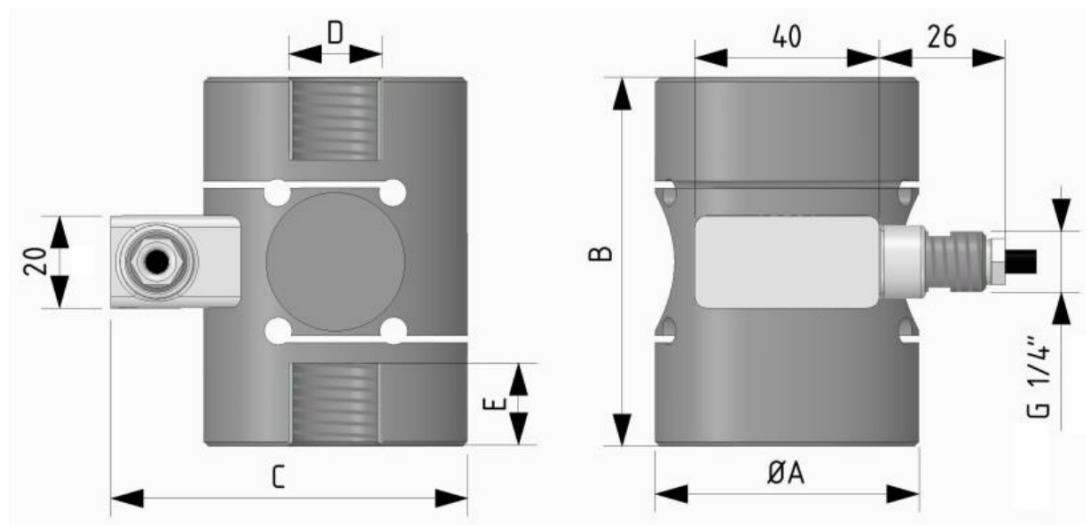
Assignment	M12, 5-pole	MIL6M
Excitation +	1	A
Excitation -	3	B
Output +	2	D
Output -	4	C
Shield	5	F

ACCESSORIES AND OPTIONS

Loading head	5 ... 25 kN and 50 ... 100 kN, each matching
Spherical loading head	M20 (5 ... 25 kN) · M30 (50 ... 100 kN)
Knuckle joints	M20 (5 ... 25 kN) · M30 (50 ... 100 kN)
Connector	MIL6M or M12, direct output instead of cable
Connection cable	female MIL6M, 6-pole, 5 m · female M12 × 1, 5-pole, 3 m; PVC, shielded
Calibration report	compression or tension



DIMENSIONS (mm)



	5 · 10 · 25 kN	50 · 75 · 100 kN
Ø A	57	82
B	80	110
C	74.5	102
D	M20 × 1.5	M30 × 2
E	17	20

Dimensions in mm. Installed height with loading head and spherical loading head (compression) A = 117 mm (5 ... 25 kN) or 149 mm (50 ... 100 kN), with knuckle joints (tension) B ≈ 200 mm or ≈ 300 mm. Cable weight can influence measurement: place the cable on the fixed side, opposite to the load.

COMPLIANCE AND CERTIFICATION

Protection Rating	IP67	
Compliance	CE, RoHS	
Calibration	Calibration report on request (compression or tension)	
Certifications		Accuracy classes 00, 0.5 and 1 to ISO 376
Certifications (on request)		Classification to ASTM E74

