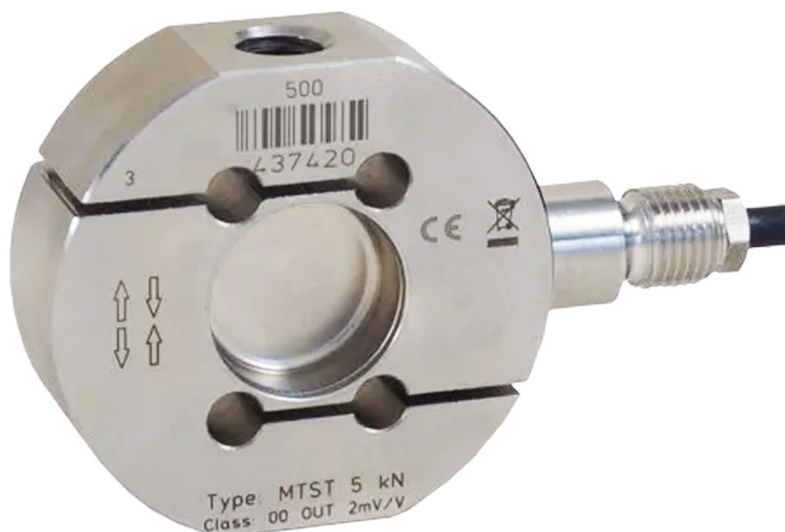
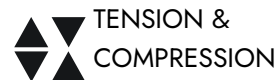


TENSION AND COMPRESSION FORCE TRANSDUCER



- CAPACITY 0.5 ... 5 kN
- ISO 376 · CLASS 00 ... 1
- STAINLESS STEEL · IP67
- FOR TESTING MACHINES



NOMINAL LOAD (FS)

Capacity	Class 00	Class 0.5	Class 1
0.5 kN	·	·	·
1 kN	·	·	·
2 kN	·	·	·
3 kN	·	·	·
5 kN	·	·	·

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

S-type force transducer for testing machines: tension and compression from 0.5 to 5 kN, accuracy classes 00, 0.5 and 1 to ISO 376.

The stainless steel transducer is protected to IP67 (0.5 kN with silicone cover: IP65) and has an M12 female thread at both ends. With loading head, spherical load head and mounting plate it measures compression, with knuckle joints tension. An accredited calibration certificate to ISO/IEC 17025 and the classification to ASTM E74 are available on request.

0.5 ... 5 kN

capacities

00 · 0.5 · 1

classes ISO 376

2 mV/V

nominal sensitivity

IP67

protection class

MEASUREMENT	DESIGN
■ tension and compression	■ stainless steel, IP67
■ class 00, 0.5 or 1 to ISO 376	■ Ø 63.5 mm, M12 female thread
■ linearity ± 0.02 % F.S.	■ 5 m cable, M12 connector option
■ nominal sensitivity 2 mV/V	■ accessories for tension and compression



TECHNICAL DATA

PRECISION ISO 376 (CLASS 00 · 0.5 · 1)

Repeatability 0°/120°/240° (b')	± 0.050 · 0.090 · 0.155 %
Interpolation (fc)	± 0.020 · 0.040 · 0.080 %
Reversibility (u)	± 0.070 · 0.100 · 0.200 %
Zero (f0), F.S.	± 0.010 · 0.025 · 0.025 %
Linearity	± 0.02 % F.S.
Hysteresis	± 0.025 % F.S.
Temperature effect on zero (10 °C)	± 0.025 % F.S.
Temperature effect on sensitivity (10 °C)	± 0.025 % F.S.

MECHANICAL PROPERTIES

Material	stainless steel
Displacement at nominal load	0.2 mm
Weight	0.60 kg
Protection class (EN 60529)	IP67 · 0.5 kN: IP65 (silicone cover)

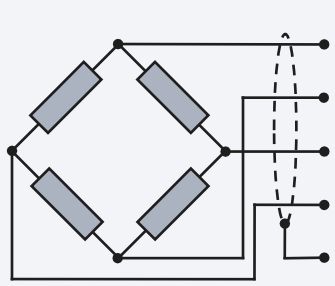
ELECTRICAL PROPERTIES

Nominal sensitivity	2 mV/V
Sensitivity tolerance	± 0.1 % F.S.
Input resistance	350 ± 2 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

	Excitation +	red
	Excitation -	black
	Output +	white
	Output -	yellow



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 %

M12 CONNECTOR, 5-POLE (OPTION)

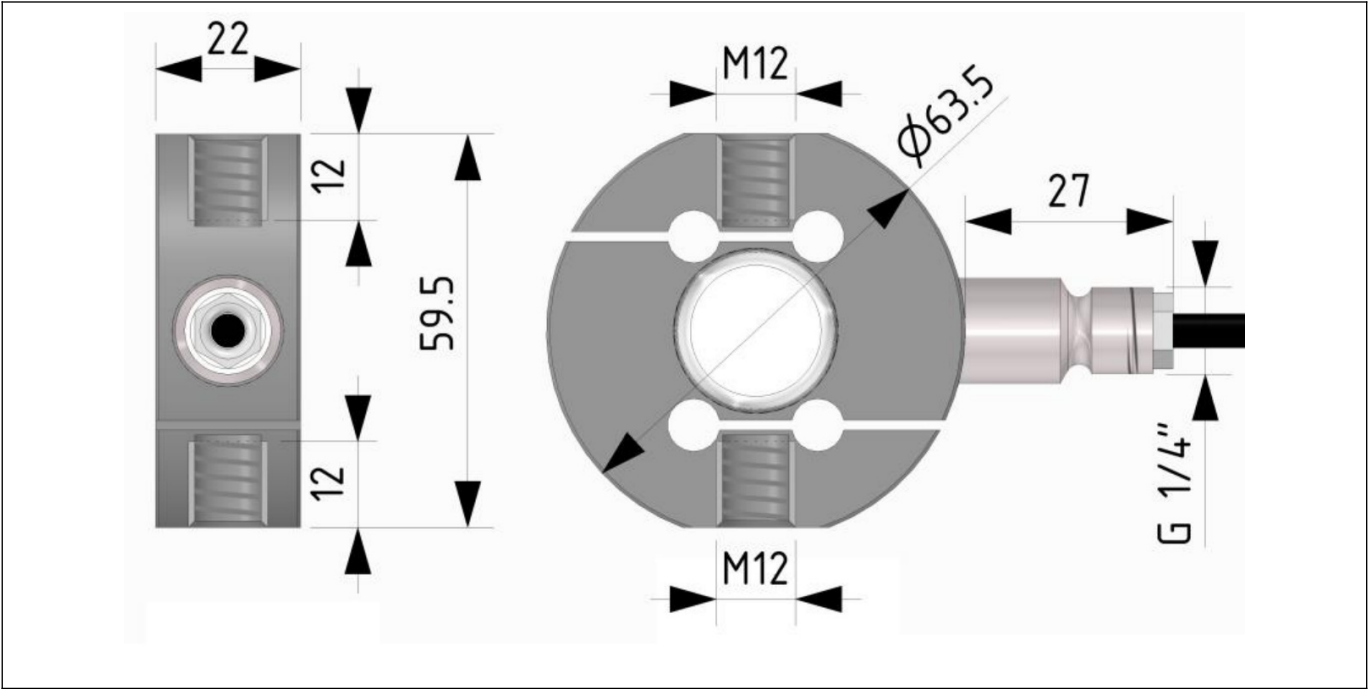
Excitation +	Pin 1
Excitation -	Pin 3
Output +	Pin 2
Output -	Pin 4
Shield	Pin 5

ACCESSORIES AND OPTIONS

Loading head	stainless steel, Ø 25 x 15 mm, bore Ø 17.3 mm
Spherical load head	stainless steel, Ø 15 mm, thread M12
Mounting plate	stainless steel, Ø 32 mm, thread M12
Knuckle joints	M12, for tension applications
M12 connector	direct output instead of cable
Connection cable	female M12 x 1, 5-pole, straight, PVC, shielded, 3 m
Calibration report	compression or tension



DIMENSIONS (mm)



Dimensions in mm. Installed height with loading head, spherical load head and mounting plate (compression) 94 mm, with knuckle joints (tension) ≈ 134 mm. The force generated during the accessories assembly must not exceed the nominal load. Cable weight can influence measurement: place the cable on the fixed side, opposite to the load.

COMPLIANCE AND CERTIFICATION

Protection Rating	IP67 · 0.5 kN: IP65	
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)		Accredited calibration certificate to ISO/IEC 17025
		Classification to ASTM E74

