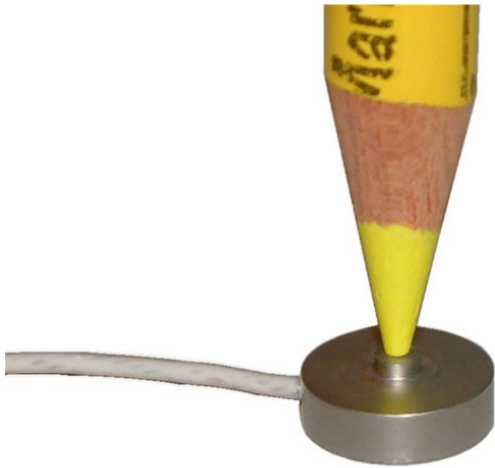


KM10 25N, 50N, 100N, 200N, 500N, 1kN



Description

The force is transmitted via the universal ball joint (diameter 2.4mm, R4) in the centre of the sensor.

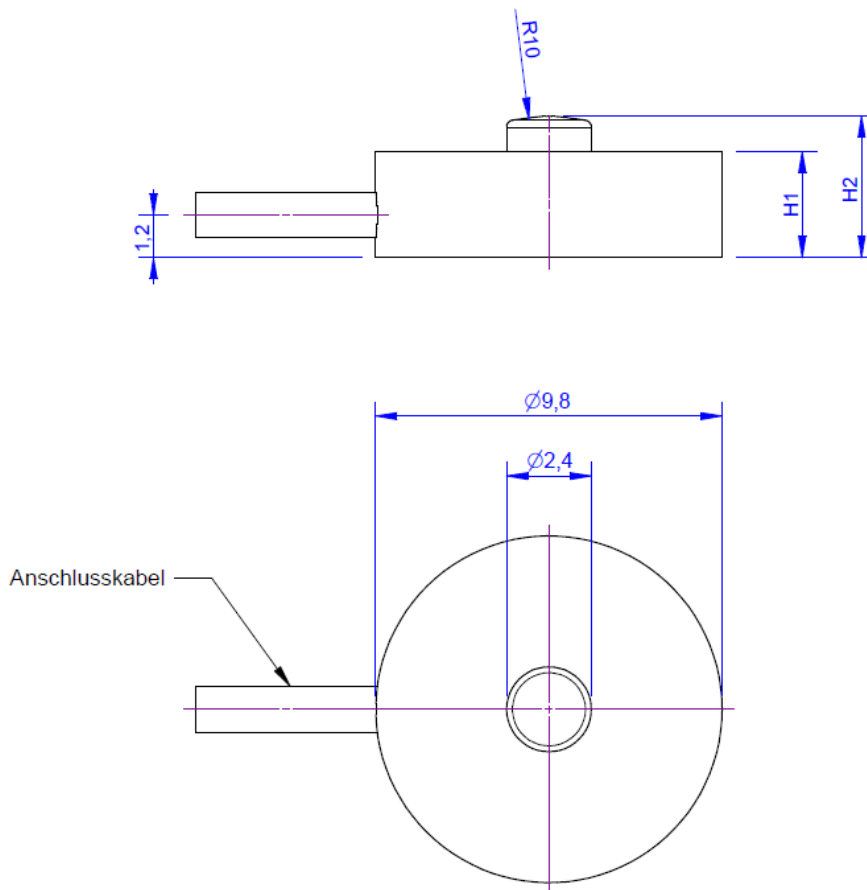
The force sensor is assembled on a flat surface. The force sensor is centered on the outer circumference, for example with 3 pins or within a 0.5 mm deep sink. The 9.8mm – 7.4mm ring forms the sensor's contact area. In the centre, a potting compound is visible up to a 7.4mm diameter. The inner ring is not used for centring.

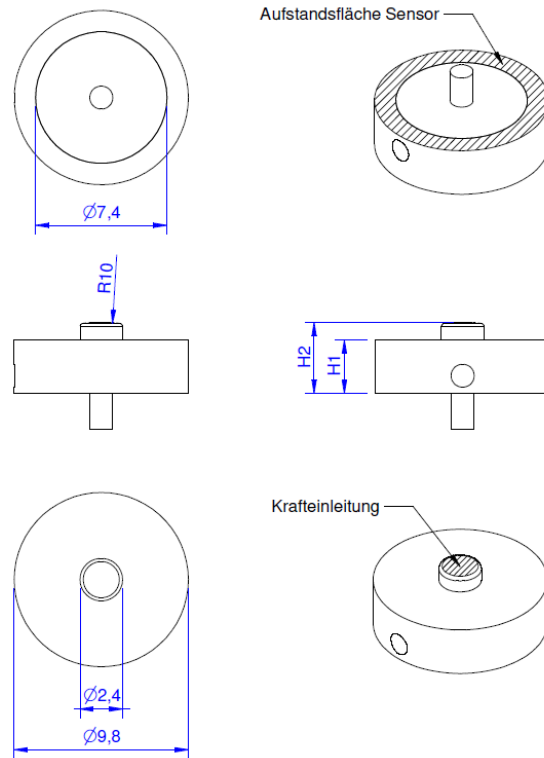
To protect against lift-off, the contact area can be fixed on a flat surface with PUR lacquer. Due to its small dimensions, a Teflon cable with an outer diameter of just 1.4mm is used. Processing the AWG36 stranded wires requires a special tool (scalpel, Hoffmann stripper-AWG36-26). The Teflon coating is intended exclusively for fixed installation, not for mobile use.

A version with a central cable outlet is available as an alternative to a lateral cable outlet.

Cable type in this version is STC-31v-4RWBG, PVC, Diameter 2,2mm;

Dimensions





Nennlast	Höhe (H1) in mm	Höhe (H2) in mm
25N	3	4
50N	3	4
100N	3	4
200N	3	4
500N	3	4
1000N	3,5	4,5

Technical Data

Force sensor

Type	Load cell
Force direction	Compression
Force introduction	Load button
Dimension 1	Ø2,4
Sensor Fastening	Circular ring
Dimension 2	Ø9,8x1,2
Operating force	150 %FS
Rated displacement	0.08 mm
Lateral force limit	10 %FS
Material	Stainless steel
Natural frequency	5 kHz
Height	4 mm
Length or Diameter	9.8 mm

Electrical Data

Input resistance	350 Ohm
Tolerance input resistance	20 Ohm
Output resistance	350 Ohm
Insulation resistance	2 GOhm
Rated range of excitation voltage f	2.5 ... 5 V
Operating range of excitation voltage f	1 ... 5 V
Zero signal	0.1 mV/V
characteristic value range min	0.5 mV/V / FS
characteristic value range max	1.1 mV/V / FS

Precision

Accuracy class	1%
Relative linearity error	0.1 %FS
Relative zero signal hysteresis	0.05 %FS
Temperature effect on zero signal	0.02 %FS/K
Temperature effect on characteristic value	0.02 %RD/K
Relative creep	0.1 %FS

Connection Data

Connection type	4 conductor open
Name of the connection	STC-36T-4
Cable length	3 m

Temperature

Rated temperature range f	-10 ... 70 °C
Operating temperature range f	-10 ... 85 °C
Storage temperature range f	-10 ... 85 °C
Environmental protection	IP64



Abbreviation: RD: „Reading“; FS: „Full Scale“;

1) The exact nominal sensitivity is indicated in the test report;







Pin Configuration

Symbol	Description	Wire colour
+Us	positive bridge supply	red
-Us	negative bridge supply	black
+Ud	positive bridge output	green
-Ud	negative bridge output	white

Screen - transparent.

Pressure load : positive output signal

accessories

	Description	Description
	Calibration Certificate kn/20/5	Factory calibration certificate for force to 20 kN in accordance with DIN EN ISO / IEC 17025 for test materials monitoring according to DIN ISO 9001: 2008 with 5 load levels and 3 series of measurements.
	GSV-1H	Measuring amplifier in top-hat rail housing for sensors with straingages. Analogue output -10V...+10V, limiting frequency 250Hz, 4 input sensitivities from 2.0mV/V.
	GSV-2TSD-DI	Measuring amplifier in desktop-housing for sensors with straingages. Serial port RS232, USB port, analogue output -5V...+5V, limiting frequency 260Hz, input sensitivity 3.5mV/V.
	GSV-3USB	Measuring amplifier in aluminum housing (IP54) for sensors with straingages. Limiting frequency 1250Hz, input sensitivity 2 / 3,5 / 10 mV/V.