

KM25 100N, 200N, 500N, 1kN



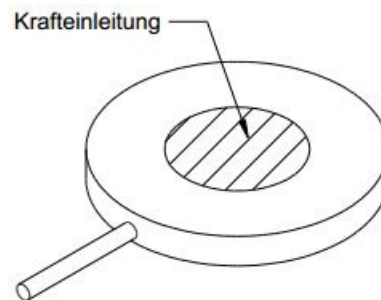
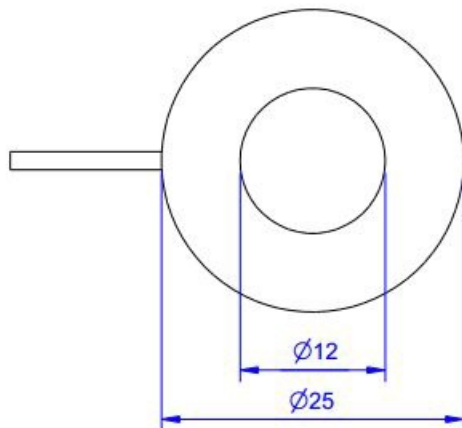
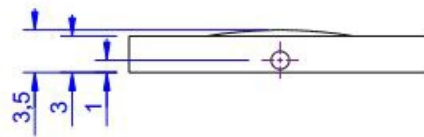
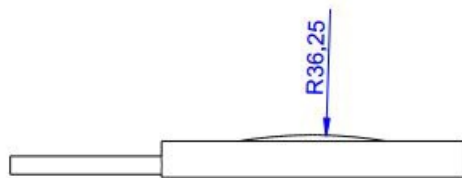
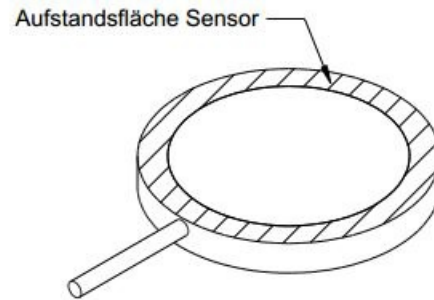
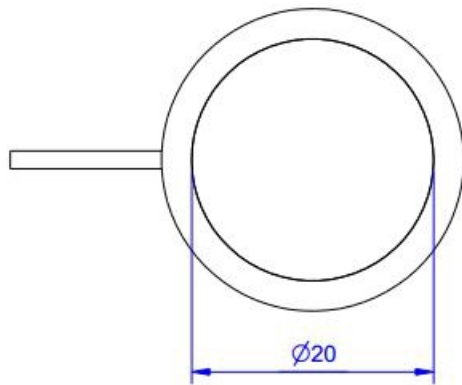
Description

The force sensor KM25 is a membrane-type force sensor with small dimensions.

It is suitable for measuring compressive forces. The force sensor is fitted into a flat recess and if required, fixed in place with adhesive. There is a spherical cap of radius 20 mm provided for the force transmission.

The method of protection is IP 66

Dimensions



Technical Data

Force sensor

Type	Load cell
Force direction	Compression
Force introduction	Load button
Dimension 1	Ø12
Sensor Fastening	Circular ring
Dimension 2	Ø25x2,5
Operating force	200 %FS
Rated displacement	0.08 mm
Lateral force limit	10 %FS
Material	Stainless steel
Natural frequency	5 kHz
Height	3 mm
Length or Diameter	25 mm

Electrical Data

Input resistance	380 Ohm
Tolerance input resistance	30 ±
Output resistance	350 Ohm
Tolerance output resistance	2.5 ±
Insulation resistance	5x10 ⁹ Ohm
Rated range of excitation voltage f	2.5 ... 5 V
Operating range of excitation voltage f	1 ... 10 V
Zero signal	0.05 mV/V
Rated output	1.5 mV/V / FS
relative error of characteristic value	0.5 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	IP66



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

1) Nominal output: $1,0 \pm 0,5$ for 100N

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 strain gauges. 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 strain gauges. 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 strain gauges. Limiting frequency 1250Hz, input sensitivity 2 / 3,5 / 10 mV/V.
	GSV-6K	analog amplifier pcb for sensors with strain gauges. Analog output configurable; sampling frequency is 10Hz ... 25kHz, input sensitivity adjustable 0.1 mV / V ... 8 mV / V