

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



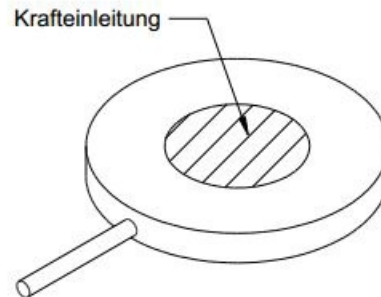
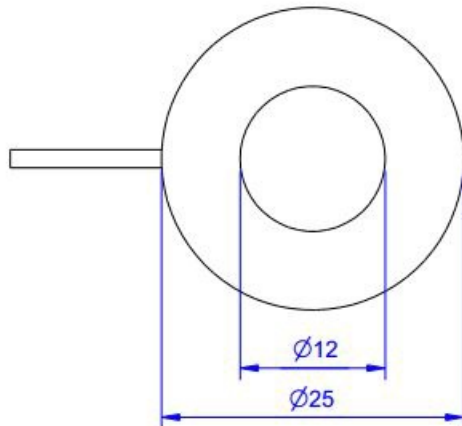
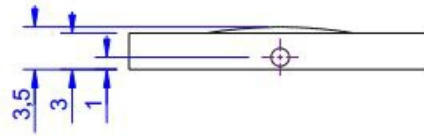
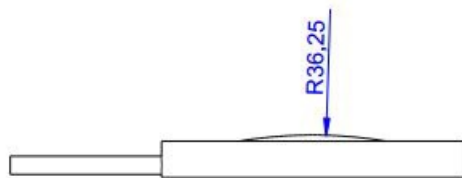
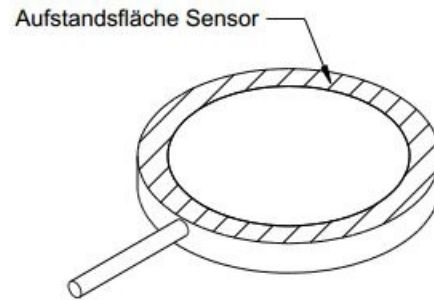
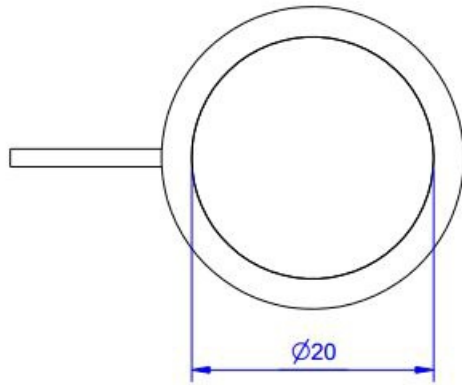
### Description

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 <sup>9</sup> 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



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*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