

## Force Sensor KM26 100N

Item number: 3978



The force sensor KM 26 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 40 mm provided for the force transmission.

The method of protection is IP 67.

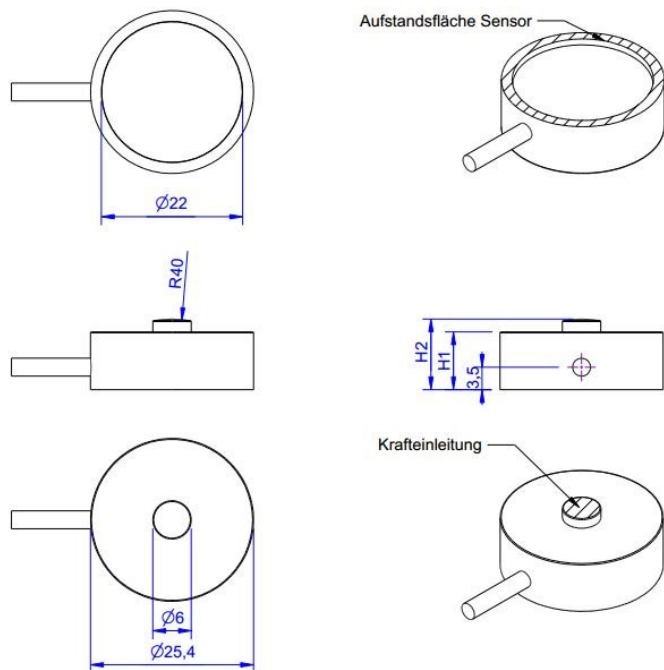
As against force sensors of the KD (double-beam) series, lateral forces result in a measurement error.

Therefore, the force transmission must be centric and free of lateral forces.

### Optional special version

- Protection class IP68: from rated force 200 N
- Vacuum version  $> 10^{-5}$  mbar
- Pressure range up to 8 bar
- Suitable for cleanrooms

## Technical Drawing



Nennlast	Höhe (H1) in mm	Höhe (H2) in mm
0,1kN	9	11
0,2kN	9	11
0,5kN	9	11
1kN	9	11
2kN	9	11
5kN	11	13
10kN	11	13

## Technical Data

Basic Data		Unit
Type	Force load cell	
Force direction	Compression	
Rated force Fx	100	N
Force introduction	Load button	
Dimension 1	Ø6x2	
Sensor Fastening	Circular ring	
Dimension 2	Ø25,4x1,7	
Operating force	150	%FS
Rated displacement	0.08	mm
Lateral force limit	10	%FS
Material	Stainless steel	
Natural frequency fx	5	kHz
Dimensions	Ø25,4 mm x 11 mm	
Height	11	mm
Length or Diameter	26	mm
Variants	100N...10kN	

Electrical Data		Unit
Input resistance	390	Ohm
Tolerance input resistance	40	Ohm
Output resistance	350	Ohm
Insulation resistance	2	GOhm
Rated range of excitation voltage from	2.5	V
Rated range of excitation voltage to	5	V
Operating range of excitation voltage from	1	V
Operating range of excitation voltage to	10	V
Zero signal	0.05	mV/V
Rated output	1	mV/V / FS

Accuracy Data		Unit
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
Environmental Data		Unit
Rated temperature range from	-10	°C
Rated temperature range to	70	°C
Operating temperature range from	-10	°C
Operating temperature range to	85	°C
Storage temperature range from	-10	°C
Storage temperature range to	85	°C
Environmental protection	IP67	

Abbreviation: RD: „Reading“; FS: „Full Scale“;1) The exact nominal sensitivity is indicated in the test report;

## Pin Assignment

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

Pressure load: positive output signal. Shield- transparent.