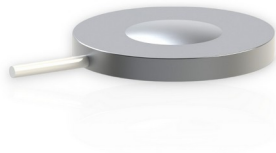


Force Sensor KM25 100N

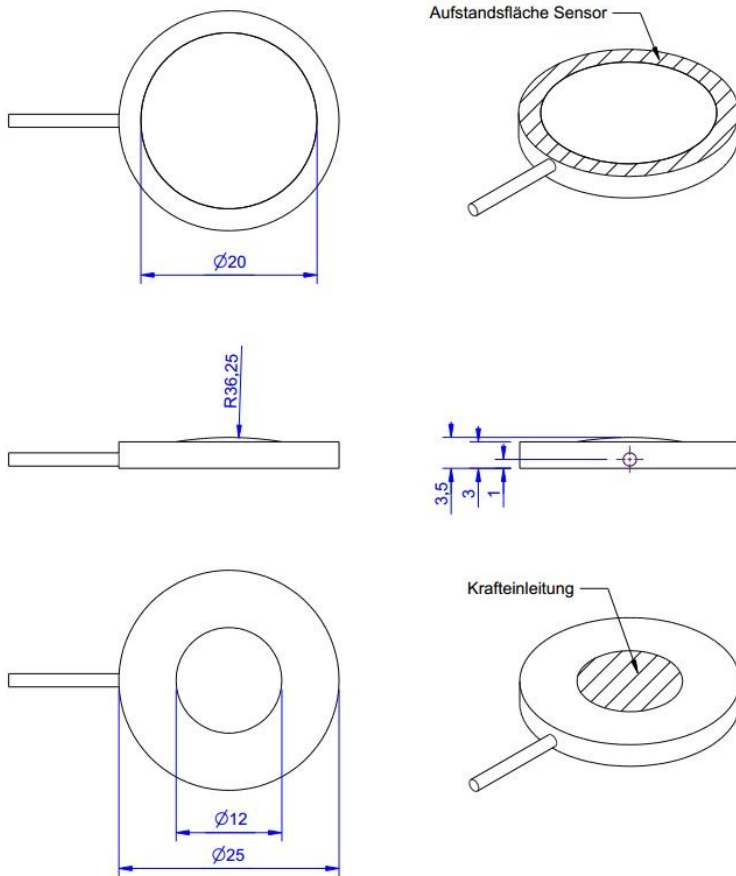
Item number: 5359



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

Technical Drawing



Technical Data

Basic Data		Unit
Type	Force load cell	
Force direction	Compression	
Rated force F _x	100	N
Force introduction	Load button	
Dimension 1	Ø12	
Sensor Fastening	Circular ring	
Dimension 2	Ø25x2,5	
Operating force	150	%FS
Rated displacement	0.08	mm
Lateral force limit	10	%FS
Material	Stainless steel	
Natural frequency f _x	5	kHz
Dimensions	Ø25 mm x 3 mm	
Height	3	mm
Length or Diameter	25	mm
Variants	100N...1kN	

Electrical Data		Unit
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 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	1.5	mV/V / FS
relative error of characteristic value	0.5	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	IP66	

Abbreviation : RD: „Reading“; FS: „Full Scale“;1) Nominal output: 1,0±0,5 for 100N The exact nominal sensitivity is indicated in the test report.

Pin Assignment

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

Screen - transparent. Pressure load : positive output signal