

Force Sensor KM46

Nominal force range 50kN

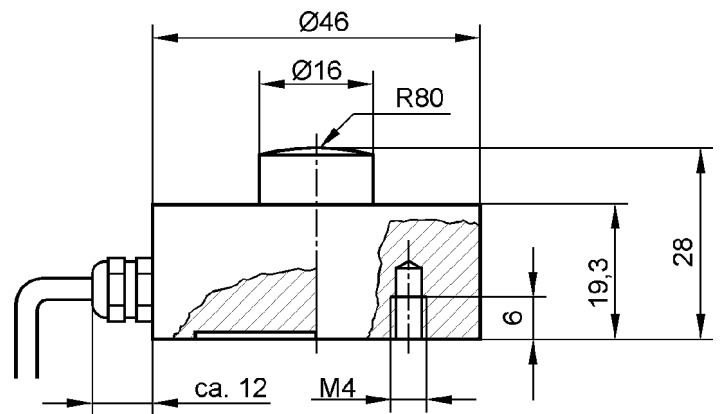
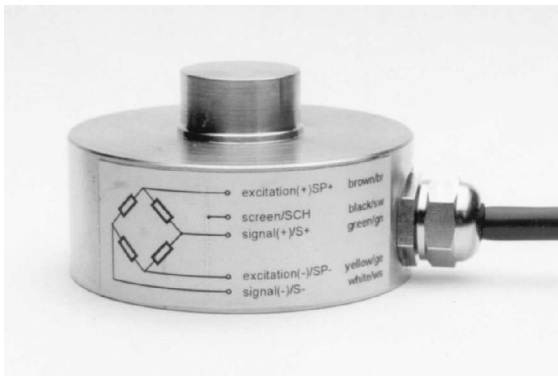
The force sensor KM 46 is a force sensor in membrane construction for measurement of compressive forces. The force sensor is fastened to a flat surface with four screws M4. There is a spherical cap with a radius of 80 mm intended for force transmission.

Environmental protection rating is IP 67.

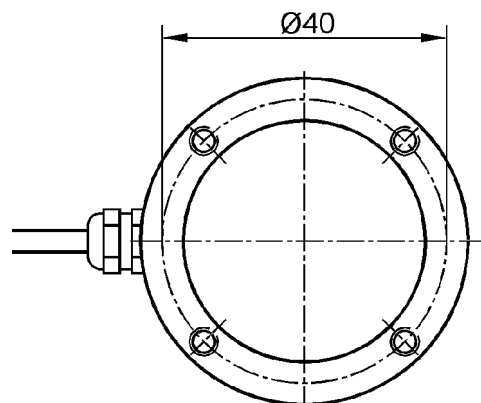
In contrast to the force sensors of the KD (double-beam) series, lateral forces result in a measurement error.

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

Dimensions



View from below:





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Technical Data

Force sensor Construction	compression membrane	
Diameter × Height	46 × 28	mm × mm
Force transmission	Spherical cap Ø16, radius 80	mm
Fastening	4 x M4	mm
Material	stainless steel	
Accuracy class	1	
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Nominal force F_N	50	kN
Operating force	150	% F_N
Breaking force	300	% F_N
Limiting lateral force	20	% F_N
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Nominal temperature range	-20...+60	°C
Operating temperature range	-20...+70	°C
Storage temperature range	-20...+70	°C
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Nominal output (S_N)	1.0 ±0.2	mV/V
Zero signal tolerance	±5	% F_N
Max. supply voltage	10	V
Input resistance	380 ±30	Ohm
Output resistance	350 ±2.5	Ohm
Insulation resistance	> 5 · 10 ⁹	Ohm
Connection, 4 conductor open	1.5	m
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Linearity error	≤ 0.2	% S_N
Reversal error	≤ 0.2	% S_N
Temperature coeff. of the zero signal	≤ ±0.05	% F_N /K
Temperature coeff. of the nominal output	≤ ±0.05	% S_N /K
Creep error (30 min)	≤ 0.2	% S_N

Pin Configuration

+Us	positive bridge supply	red	brown		
-Us	negative bridge supply	blue	yellow		shield: black
+U _D	positive bridge output	green	green		
-U _D	negative bridge output	yellow	white		