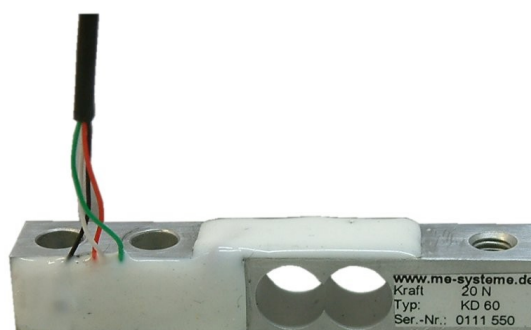


Force Sensor KD60

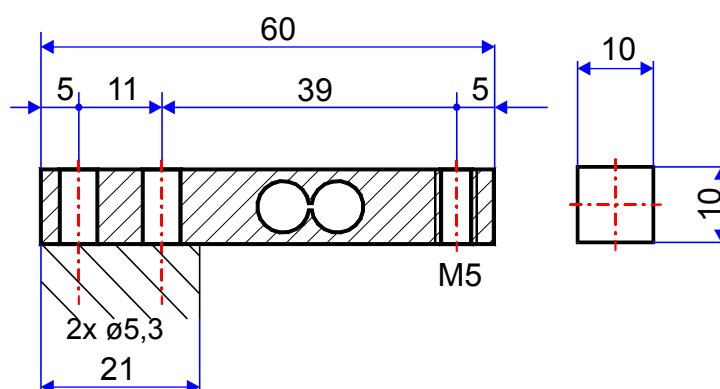
Nominal force ranges $\pm 5\text{N}$, $\pm 10\text{N}$, $\pm 20\text{N}$, $\pm 50\text{N}$, $\pm 100\text{N}$

The force sensor KD60 has the geometry of a miniature load cell. It is fastened on one side using the through holes $\varnothing 5.3$. There is a thread M5 for force transmission, which is displaced parallel under loading. The force sensor tolerates displacements of force transmission and lateral forces due to its design as a double-beam.

The force sensor KD60 is designed as a multi-range sensor. The accuracy of 0.1% is already reached at a nominal output of 0.5mV/V. This means that the zero point stability is 4 times higher than in a sensor with nominal output of 2mV/V. The KD60 force sensor can be used up to an output signal of 2mV/V or up to four times the specified nominal force.



Dimensions



Pin configuration

+Us	positive bridge supply	red
-Us	negative bridge supply	black
+UD	positive bridge output	green
-UD	negative bridge output	white



Force sensor KD60

Nominal force ranges $\pm 5\text{N}$, $\pm 10\text{N}$, $\pm 20\text{N}$, $\pm 50\text{N}$, $\pm 100\text{N}$

Technical Data

Force sensor	Tension / compression					
Construction	Double bending beam					
Length × Width × Height	60 × 10 × 10					mm × mm × mm
Force transmission	1 × M5					mm
Fastening	2 × Ø5.3					mm
Material	Aluminum					
Accuracy class	0.1					
Nominal force F_N	5	10	20	50	100	N
Nominal displacement	0.036	0.029	0.022	0.019	0.021	mm
Operating force	20	40	80	200	400	N
Breaking force	65	140	290	760	1550	N
Maximum lateral force	10					% F_N
Nominal temperature range	+10...+60					°C
Operating temperature range	-20...+80					°C
Storage temperature range	-40...+80					°C
Nominal output (S_N)	0.5 ± 0.1%					mV/V
Zero signal tolerance	±5					% F_N
Max. supply voltage	10					V
Input resistance	415 ± 10					Ohm
Output resistance	350 ± 1.5					Ohm
Insulation resistance	> 5 · 10 ⁹					Ohm
Connection, 4 conductor	1					m
Linearity error	≤ 0.1					% S_N
Reversal error	≤ 0.1					% S_N
Temperature coeff. of the zero signal	≤ ± 0.02					% F_N /K
Temperature coeff. of the nominal output	≤ ± 0.01					% S_N /K
Zero point return error (30 min)	≤ 0.1					% S_N
Creep error (30 min)	≤ 0.1					% S_N