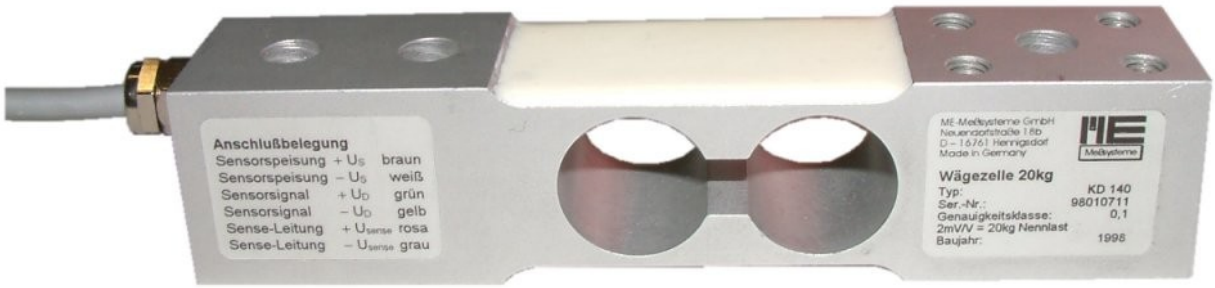
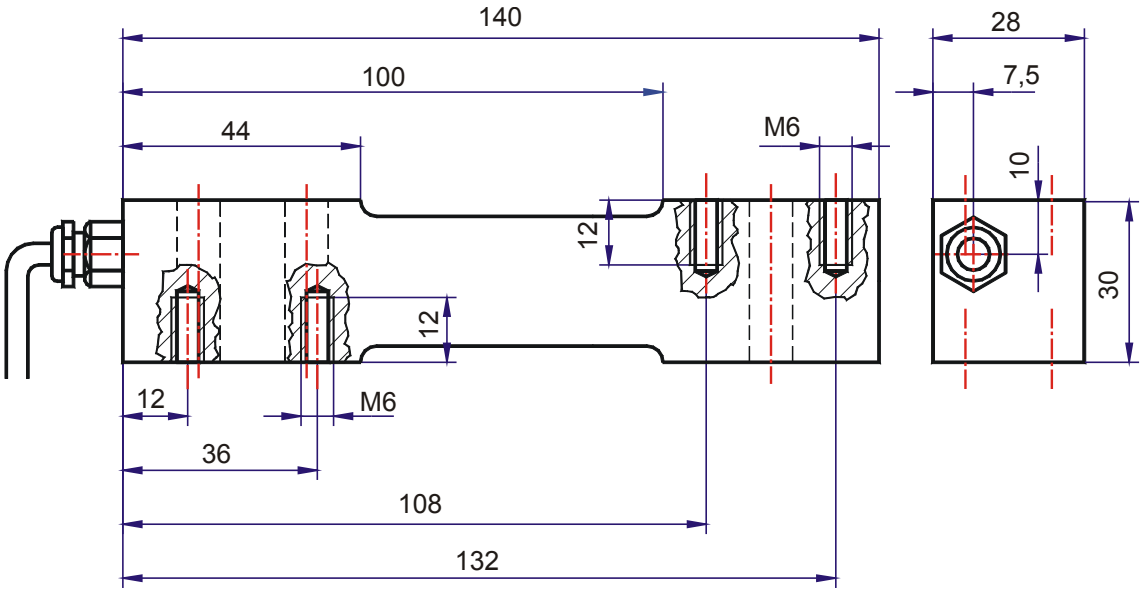
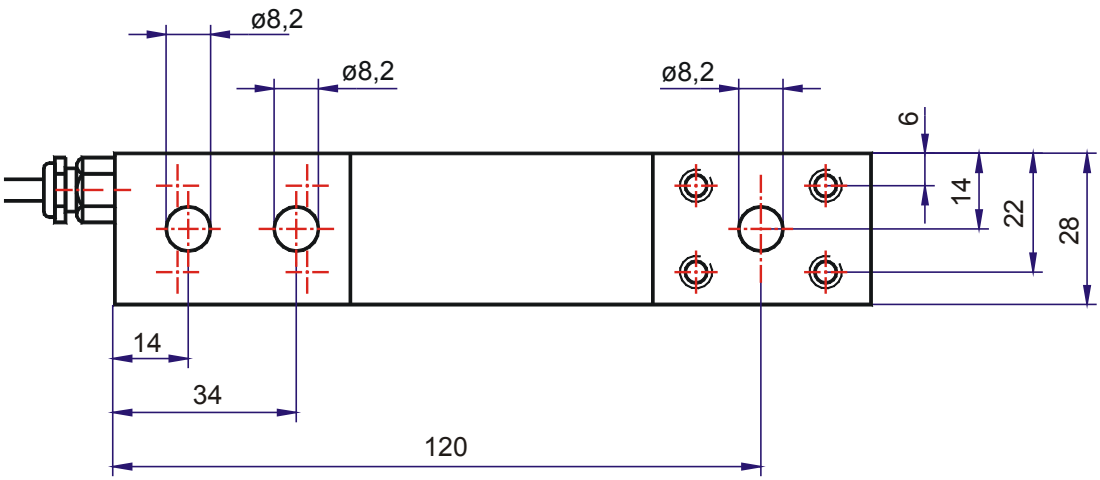
Force Sensor KD140

Nominal force ranges ±50N, ±100N, ±200N, ±500N, ±1000N



Dimensions





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Technical Data

Force sensor	Tension / compression					
Construction	Double bending beam					
Length × Width × Height	140 × 30 × 30					mm × mm × mm
Force transmission	1 × ∅ 8.2 / 4 × M6					mm
Fastening	2 × ∅ 8.2 / 4 × M6					mm
Material	Aluminum					
Accuracy class	0.1					
Nominal force (F_N)	50	100	200	500	1000	N
Nominal displacement	0.5	0.25	0.125	0.05	0.025	mm
Operating force	150					$\%F_N$
Breaking force	>300					% F_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)	2.0 ± 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, 6 conductor	2					m
Linearity error	<< 0.1					% S_N
Reversal error	<< 0.1					% S_N
Temperature coeff. of the zero signal	≤ ± 0.005					% F_N /K
Temp. 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

Pin configuration

+U_S	positive bridge supply	brown
-U_S	negative bridge supply	white
+U_D	positive bridge output	green
-U_D	negative bridge output	yellow
+U_F	positive sensor wire	pink
-U_F	negative sensor wire	gray