

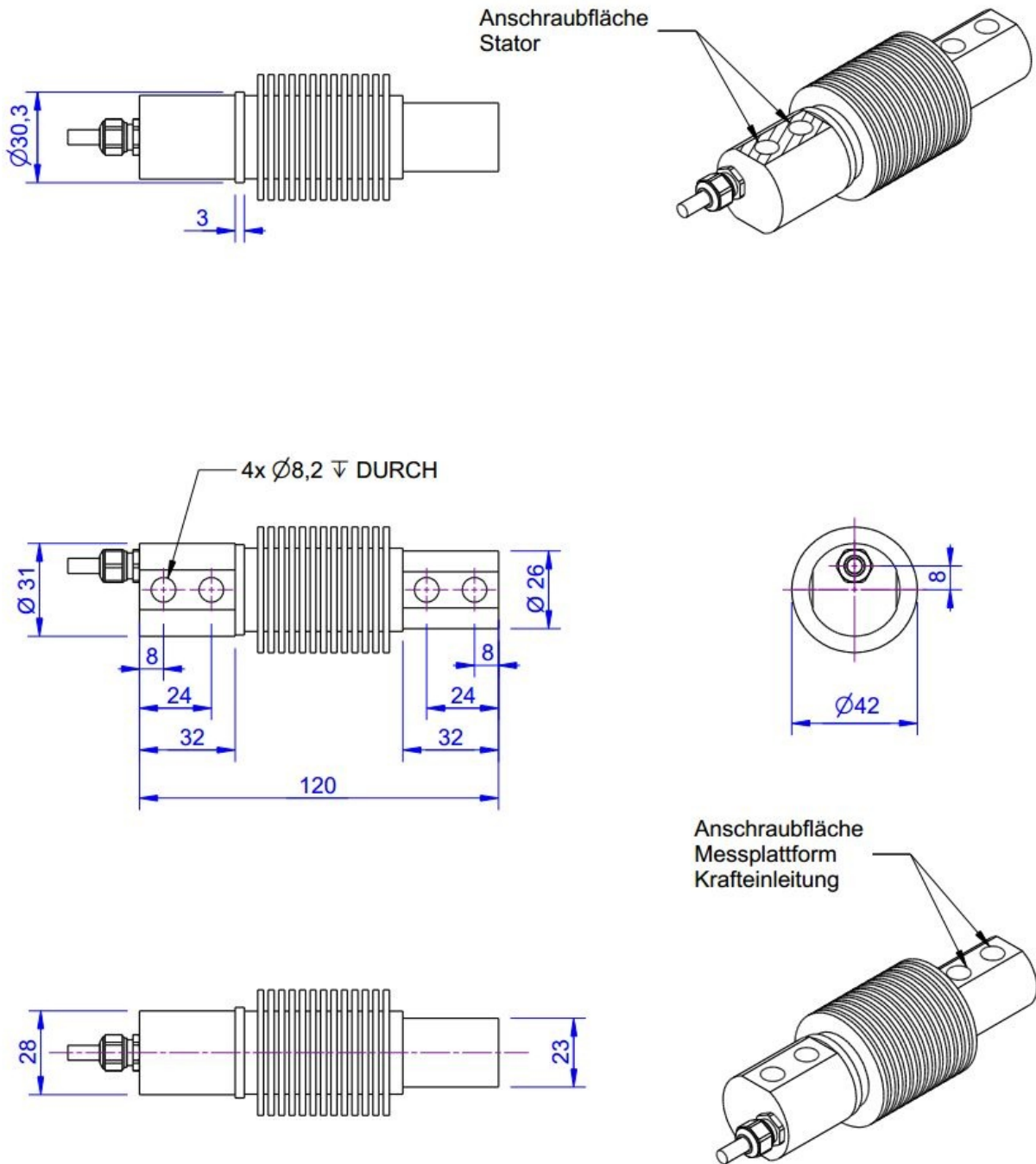
KD120 $\pm 100\text{N}$, $\pm 200\text{N}$, $\pm 500\text{N}$, $\pm 1000\text{N}$, $\pm 2000\text{N}$



Description

The force sensor KD120 is made for a maximum operating temperature of 180°C. Force introduction at the cylindrical ends is either done by clamps or by 4 screws M8.

Dimensions





Technical Data

Kraftsensoren

Type	Force sensor
Force direction	Tension / Compression
Operating force	150 %FS
Rated displacement	0.2 mm
Lateral force limit	100 %FS
Material	Stainless steel
Natural frequency	2 kHz
Height	42 mm
Length or Diameter	120 mm

Elektrische Daten

Input resistance	390 Ohm
Tolerance input resistance	40 Ohm
Output resistance	350 Ohm
Tolerance output resistance	3 Ohm
Insulation resistance	5x10 ⁹ Ohm
Rated range of excitation voltage f	2.5 ... 5 V
Operating range of excitation voltage f	1 ... 10 V
Zero signal	0.05 mV/V
Rated output	1 mV/V / FS
characteristic value range min	0.8 mV/V
characteristic value range max	1.2 mV/V

Precision

Accuracy class	0,1%
Relative linearity error	0.02 %FS
Relative zero signal hysteresis	0.02 %FS
Temperature effect on zero signal	0.01 %FS/K
Temperature effect on characteristic value	0.01 %RD/K
Relative creep	0.05 %FS

Connection Data

Connection type	6 conductor open
Name of the connection	von Variante abhängig



Cable length 5 m

Temperature

Rated temperature range f -10 ... 70 °C

Operating temperature range f -10 ... 85 °C

Storage temperature range f -10 ... 85 °C

Environmental protection IP67



Pin Configuration





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

Pressure load : positive output signal

Channel	Symbol	Description	Wire colour	PIN
	+Us	positive bridge supply	red	
	-Us	negative bridge supply	black	
	+Ud	positive bridge output	green	
	-Ud	negative bridge output	yellow	
	+Uf	positive sense lead	blue	
	-Uf	negative sense lead	white	

Pressure load : positive output signal

accessories

Description		Description
	Calibration Certificate kn/20/5	Factory calibration certificate for force to 20 kN in accordance with DIN EN ISO / IEC 17025 for test materials monitoring according to DIN ISO 9001: 2008 with 5 load levels and 3 series of measurements.
	GSV-1H	Measuring amplifier in top-hat rail housing for sensors with strain gauges. Analogue output -10V...+10V, limiting frequency 250Hz, 4 input sensitivities from 2.0mV/V.
	GSV-1A	Measuring amplifier in aluminum housing (IP66) for sensors with strain gauges. two round plugs M12, analogue output -10V...+10V, limiting frequency 250Hz, 4 input sensitivities from 2.0 mV/V.
	GSV-6K	analog amplifier pcb for sensors with strain gauges. Analog output configurable; sampling frequency is 10Hz ... 25kHz, input sensitivity adjustable 0.1 mV / V ... 8 mV / V



Orderoptions

Type	Description
KD120	stainless steel, temperature range -10 ... +70 °C (standard type)
KD120/HT	stainless steel, temperature range -20 ... +150°C