

KM16z 2kN, 5kN, 10kN, 20kN, 50kN



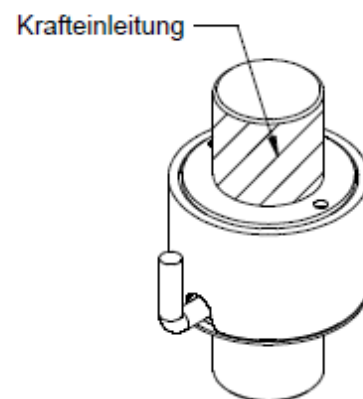
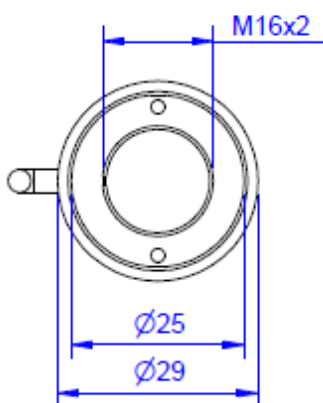
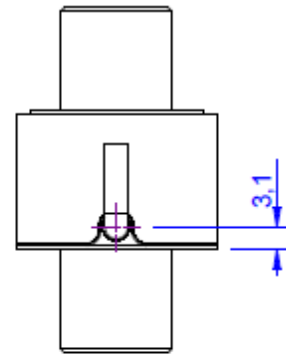
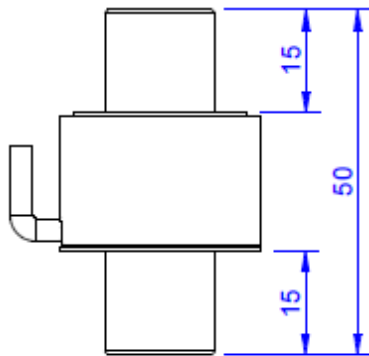
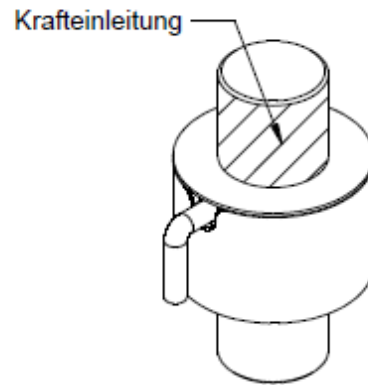
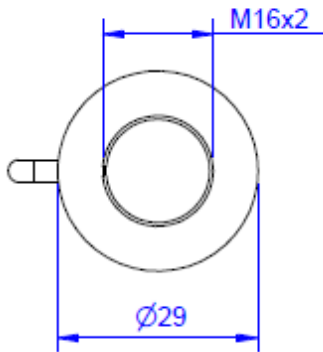
Description

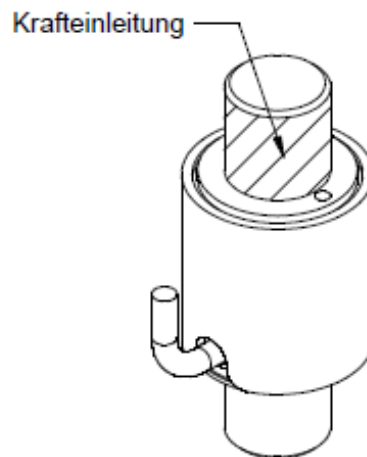
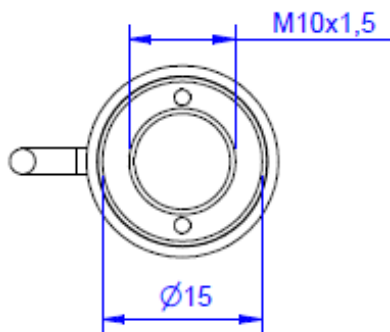
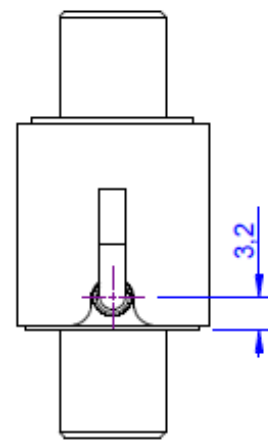
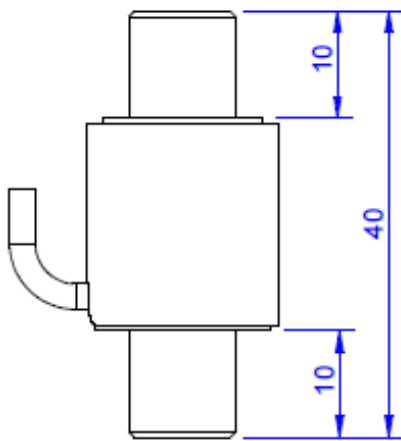
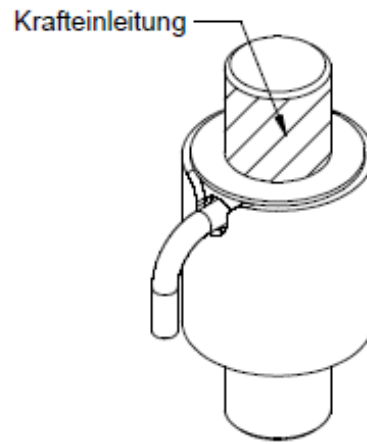
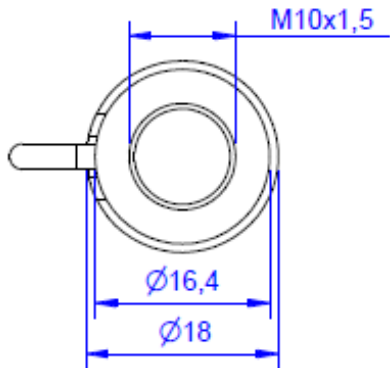
The force sensor KM16z is a sensor with minimal dimensions, which is used to measure tensile and compressive forces.

For the application of force two threads are provided.

The protection class is IP 67. The load must be free of transverse forces and bending moments.

Dimensions







Technical Data

Kraftsensoren

Type	Force sensor
Force direction	Tension / Compression
Force introduction	Außengewinde
Sensor Fastening	Außengewinde
Operating force	200 %FS
Rated displacement	0.011 mm
Lateral force limit	10 %FS
Material	Stainless steel
Natural frequency	40 kHz
Torque limit	10 Nm
Bending moment limit	1 Nm

Elektrische Daten

Input resistance	390 Ohm
Tolerance input resistance	40 ±
Output resistance	350 Ohm
Insulation resistance	2x10 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

Precision

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

Connection Data

Connection type	4 conductor open
Name of the connection	STC-31V-4
Cable length	3 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

Abbreviation: RD: „Reading“; FS: „Full Scale“;

1) The exact nominal sensitivity is indicated in the test report;



Pin Configuration

Channel	Symbol	Description	Wire colour
	+Us	positive bridge supply	red
	-Us	negative bridge supply	black
	+Ud	positive bridge output	green
	-Ud	negative bridge output	white

*Pressure load: positive output signal.
Shield- transparent.*

Channel	Symbol	Description	Wire colour
	+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










Mounting

Mounting instructions:

Ensure that the sensor is installed on the mounting side of the mounting parts. Do not direct the tightening torque through the sensor.

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.
	Calibration Certificate kn/200/5	Factory calibration certificate for force to 200 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.
	Ringmutter	Ring nut for sensors with external thread KM16z, KM26z, KM30z
	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-2T SD-DI	Measuring amplifier in desktop-housing for sensors with strain gauges. Serial port RS232, USB port, analogue output -5V...+5V, limiting frequency 260Hz, input sensitivity 3.5mV/V.
	GSV-3USB	Measuring amplifier in aluminum housing (IP54) for sensors with strain gauges. Limiting frequency 1250Hz, input sensitivity 2 / 3,5 / 10 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