

Force Sensor KR55 1kN

Item number: 11168



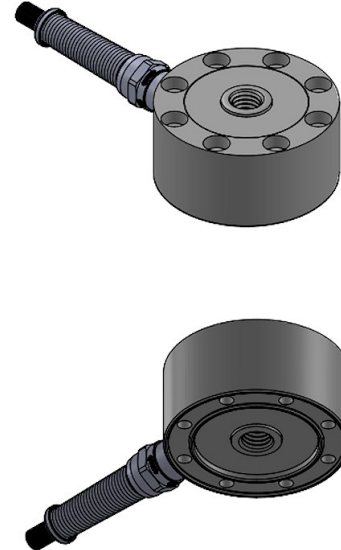
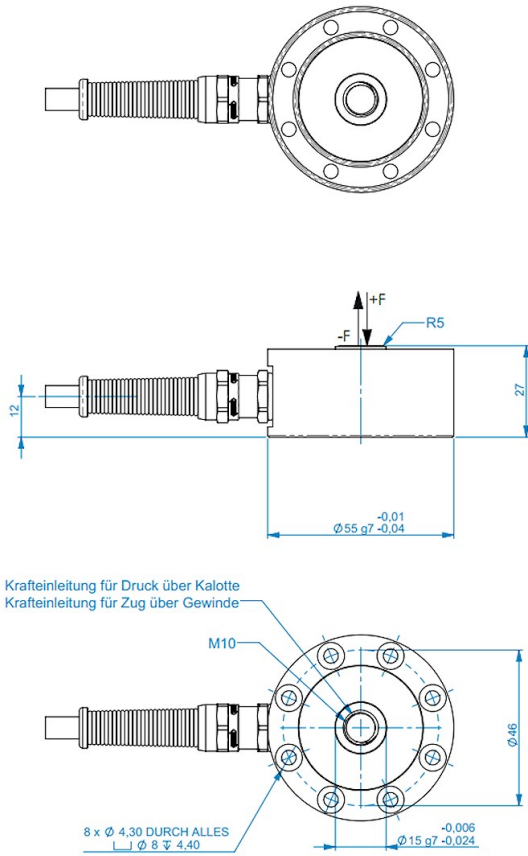
Highlights

- compact dimensions diameter 55mm x 27 mm
- accuracy class 0,05
- robust cable suitable for drag chains
- continuous thread M10 for the introduction of tension / compression

Due to its compact design, the KR55 ring torsion force sensor is ideally suited for testing tasks in quality assurance and materials testing.

The KR55 force sensor is available in versions with tensile forces and compressive forces from 1kN to 10kN. The 20kN variant can be loaded up to 20kN in compression and up to 10kN in tension.

Technical Drawing



Technical Data

Basic Data	Unit
Type	Kraftsensor
Force direction	Tension/Compression
Rated force Fx	1 kN
Force introduction	internal thread
Dimension 1	M10
Sensor Fastening	Circular ring
Dimension 2	8x M4, Teilkreis Ø46
Operating force	150 %FS
Rated displacement	0.008 mm
Lateral force limit	150 %FS
Material	Stainless steel
Natural frequency	3.7 kHz
Dimensions	Ø55mm x 27mm
Torque limit	5 Nm
Bending moment limit	15 Nm
Variants	1kN... 20kN

Electrical Data		Unit
Input resistance	760	Ohm
Tolerance input resistance	60	Ohm
Output resistance	700	Ohm
Tolerance output resistance	10	Ohm
Insulation resistance	5	GOhm
Rated range of excitation voltage from	2.5	V
Rated range of excitation voltage to	5	V
Operating range of excitation voltage from	1	V
Operating range of excitation voltage to	10	V
Zero signal tolerance	0.05	mV/V
Rated output	1	mV/V / FS

Accuracy Data		Unit
Accuracy class	0,05	
Relative linearity error	0.02	%FS
Relative zero signal hysteresis	0.02	%FS
Temperature effect on zero signal	0.02	%FS/K
Temperature effect on characteristic value	0.01	%RD/K
Relative creep	0.1	%FS

Environmental Data		Unit
Rated temperature range from	-10	°C
Rated temperature range to	70	°C
Operating temperature range from	-10	°C
Operating temperature range to	85	°C
Storage temperature range from	-10	°C
Storage temperature range to	85	°C
Environmental protection	IP65	

Abbreviation: RD: "Reading"; FS: "Full Scale";

The exact nominal sensitivity is indicated in the test report;

Pin Assignment

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

Compressive load: positive output signal. Shield: transparent.