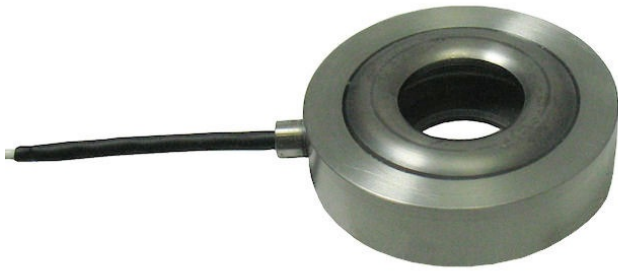


KR20 5kN, 10kN, 20kN, 30kN, 40kN, 50kN, 60kN, 100kN, 200kN



Description

The force measurement ring KR20 was developed especially for examining preload forces on screws.

Because of its very low construction height, the sensor is equipped with a Teflon cable with an outer diameter of just 1.8mm.

The force measurement ring is equipped with a strain gauge that covers the entire area. A high level of repeatability is thus achieved in various installation positions. The force measurement ring has a Sub-D-15 plug connection containing internal trimming resistors.

The force measurement ring is supplied with a detailed factory certificate (5 points, 3 measurement series in 3 installation positions).

Technical Data

Force sensor

Type	Force sensor
Force direction	Compression
Force introduction	Through bore
Dimension 1	Ø16
Sensor Fastening	Through bore
Dimension 2	Ø16
Operating force	150 %FS
Material	Stainless steel

Electrical Data

Input resistance	390 Ohm
Tolerance input resistance	50 ±
Output resistance	390 Ohm
Tolerance output resistance	50 ±
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	0.5 mV/V / FS

Precision

Accuracy class	1%
Relative linearity error	0.5 %FS
Relative zero signal hysteresis	0.1 %FS
Temperature effect on zero signal	0.05 %FS/K
Temperature effect on characteristic value	0.05 %RD/K
Relative creep	0.05 %FS

Connection Data

Name of the connection	STC-32-T-4 und Adapterkabel Sub-D15
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	IP65

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

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

Pin Configuration

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

Cable with Sub-D15 connector.

Pressure load: positive output signal.

Shield- transparent.







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

Adapter cable with SubD-15 socket.

Pressure load: positive output signal.

Shield- transparent.

accessories

	Description	Description
	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.
	KR20 Adapter cable D-Sub15/1.5m	Adapter cable for connection to sensor KR20
	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-2TSD-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