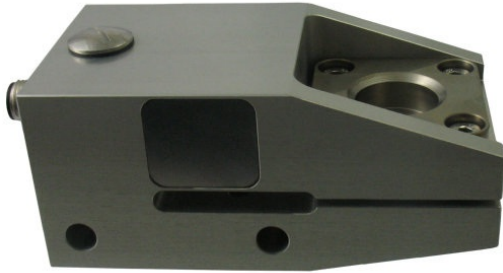


## KD115u $\pm 1\text{kN}$ , $\pm 5\text{kN}$ , $\pm 10\text{kN}$

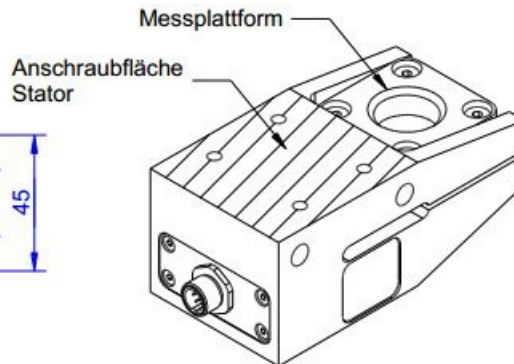
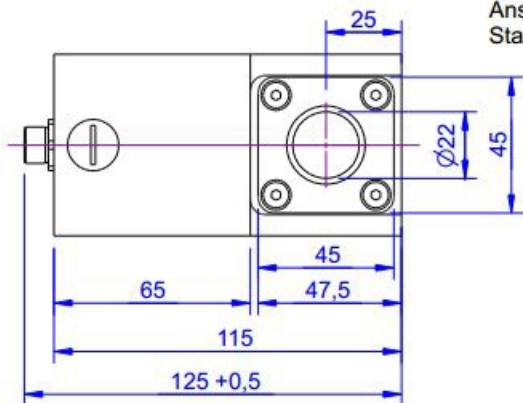
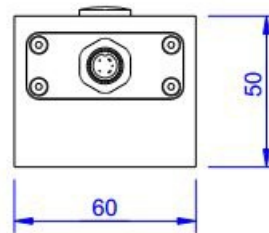
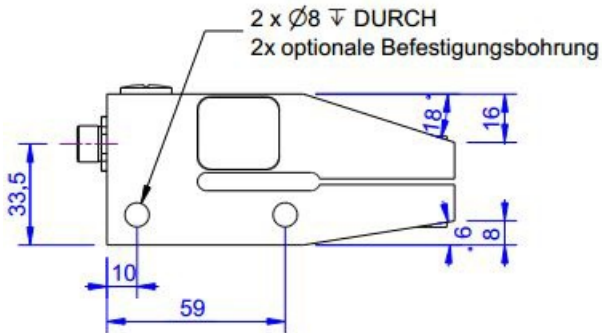
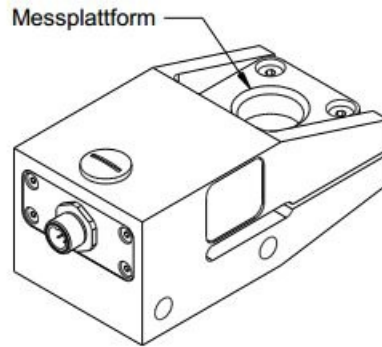
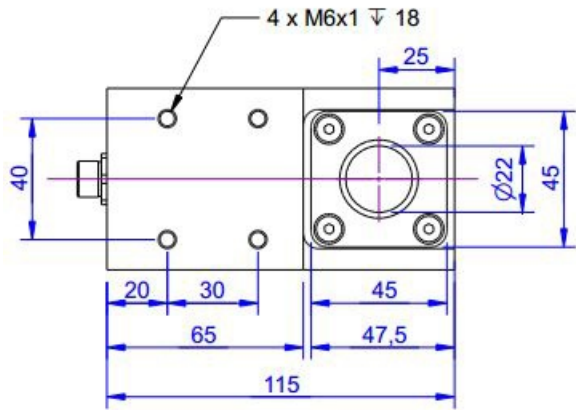


### Description

The force sensor KD115u is particularly suitable for measuring the contact force between two electrodes of a spot welder. The distance between the electrodes can be adjusted in a range from 5mm to 20mm. Two Adapters with a circular pressure surface diameter 22mm are included. The distance between the contact surfaces is 10mm.

The force insertion can be adapted for measuring radial force of seals or for measuring the cutting force of a tool.

Dimensions



## Technical Data

### Force sensor

Type	Force sensor
Force direction	Compression
Force introduction	Fläche
Dimension 1	22
Sensor Fastening	Fläche
Dimension 2	22
Material	Aluminium alloy
Surface	anodised
Height	10 mm
Length or Diameter	22 mm

### Electrical Data

Input resistance	390 Ohm
Tolerance input resistance	40 Ohm
Output resistance	350 Ohm
Tolerance output resistance	3 Ohm
Insulation resistance	2x10 <sup>9</sup> 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

### Precision

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

### Connection Data

Connection type	Connector
Name of the connection	round plug connector M12, 4-pole, male





## Pin Configuration

Symbol	Description	Wire colour	PIN
+Us	positive bridge supply	brown	1
-Us	negative bridge supply	white	2
+Ud	positive bridge output	blue	3
-Ud	negative bridge output	black	4

*Pressure load: positive output signal.*

*Shield- transparent.*

## accessories

	Description	Description
	Calibration Certificate kn/20/5	Factory calibration certificate for force to 20 kN in accordance with DIN EN ISO / IEC 17025 and ISO 9000 for test materials monitoring according to DIN ISO 9001: 2008 with 5 load levels and 3 series of measurements. Compressive Force
	GSV-1H	Measuring amplifier in top-hat rail housing for sensors with straingages. 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 straingages. 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 straingages. Limiting frequency 1250Hz, input sensitivity 2 / 3,5 / 10 mV/V.