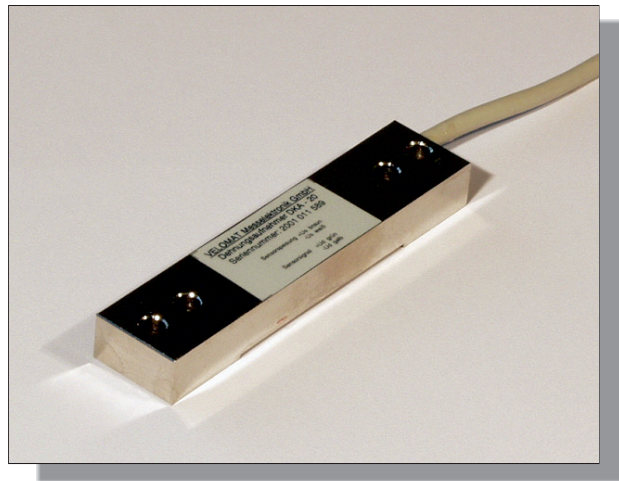


# Force Transducer DKA-20

article-no: VX34020177  
serial-no: key 011



## description

The transducer DKA-20 is a robust screw-on clip gauge. Due to the closed construction it is suitable for strain and indirect force measurement on machine parts.

The installation is carried out simply by screwing the transducer with four M5 screws on the planar material surface. Direct application of the strain gauge on the machine part and adjustment are not necessary.

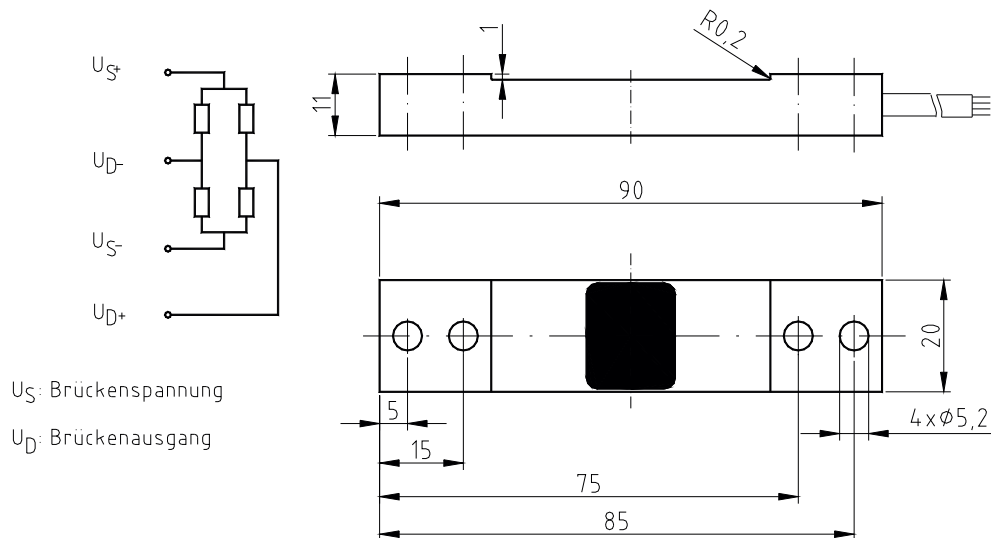
Application areas are, for instance, force monitoring and strain determination on machine parts mainly made of steel and aluminum.

The transducer signal, temperature behaviour and transfer factor depend, inherent to the principle of measurement, on the geometry and material pairing of transducer and machine part.

Calibration of the transducer is therefore ideally accomplished by applying a determined force under environmental conditions typical for measurement.

The cable screen is not connected with the transducer.

## specification



## mechanical execution

diameter and mounting see assembly drawing

**weight** approx. 0,18 kg  
**material** heat-treated steel nickel-plated  
**degree of protection** IP 67

**nominal measuring range** approx.  $\pm 250 \mu\text{m} / \text{m}$  (strain / compression)  
**overload capability** 150 % of nominal measuring range  
**transformation factor** approx. 4

## electrical execution

**output signal** approx. 1,3 mV / V at nominal strain  
**zero signal** according to matching of geometry and material plus bolting torque during fixing  
**thermal expansion coefficient** approx.  $13 \times 10^{-6} 1 / \text{K}$   
**measuring principle** wheatstone full bridge of strain gauges  
**input / output resistance** 1000  $\Omega$  / 1000  $\Omega$   
**excitation voltage** max. 20 V AC / DC  
**current consumption** max. 35 mA  
**insulation resistance** > 5.000 M $\Omega$   
**nominal temperature range** -15 °C to +70 °C  
**operating temperature range** -25 °C to +80 °C\*\*

## cable and connection

**cable length / cable type** 1,5 m LiYCY 4 x 0,14 mm<sup>2</sup>  
**cable end** wire-end-sleeve  
**wiring connections**

brown	excitation voltage $U_{S+}$ / $B+$
green	excitation voltage $U_{S-}$ / $B-$
yellow	signal $U_{D+}$ / $S+$
white	signal $U_{D-}$ / $S-$
blue	shielding (only in the case of a shielded cable)

\* These details are depending on the fit, the resistance moment and the installation length. They are reached with favorable values.

\*\* only for the case that the cable is laid with fastening (depending on cable type)

\*\*\* This cable should be connected at the operating voltage unless the calibration signal is used. (only applicable to executions with amplifier)