

Force Transducer SB-25-25-1.60

article-no: VX34021116
serial-no: key 42Z



description

The force transducer works according to the principle of shear force measurement normally to the longitudinal axis.

It was developed especially for use on hydraulic cylinders of work platforms, in cranes and conveyor technics.

Construction is a pin with two lateral notches. The transducer is prevented from axial slipping by enlarged pin diameter on one side and securing plates put into the notches. For protection against distortion and for marking the direction of force application the SB-25 flattened on one side.

The strain gauges are protected against mechanical and chemical damages by sealing the application room with a highly elastic compound.

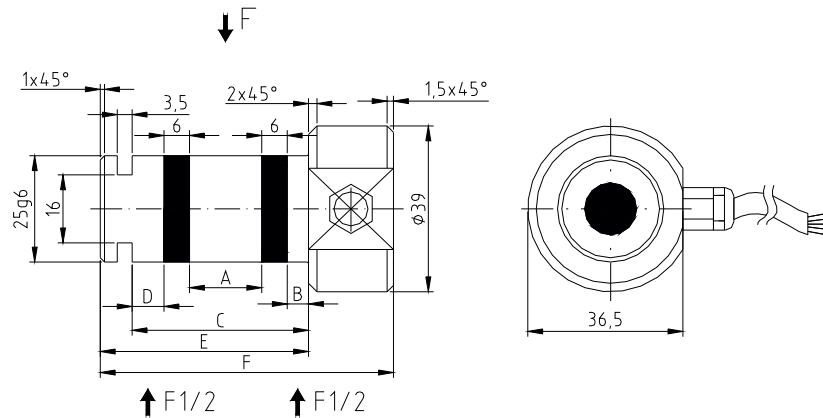
Strain gauges full bridges measure the deformation caused by shear forces on the bolt in the measuring chamber. An external amplifier delivers the measuring signal of 4 – 20 mA.

In the unloaded state the nominal output current can be produced by applying the calibration check signal (software calibration). This enables a check of the force transducer, amplifier and the following measuring device.

The SB-25 is provided for the direct coupling to a control system or a comparator switch.

The shield of the cable is connected with the force transducer.

specification



	A	B	C	D	E	F
SB-25-25-1.60	21,5	6	45,5 ^{+0,1}	6	53	68

mechanical execution

diameter, force transmission and mounting see assembly drawing

weight approx. 0,35 kg
 material stainless steel
 degree of protection IP 67

SB **25-25**
 nominal force / nominal load 25 kN
 max. overload range / force limit 200 % of nominal force
 breaking force 400 % of nominal force

electrical execution

measuring signal (output) 4 - 20 mA
 operating voltage 12 - 24 V DC ± 20 %
 current consumption max. 45 mA
 calibration tolerance < 0,50 % of final value*
 non-linearity < 0,25 % of final value*
 hysteresis < 0,15 % of final value*
 temperature coefficient:
 of zero signal $\leq 0,04$ % of final value / K
 of the sensitivity $\leq 0,04$ % of set point / K
 insulation resistance > 5.000 M Ω
 nominal temperature range -15 °C to +70 °C
 operating temperature range -25 °C to +80 °C**

cable and connection

cable length / cable type:
 sensor - amplifier 0,5 m LiYCY 4 x 0,14 mm²
 amplifier - cable end 1,5 m LiYCY 4 x 0,14 mm²
 cable end wire-end-sleeve
 wiring connections
 brown operating voltage U_B
 green ground / earth GND
 yellow measuring signal output I_m
 white calibration signal (low active) CC***
 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)