

Force Transducer SB-25-10-1.00

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serial-no: key 44C



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.

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

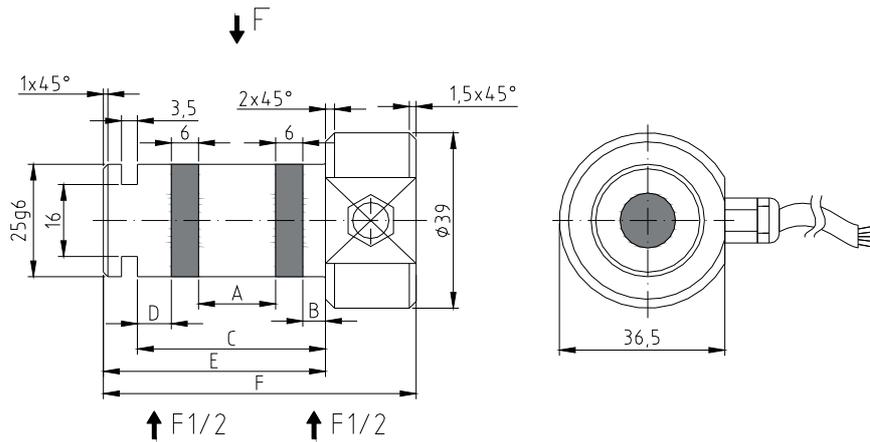
Strain gauge full bridges measure the deformation due to shear forces acting on the bolt.

The bridges are adjusted in the unloaded state to approx. $\pm 0,01$ mV/V.

The SB-25 is provided for the direct coupling to a amplifier.

The shield of the cable is not connected with the force transducer.

specification



	A	B	C	D	E	F
SB-25-16-1	17	5	41.5 ¹⁾	7.5	49	69

mechanical execution

diameter, force transmission and mounting see assembly drawing

weight	approx. 0,42kg
material	stainless steel
degree of protection	IP 67
SB	25-10
nominal force / nominal load	10 kN
max. overload range / force limit	200% of nominal force
breaking force	400 % of nominal force

electrical execution

measuring principle	wheatstone full bridge of strain gauges
input / output resistance	1000 Ω / 1000 Ω
nominal sensitivity	approx. 0,85 mV / V (accurate value: see type label / banderole)
excitation voltage	max. 20V AC / DC
current consumption	max. 35 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	≤ 0,04 % of final value / K
of the sensitivity	≤ 0,04 % of set point / K
insulation resistance	> 5.000 MΩ
nominal temperature range	-15 °C to +70 °C
operating temperature range	-25 °C to +80 °C**

cable and connection

cable length / cable type	4 m LiYCY 4 x 0,14 mm ²										
cable end	wire-end-sleeve										
wiring connections	<table> <tbody> <tr> <td>brown</td> <td>excitation voltage Us+ / B+</td> </tr> <tr> <td>green</td> <td>excitation voltage Us- / B-</td> </tr> <tr> <td>yellow</td> <td>signal Ud+ / S+</td> </tr> <tr> <td>white</td> <td>signal Ud- / S-</td> </tr> <tr> <td>blue</td> <td>shielding (only in the case of a shielded cable)</td> </tr> </tbody> </table>	brown	excitation voltage Us+ / B+	green	excitation voltage Us- / B-	yellow	signal Ud+ / S+	white	signal Ud- / S-	blue	shielding (only in the case of a shielded cable)
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* 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)