

Force Transducer SB-25-10-20.S50

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description

The force transducer SB-25 is designed for measuring shear forces normally to the longitudinal axis.

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

The measurement chamber including the strain gauge protected against mechanical and chemical damage by seal welding.

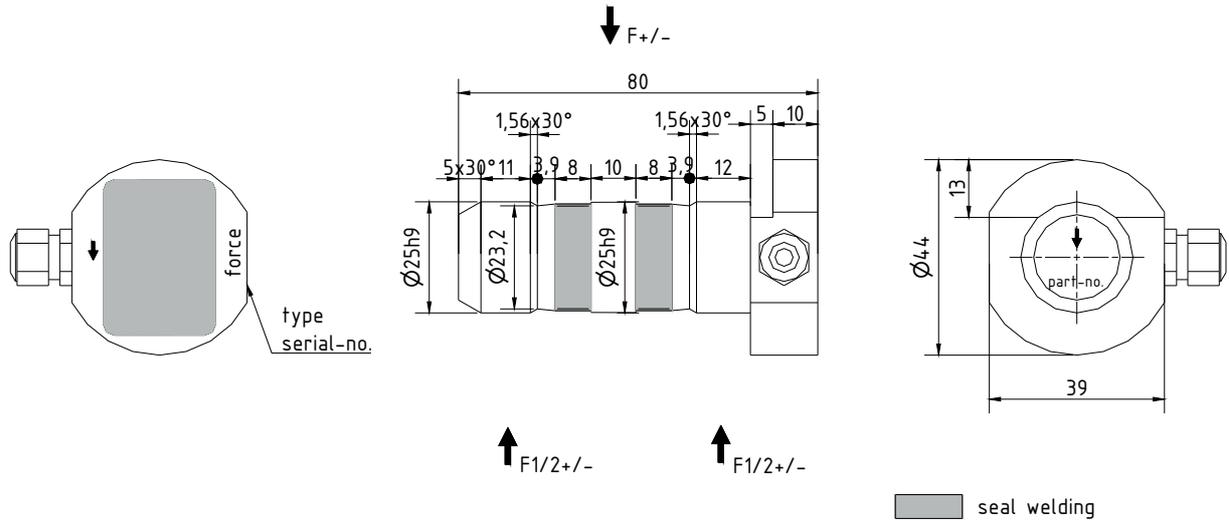
Strain gauge full bridges measure the deformation due to shear forces acting on the bolt. The integrated amplifier provides a signal of $12 \text{ mA} \pm 8 \text{ mA}$ in the unloaded state.

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 not connected with the force transducer.

specification



mechanical execution

diameter, force transmission and mounting see assembly drawing

weight	approx. 0,44 kg
material	stainless steel
degree of protection	IP 67
SB	25-10
nominal force / nominal load	10 kN
max. overload range / force limit	150 % of nominal force
breaking force	400 % of nominal force

electrical execution

measuring signal (output)	NP = 12 mA ± 8 mA (1 %)
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	≤ 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	5 m SABIX D 315 FRNC 4 x 0,25 mm ²										
cable end	wire-end-sleeve										
wiring connections	<table border="0"> <tr> <td>brown</td> <td>operating voltage UB</td> </tr> <tr> <td>green</td> <td>ground / earth GND</td> </tr> <tr> <td>yellow</td> <td>measuring signal output Im</td> </tr> <tr> <td>white</td> <td>calibration signal (low activ) CC***</td> </tr> <tr> <td>blue</td> <td>shielding (only in the case of a shielded cable)</td> </tr> </table>	brown	operating voltage UB	green	ground / earth GND	yellow	measuring signal output Im	white	calibration signal (low activ) CC***	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)