

Force Transducer BFS-105-1,2-1.10

article-no: VX34020130
serial-no: key 28G



description

The force transducer works according to the principle of the clipping strength measuring crossways to the longitudinal axis.

The BFS-105 is suitable for use to band, container, platform and suspension track carriage also for measuring strengths in terms of machine parts, levers, axes etc.

It is designed as a beam with measuring chambers. The beam shape and two drillings with 13 mm of diameters permit an assembly suitable for mechanical engineering. The force introduction is carried out via a thread M10.

The application room for the strain gauge (dms) is spilled with a very elastic mass and therefore protected from mechanical and chemical damages.

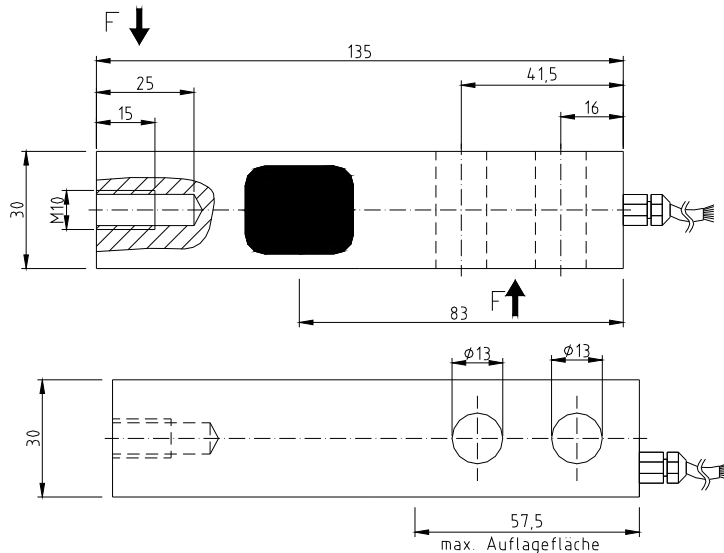
Strain gauges-full bridges measure the deformation caused by clipping strengths on the bolt in the measuring chamber. An integrated amplifier delivers the measuring signal of 1 to 9 mA.

In the unloaded state can by add-ons of the calibrating checking signal (software calibration) the nominal output current be produced. A check of the force transducer with the amplifier and the following measuring facilities is possible with that.

The BFS-105 is provided for the direct coupling to an automatic control or a controlling switch.

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

specification



mechanical execution

diameter, force transmission and mounting see assembly drawing

weight	approx. 0,35 kg
material	aluminium
degree of protection	IP 67
BFS	105-1,2
nominal force / nominal load	1,2 kN
max. overload range / force limit	150 % of nominal force
breaking force	400 % of nominal force

electrical execution

measuring signal (output)	1 - 9 mA
operating voltage	12 - 24 V DC ± 20 %
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	$\leq 0,04$ % 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	1,5 m LiYCY 4 x 0,14 mm ²										
cable end	wire-end-sleeve										
wiring connections	<table border="0"> <tr> <td>brown</td> <td>operating voltage U_B</td> </tr> <tr> <td>green</td> <td>ground / earth GND</td> </tr> <tr> <td>yellow</td> <td>measuring signal output I_m</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 U _B	green	ground / earth GND	yellow	measuring signal output I _m	white	calibration signal (low activ) CC***	blue	shielding (only in the case of a shielded cable)
brown	operating voltage U _B										
green	ground / earth GND										
yellow	measuring signal output I _m										
white	calibration signal (low activ) 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)