

Force Transducer PBB-28A-20kg-3.50

article-no: VX34020769
serial-no: key 30W



description

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

The PBB-28A is specially designed for measuring small forces (quality assurance, weight and fluid level measurement) in robotics, industrial handling systems and medical devices.

It is constructed as a beam with a chamber. The beam shape and two $\varnothing 5.5$ mm drillings enable installation according to mechanical engineering rules. The force introduction is carried out via a thread M8.

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

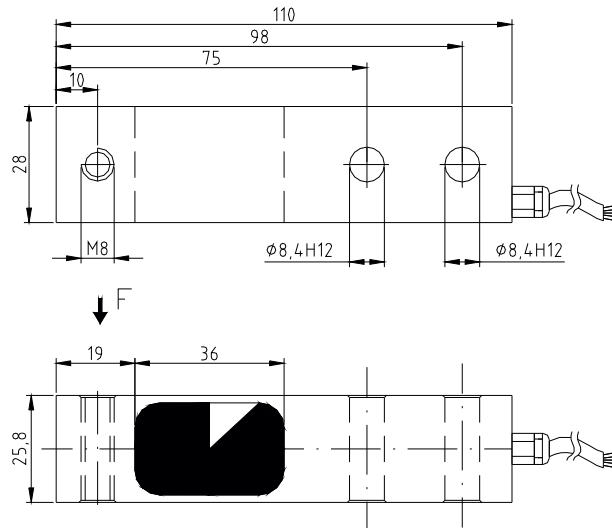
The strain gauge full bridges measures the deformation due to the bending forces acting on the beam. An integrated amplifier delivers the measuring signal of 4 – 20 mA.

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 PBB-28A 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



mechanical execution

diameter, force transmission and mounting see assembly drawing

weight	approx. 0,36 kg
material	aluminium
degree of protection	IP 67
PBB	28A-20kg
nominal force / nominal load	20 kg
max. overload range / force limit	150 % 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	6 m LiYCY 4 x 0,14 mm ²										
cable end	wire-end-sleeve										
wiring connections	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">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

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