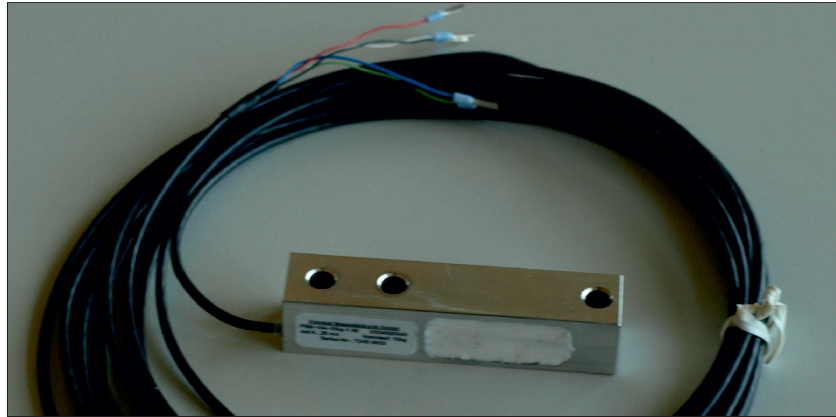


# Force Transducer PBB-15A-10kg-1.50

article-no: VX34020543

serial-no: key 24E



## description

The Force Transducer is a double bending beam, the force measurement is crossways to the longitudinal axis.

Der PBB-15A was developed especially for measuring small forces (quality control, weight and filling level determination, ...) to robot, handling and medical engineering.

It is executed as a beam with an open chamber. The beam shape and two boreholes with 5,5 mm of diameters permit an assembly suitable for mechanical engineering. The strength introduction is carried out via further borehole with 5,5 mm of diameters.

The strain gauges situated in the chamber is spilled with a very elastic mass and with that protected from mechanical and chemical damages.

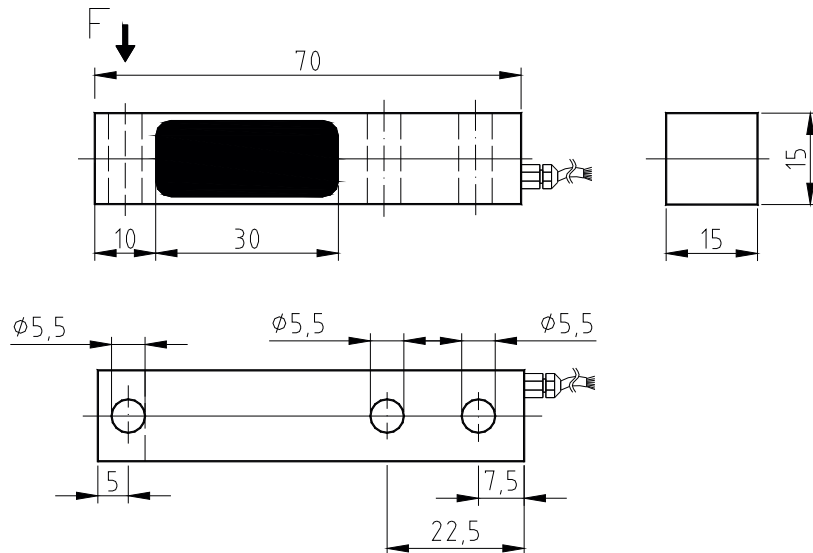
DMS-full bridges measure the deformation on the beam caused by bend strengths. An integrated amplifier delivers the measuring signal of 4 to 20 mA.

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 PBB-15A is provided for the direct coupling to an automatic control or a controlling switch.

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

## specification



## mechanical execution

diameter, force transmission and mounting see assembly drawing

<b>weight</b>	approx. 0,08 kg
<b>material</b>	aluminium
<b>degree of protection</b>	IP 67
<b>PBB</b>	<b>15A-10kg</b>
<b>nominal force / nominal load</b>	10 kg
<b>max. overload range / force limit</b>	150 % of nominal force
<b>breaking force</b>	300 % of nominal force

## electrical execution

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

## cable and connection

<b>cable length / cable type</b>	5 m STC-31V-4RWBG 4 x 0,05 mm <sup>2</sup>										
<b>cable end</b>	wire-end-sleeve										
<b>wiring connections</b>	<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)