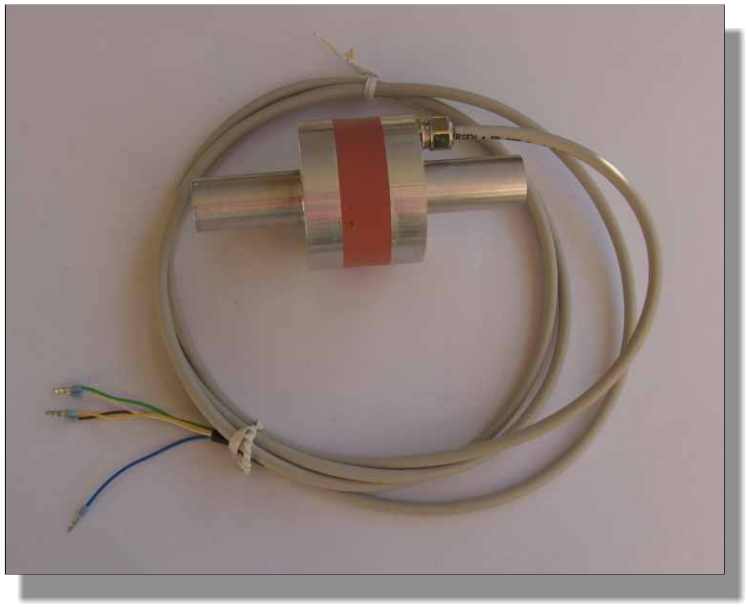
Force Transducer
PBM-40A-20N-1.00

VELOMAT MESSELEKTRONIK

article-no.: VX34020078
serial-no.: key 29D



description

The force transducer works according to the bending force measuring principle. The force introduction is crossways to the longitudinal axis.

Got to the PBM-40A special for measuring small strengths (quality control, weight and filling level determination, ...) to robot, handling and medical engineering develops.

It is carried out as a bolt with a measuring chamber. Its specific shape and the diameters of 18 mms on both sides permit a mounting appropriate for mechanical engineering. The force introduction is marked in the application sketch accordingly.

The strain gauge (dms) applied in the chamber are poured with a highly elastic mass and are protected thus against mechanical and chemical damages.

The strain gauge full bridge measures the deformation which is caused of bending forces on the beam.

The strap balance is balanced in the unloaded state on approx. ±0,01 mV / V.

The PBM-40A is planned for the direct connection with an amplifier.

TÜV CERT DIN EN ISO 9001 : 2000 Zertifikat: 08/100/304/8

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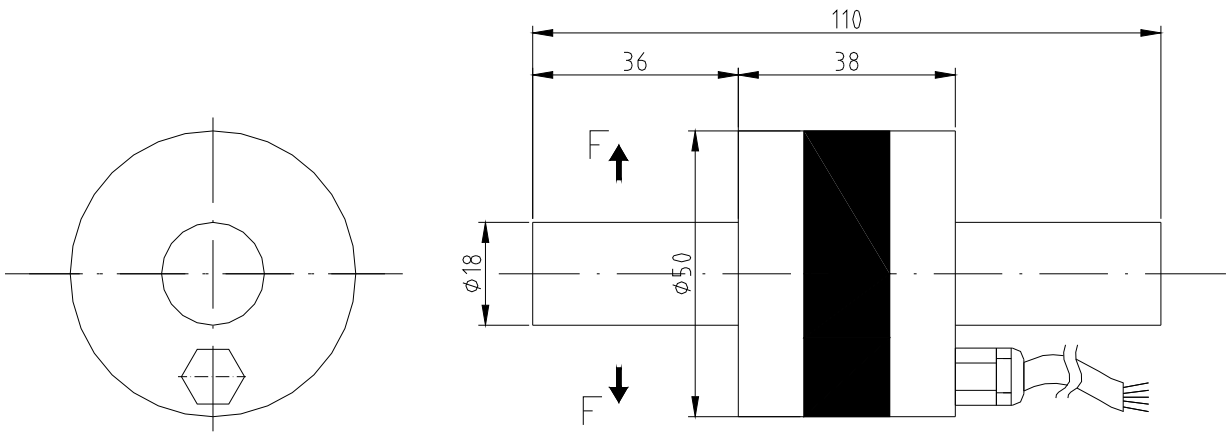
specification



mechanical execution

weight	approx. 260 g
mounting	2 x diameter 18 mm
material	aluminium
environmental protection	IP 67
PBM	**40A-20N**
nominal force	20 N
max. use force	150 % of the nominal force
rupture force	400 % of the nominal force

electrical execution

measuring principle	strain gauge full bridge
input and output resistance	350 Ω
sensitivity	approx. 0,4 mV / V (exactly details on type label or banderole of the cable)
operating voltage	max. 12 V AC / DC
calibration tolerance	< 0,50 % of the final value*
nonlinearity	< 0,25 % of the final value*
hysteresis	< 0,15 % of the final value*
temperature coeff.	
zp.	≤ 0,05 % of the final value / K
rec.	≤ 0,06 % of the set point / K
insulation resistance	> 5.000 MΩ
operating condition	-25 °C to +80 °C**

connection

cable type	SD 200 C 4 x 0,25 mm^2	
cable length	1,5 m	
cable end	wire-end-sleeve	
electrical connections	brown	strap voltage U_S+
	green	strap voltage U_S-
	yellow	strap signal U_D+
	white	strap signal U_D-
	blue	protection

* These details are depending on the fit, the resistance moment and the installation length. They are reached with favorable values.
** in case the laid cable is fixed