

Force Transducer PBB-10A-0,01-3.00

Part no.: VX34120047

Serial no.: Key 66S

VELOMAT

MESSELEKTRONIK GmbH



- **Measuring range: 0 ... 0.01 kN**
- **Measuring bridge: 350 Ω**
- **Full-bridge DMS**

Description

The force transducer is a double-beam beam, with force measurement taking place perpendicular to the longitudinal axis.

The PBB-10A has been specially developed for measuring small forces (quality control, weight and level determination, etc.) in robotics, handling and medical technology. It is designed as a beam with an open chamber. The beam shape and two 3.2 mm diameter bores allow for machine-compatible mounting. The force is applied via a further 4.3 mm diameter bore.

The strain gauge (SG) applied in the chamber is encapsulated in a highly elastic compound, thus protecting it from mechanical and chemical damage.

Full-bridge strain gauges measure the deformation caused by bending forces on the beam.

The bridge balance is calibrated to approx. +0.01 mV/V in the unloaded state.

The PBB-10A is designed for direct connection to an amplifier.

The shield of the supply cable is not connected to the surface of the force transducer.

Product Range Force Transducer



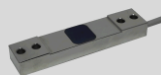
Shear force
Transducer
SKA-30D



Parallel
Bending Beam
PBB-28A



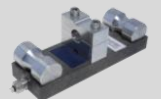
Tensile Force
Transducer
ZKA-12



Strain
Transducer
DA-20



Compression
Force
Transducer
DKA-30



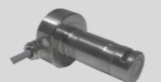
Rope Force
Transducer
LBA-160



Tensile Force
Transducer
KWZ-70



Tensile / Com-
pression Force
Transducer
DZA-24A



Load Pin
SB-25



Load Pin
SKL-90

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Technical Data

Mechanical Data:

Force Transducer:

Weight:	approx. 0.22 kg
Material:	Aluminium
Degree of protection:	IP 67
Nominal load:	0.01 kN
Max. working load:	150 % of nominal load
Min. breaking load:	400 % of nominal load

Electrical Data:

General Data:

Total error:	$\leq 1 \%$ of final value
Temperature error zero point:	$\leq 0.04 \%$ of final value / K
Temperature error sensitivity:	$\leq 0.04 \%$ of final value / K
Insulation resistance:	$> 5000 \text{ M}\Omega$
Nominal temperature range:	-15°C to $+70^\circ\text{C}$
Temperature range of use:	-25°C to $+80^\circ\text{C}$

Measurement Bridge:

Operating voltage:	max. 12 V AC / DC
Measurement principle:	Strain gauge full bridge
Input / output resistance:	350Ω / 350Ω
Nominal sensitivity:	approx. 1 mV/V (Exact value: see label / type plate)

ATEX / IECEx:

ATEX Zone:	Available in Zone 2/22
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Cable and Connection

Cable:

Type:	PVC screened 4 x 0.04 mm ²
Length:	3 m
Cable end:	Wire end ferrules

Core Colour

Core Colour	Description
brown	Bridge supply Us+ / B+
green	Bridge supply Us- / B-
yellow	Bridge output Ud+ / S+
white	Bridge output Ud- / S-
blue	Screen of cable

Product Range Electronics



Measurement Amplifier
VMV-0025



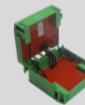
Limiting Switch
VMV-0131



Large Size Display
VPA-0185



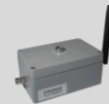
Handheld Terminal
VHT-0041
VHT-0020



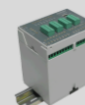
ATEX Barrier
VZB-0010



Data Logger
VPA-0400



Radio System
VUR-0350



Small Control System
VKS-0100



Measurement Controller
VKS-0120



Load Monitor
VKS-0151



ATEX Device
VMV-0034

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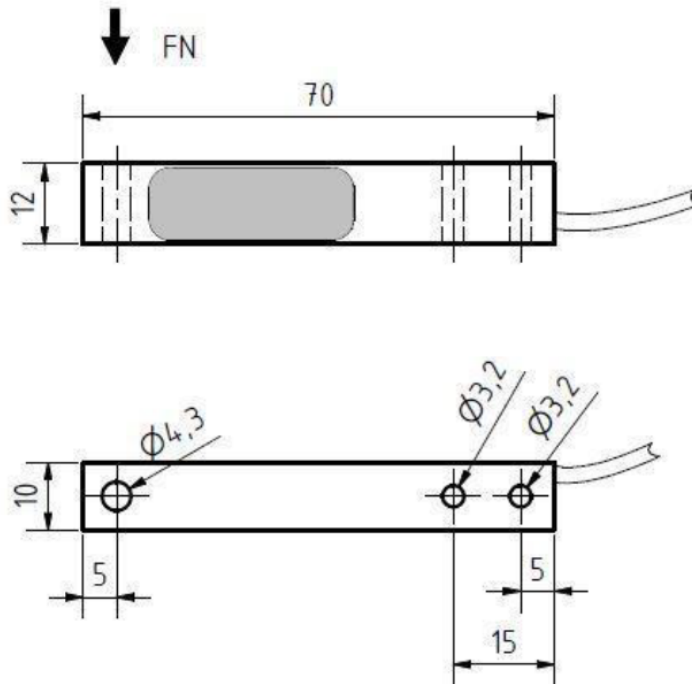
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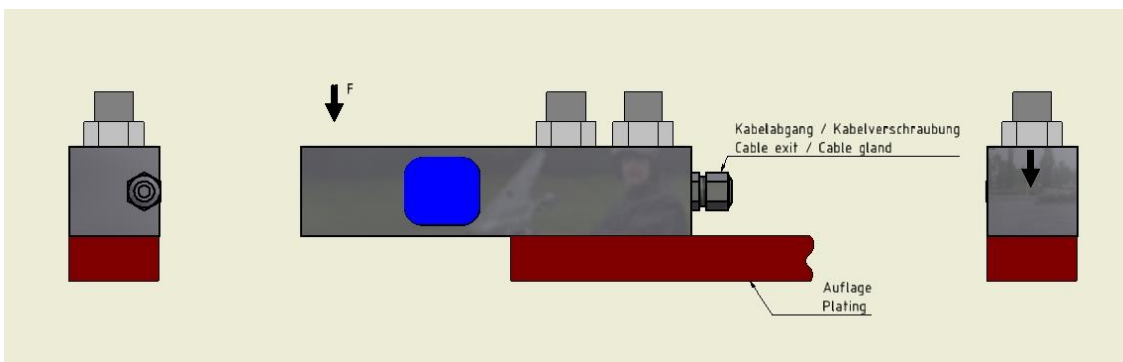
MESSELEKTRONIK GmbH



Installation Dimensions



Installation



Customised
Special Solutions

Contract
Applications

Factory Calibration

DAkKS- / DKD-
Calibration

Cable Assembly

Engineering Services