

Force Transducer SB-32-53-1.00

Part no.: VX34021403

Serial no.: Key 54K

VELOMAT

MESSELEKTRONIK GmbH



- **Measurement range 0... 53 kN**
- **Measuring bridge 1000 Ω**

Description

The force transducer SB-32 works according to the principle of shear force measurement laterally to the longitudinal sensor axis.

SB-32 was developed especially for application at hydraulic cylinders of working platforms, in cranes and conveyors.

Construction is a pin with two lateral notches. The transducer is prevented from axial slipping by enlarged pin diameter on one side and securing plates put into the notches. For protection against distortion and for marking the direction of force application the SB-32 flattened on one side.

The application chamber for the strain gauge is casted with a highly elastic material for long term protection against mechanical and chemical damage.

Strain gauge full bridges measure the deformation due to shear forces acting on the bolt.

The bridges are adjusted in the unloaded state to approx. $\pm 0,01$ mV / V.

The transducer SB-32 is designed for connection to an amplifier.

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

Product Range Force Transducer



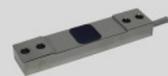
Shear force
Transducer
SKA-30D



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. 0,6 kg
Material:	Stainless steel
Degree of protection	IP 67
Nominal load:	400 kg
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. 20 V AC / DC
Current consumption	20 mA
Measurement principle:	Strain gauge full bridge
Input / output resistance:	1000 Ω / 1000 Ω
Nominal sensitivity:	approx. 0,5 mV/V

Cable and Connection

Cable:

Type:	PVC screened 4 x 0.14 mm ²
Length:	1,5 m
Cable end:	ferrules

Connection:

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



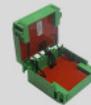
Limiting
Switch
VMV-0131



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

Force Transducer SB-32-53-1.00

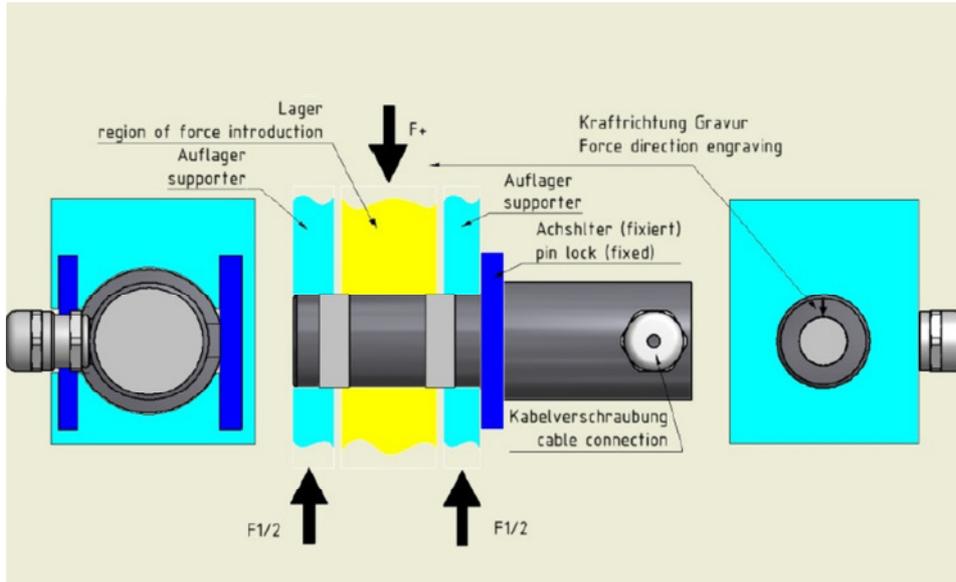
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Installation Dimensions



Customised
Special Solutions

Contract
Applications

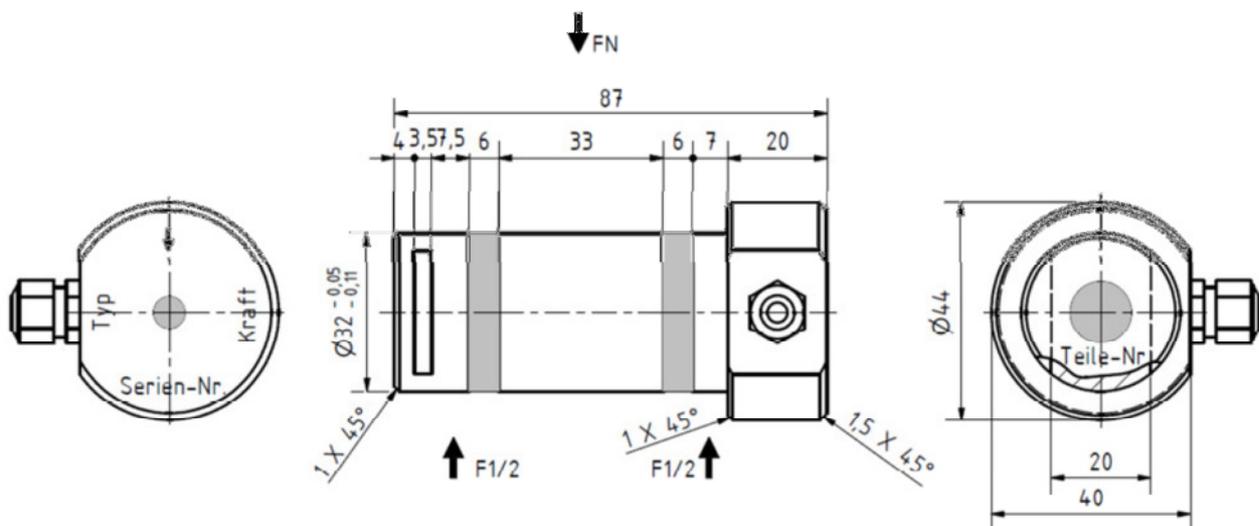
Factory Calibration

DAkKS -/ DKD-
Calibration

Cable Assembly

Engineering Services

Installation



10.11.2017

Subject to technical changes without notice. Errors and omissions excepted.

DS VX34021403