

Force Transducer KWZ-60-20-4.S70

Part no.: VX34021870

Serial no.: Key 73G

VELOMAT

MESSELEKTRONIK GmbH



- **Measurement range 0 ... 20 kN**
- **Measured signal 4 ... 20 mA**
- **internal amplifier**
- **compact design**

Description

The tensile force transducer operates on the principle of measuring force in the direction of the longitudinal axis.

It can be used to measure tensile forces on lifts, cranes and gondolas, as well as tension in masts, towers, platforms and so on.

The KWZ-60 tensile force transducer is designed as a double tensile element. It has an 18 mm diameter bore on both sides for easy mounting with bolts or similar fasteners. Using the shackles available as accessories, it can be easily attached to load hooks, trolleys, eyebolts, chain links or other slings.

The application chamber for the strain gauge (SG) is encapsulated with a highly elastic casting material and is thus protected against mechanical and chemical damage.

Full-bridge strain gauges measure the deformation caused by tensile forces on the transducer within the measuring chamber. An integrated amplifier supplies a measurement signal of 4–20 mA.

In the unloaded state, the nominal output current can be generated by activating the calibration check signal (software calibration); with this sensor, a range of 16 mA is generated. This allows the tension strap to be checked using the amplifier and the downstream measuring equipment.

The KWZ-60 is designed for direct connection to a control system or comparator circuit.

The shield of the supply cable is not connected to the surface of the load cell.

Product Range Force Transducer



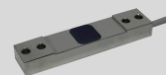
Shear force
Transducer
SKA-30D



Parallel
Bending Beam
PBB-28A



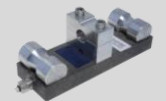
Tensile Force
Transducer
ZKA-12



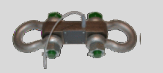
Strain
Transducer
DA-20



Compression
Force
Transducer
DKA-30



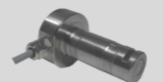
Rope Force
Transducer
LBA-160



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. 0.8 kg
Material:	Stainless steel
Degree of protection:	IP 67
Nominal force:	20 kN = 20 mA
Max. force of use:	150 % of nominal force
Min. breaking force:	400 % of nominal force

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 Amplifier:

Power supply:	12-24 V DC $\pm 20 \%$
Current consumption:	max. 45 mA
Output signal:	4 ... 20 mA = 0 ... 20 kN
Execution:	internal amplifier
Calibration check stroke:	+16 mA

Cable and Connection

Cable:

Type:	PUR, screened, 4 x 0.14 mm ²
Length:	5 m
Cable end:	Wire end ferrules

Core Colour

	<u>Description</u>
brown	Operating voltage UB
white	Calibration check (low aktiv) CC*
green	GND
yellow	Load signal IM
blue	Screen connection cable

Product Range Electronics



Measurement
Amplifier
VMV-0025



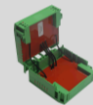
Limiting
Switch
VMV-0131



Large Size
Display
VPA-0185



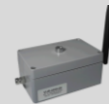
Handheld
Terminal
VHT-0041
VHT-0020



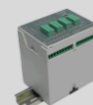
ATEX Barrier
VZB-0010



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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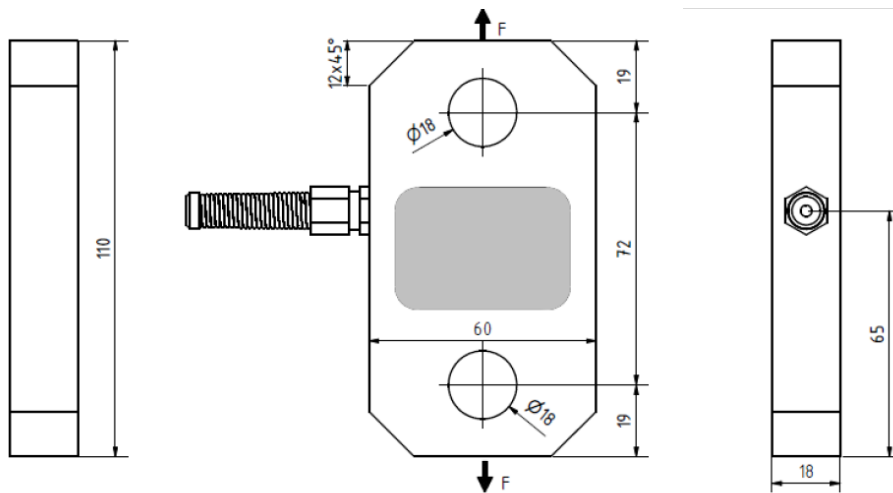
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Installation & Dimensions



Customised
Special Solutions

Contract
Applications

Factory Calibration

DAkKS- / DKD-
Calibration

Cable Assembly

Engineering Services