

Force Transducer KWZ-70-50-4.00

Part no.: VX34120059

Serial no.: Key 67E

VELOMAT

MESSELEKTRONIK GmbH



- **Measurement range 0 ... 50 kN**
- **Measuring bridge 350 Ω**
- **Strain gauge full bridge**

Description

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

It can measure high tensile forces on lifts, cranes and gondolas, as well as tension in masts, towers, platforms and much more.

The KWZ-70 tensile force transducer is designed as a double tensile element. It has a 26 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 lifting gear.

The application chamber for the strain gauge (SG) is sealed with plates and 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.

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

The KWZ-70 is designed for direct connection to an amplifier.

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

Product Range Force Transducer



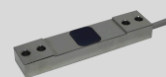
Shear force
Transducer
SKA-30D



Parallel
Bending Beam
PBB-28A



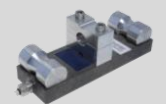
Tensile Force
Transducer
ZKA-12



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. 2.6 kg
Material:	Stainless steel
Degree of protection:	IP 67
Nominal load:	50 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)

Cable and Connection

Cable:

Type:	PVC, screened 4 x 0.14 mm ²
Length:	3 m
Cable end:	Wire end ferrules

Core Colour

Description

brown	Bridge supply Us+ / B+
green	Bridge supply Us- / B-
yellow	Bridge output Ub+ / S+
white	Bridge output Ub- / S-
blue	Screen of cable

Product Range Electronics



Measurement
Amplifier
VMV-0025



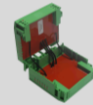
Limiting
Switch
VMV-0131



Large Size
Display
VPA-0185



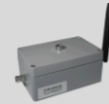
Handheld
Terminal
VHT-0041
VHT-0020



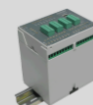
ATEX Barrier
VZB-0010



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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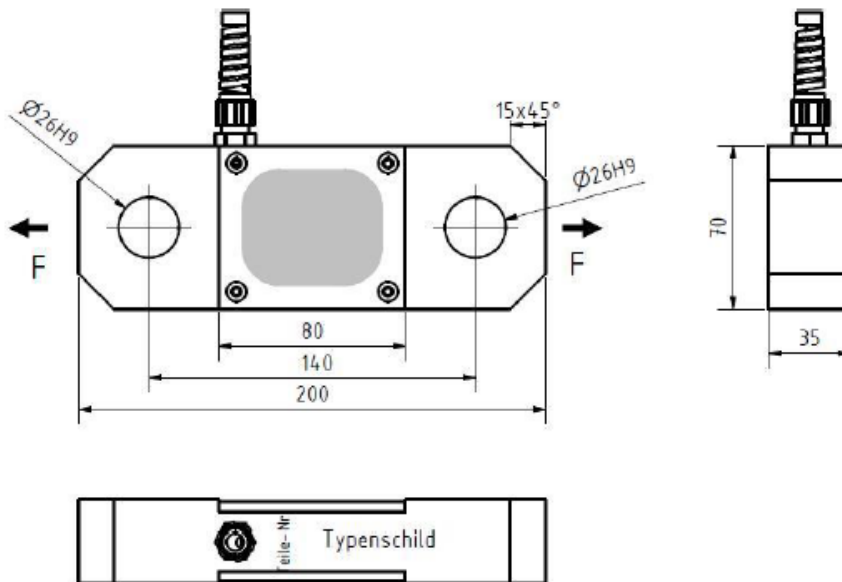
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Installation & Fitting



Customised
Special Solutions

Contract
Applications

Factory Calibration

DAkKS- / DKD-
Calibration

Cable Assembly

Engineering Services