

# Force Transducer KWZ-70-100-4.00

Part no.: VX34120061

Serial no.: Key 67G

# VELOMAT

MESSELEKTRONIK GmbH



- **Measurement range 0 ... 100 kN**
- **Measuring bridge 350  $\Omega$**
- **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 slings.

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



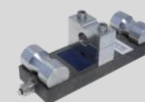
Tensile Force  
Transducer  
ZKA-12



Strain  
Transducer  
DA-20



Compression  
Force  
Transducer  
DKA-30



Rope Force  
Transducer  
LBA-160



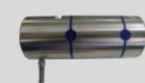
Tensile Force  
Transducer  
KWZ-70



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. 3.0 kg
Material:	Stainless steel
Degree of protection:	IP 67
Nominal load:	100 kN
Max. working load:	125 % of nominal load
Min. breaking load:	300 % 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:	$-15^\circ\text{C}$ to $+70^\circ\text{C}$
Temperature range of use:	$-25^\circ\text{C}$ to $+80^\circ\text{C}$

#### Measurement Bridge:

Measurement principle:	Strain gauge full bridge
Input / output resistance:	$350 \Omega$ / $350 \Omega$
Nominal sensitivity:	approx. $1 \text{ mV/V}$ (exact value: see label / type plate)

## Cable and Connection

### Cable:

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

### 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



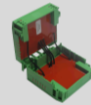
Limiting Switch  
VMV-0131



Large Size Display  
VPA-0185



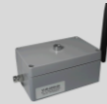
Handheld Terminal  
VHT-0041  
VHT-0020



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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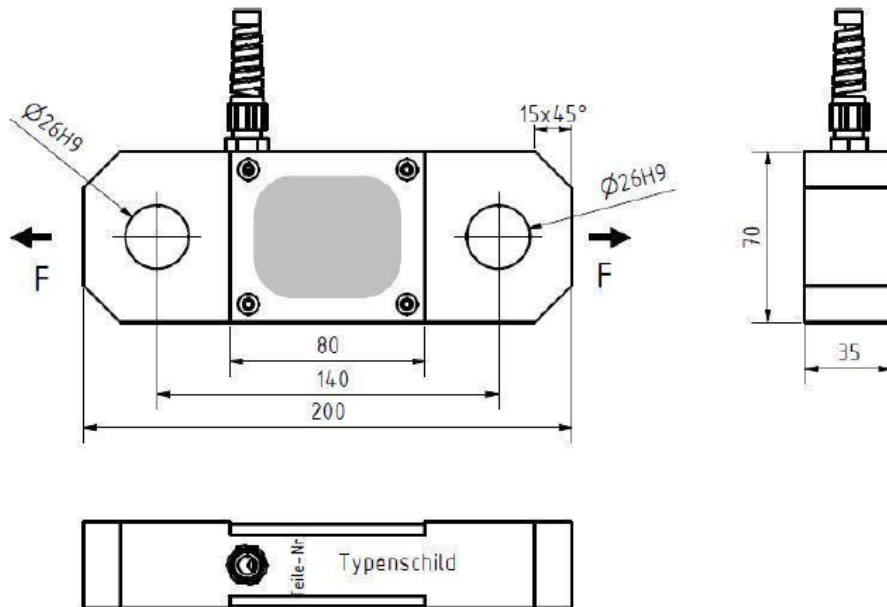
Serial no.: Key 67G

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## Installation & Fitting



Customised  
Special Solutions

Contract  
Applications

Factory Calibration

DAkKS- / DKD-  
Calibration

Cable Assembly

Engineering Services