

## K3D60a ±500N/VA



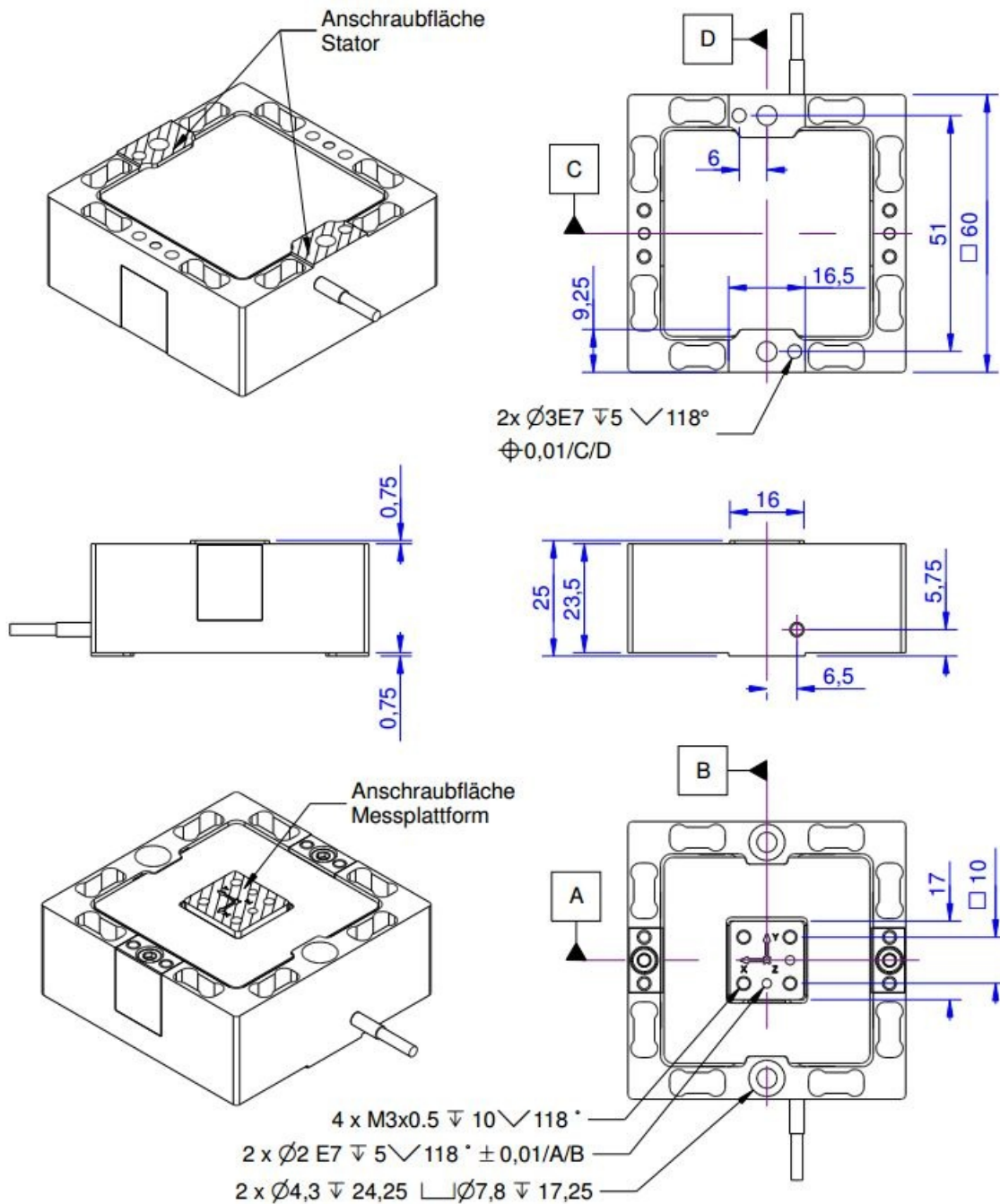
### Description

The K3D60a three-axis sensor is suitable for measuring force on three mutually perpendicular axes.

The new 3-axis sensor K3D60a is a further development of the series K3D60 and it is available in the measuring ranges ±20N to ±500N. Up to a rated load of ±100N, these sensors are made of aluminum, from a rated load of ±200N these force sensors are made of stainless steel.

The sensor K3D60 (11/2009 ... 02/2016) 2016 was replaced by the improved implementation K3D60a.

## Dimensions



## Technical Data

### Force sensor

Type	3-axis force sensor	
Force direction	Tension / Compression	
Rated force F <sub>x</sub>	500	N
Rated force F <sub>y</sub>	500	N
Rated force F <sub>z</sub>	500	N
Force introduction	Inner thread	
Dimension 1	4x M3x0,5	
Sensor Fastening	Through bore	
Dimension 2	2x Ø4,3	
Operating force	200	%FS
Rated displacement	0.1	mm
Material	Stainless steel	
Natural frequency	6	kHz
Dimensions	60 x 60 x 25	mm x mm x mm
Height	25	mm
Length or Diameter	60	mm
Torque limit	50	Nm
Bending moment limit	50	Nm

### Precision

Accuracy class	0,5%	
Relative linearity error	0.2	% FS
Relative zero signal hysteresis	0.02	% FS
Temperature effect on zero signal	0.02	%FS / K
Temperature effect on characteristic value	0.02	%RD/ K
Relative creep	0.1	% FS

### Connection Data

Connection type	12 conductor open	
Name of the connection	STC-32T-12	
Cable length	3	m

### Eccentricity and Crosstalk

Influence of eccentric load to FS	1	%FS / 10Nm
Crosstalk from x to y at rated load	2	%FS
Crosstalk from y to x at rated load	2	%FS
Crosstalk from z to x/y at rated load	2	%FS
Crosstalk from x/y to z at rated load	2	

### Temperature

Rated temperature range f	-10 ... 70	°C
Operating temperature range f	-10 ... 85	°C
Storage temperature range f	-10 ... 85	°C

Environmental protection	IP65
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#### Electrical Data

Rated output x-axis	0.5	mV/V / FS
Rated output y-axis	0.5	mV/V / FS
Rated output z-axis	0.5	mV/V / FS
Zero signal	0.1	mV/V
Rated range of excitation voltage f	2.5 ... 5	V
Operating range of excitation voltage f	1 ... 10	V
Input resistance x-axis	375	Ohm
Output resistance x-axis	350	Ohm
Input resistance y-axis	375	Ohm
Output resistance y-axis	350	Ohm
Input resistance z-axis	375	Ohm
Output resistance z-axis	350	Ohm
Insulation resistance	5	GOhm
Tolerance input resistance	10	Ohm
Tolerance output resistance	10	Ohm

Abbreviation : RD: „Reading“; FS: „Full Scale“;

1) The exact rated output is reported in the test report .

2) K3D60a with 370 and 390 Ohm input impedance and 350 ohm output resistance



## Pin Configuration

Channel	Symbol	Description	Wire colour
1	+Us	positive bridge supply	brown
	-Us	negative bridge supply	white
	+Ud	positive bridge output	green
	-Ud	negative bridge output	yellow
2	+Us	positive bridge supply	pink
	-Us	negative bridge supply	grey
	+Ud	positive bridge output	blue
	-Ud	negative bridge output	red
3	+Us	positive bridge supply	purple
	-Us	negative bridge supply	black
	+Ud	positive bridge output	orange
	-Ud	negative bridge output	transparent

*Pressure load: positive output signal.*

*Shield- transparent.*

## accessories

Description Description	
	<p>GSV-1A4 SubD37/2</p> <p>4-channel strain gauge measuring amplifier for sensors with strain gauges. Adaptation of the sensor via <a href="#">Sub-D-37 connector</a>. Output <math>\pm 10V</math> and 4 ... 20mA via 15-pin SUB-D (female); Input sensitivity 2mV/V;</p>
	<p>GSV-4USB SubD37</p> <p>4-channel strain measurement amplifier with USB port with configurable input for strain gauges, temperature sensors, active sensors, displacement sensors and other sensors. Sensor connection via 1 piece Sub D37 connector</p>