

#### Multi-axis force sensor K3D60a

Measuring ranges: ±10N, ±20N, ±50N, ±100N, ±200N, ±500N



#### **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.

	K3D60	K3D60a
Fastening	2x M3	2x M4
Measuring Platform	14mm x 14mm, 2x M3 (8mm x 8mm)	16mm x 16mm 2x M3 (10mm x 10mm)
Nominal Force	±10N, ±100N	±10N, ±500N

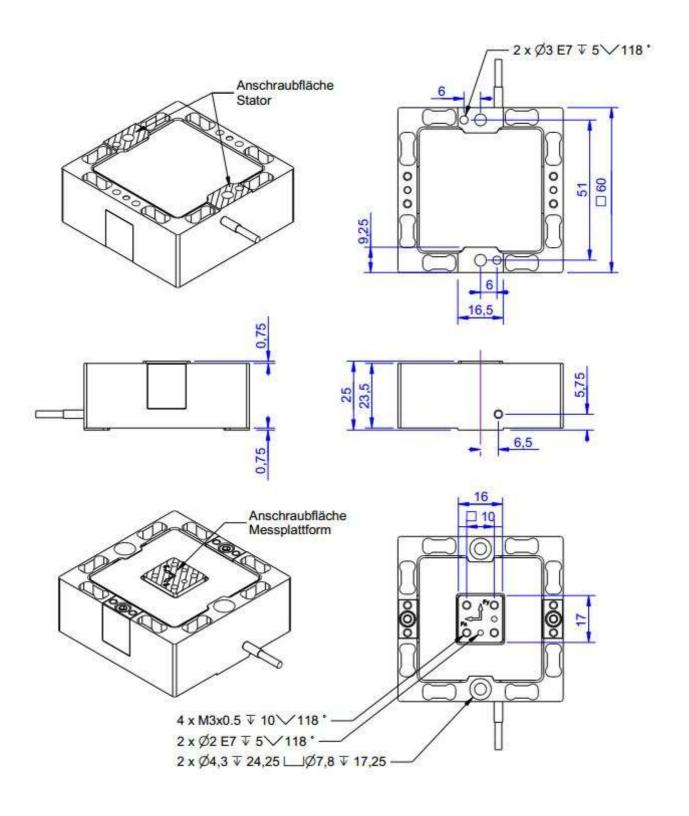
The force is applied to the platform 16mm x16mm.

The bottom of the sensor is fixed with 2 screws M4

The force sensor is characterized by a particularly compact design with a footprint of 60mm x 60mm and a low overall height of only 25mm.



### **Dimensions K3D60a**





## **Technical Data**

Type	Design & Material		
Aluminium ±20N±100N   stainless steel ±200N±50			3-axis force sensor
Stainless steel ±200N±50			
Length x wide × height         mm x mm x mm         60 x 60 x 25           Force transmission / fastening         4x female thread M3x0,5           Weight         g         110           Mechanical data         N         ±10 ±500           Operating force         %FS         150           Breaking force         %FS         300           Elektrical Data         W/V @FS         0,5 1)           Nominal output (FS) x-Axis         mV/V @FS         0,5 1)           Nominal output (FS) y-Axis         mV/V @FS         0,5 1)           Nominal output (FS) z-Axis         mV/V @FS         0,5 1)           Zero signal tolerance         mV/V @FS         0,5 1)           Max. supply voltage         V         10           Input resistance x, y-Axis ²)         Ohm         710 ± 10           Output resistance x, y-Axis ²)         Ohm         710 ± 10           Output resistance z-Axis ²)         Ohm         710 ± 10           Input resistance z-Axis ²)         Ohm         710 ± 10           Insulation resistance         Ohm         > 5 ⋅ 10°           Connection cable teflon STC-32T-12         m         3           Precision         S          0,2           Backlash width	iwatenai		stainless steel ±200N±500N
Force transmission / fastening   g   110	Length x wide × height	mm x mm x mm	60 x 60 x 25
Weight         g         110           Mechanical data         N         ±10 ±500           Operating force         %FS         150           Breaking force         %FS         300           Elektrical Data         Nominal output (FS) x-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) y-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) z-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) z-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) z-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) z-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) y-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) y-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) y-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) y-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) y-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) y-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) y-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) y-Axis         nV/V @ FS         0,5 ¹           Nominal output (FS) y-A			4x female thread M3x0,5
Mechanical data         Nominal force (FS). x-,y-, z-Axis         N         ±10 ±500           Operating force         %FS         150           Breaking force         %FS         300           Elektrical Data         Nominal output (FS) x-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) y-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) z-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) z-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) z-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) z-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) y-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) y-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) y-Axis         nm/V @ FS         0,5 ¹)           Nominal output (PS) y-Axis         nm/V @ FS         0,5 ¹)           Nominal output (PS) y-Axis         nm/V @ FS         0,5 ¹)           Nominal output (PS) y-Axis         nm/V @ FS         0,5 ¹)           Nominal output (PS) y-Axis         nm/V @ FS         0,5 ¹)           Nominal output (PS) y-Axis         nm/V @ FS         0,5 ¹           Nominal output (PS) y-Axis         nm/V @ FS </td <td>Weight</td> <td>g</td> <td>·</td>	Weight	g	·
Operating force         %FS         150           Breaking force         %FS         300           Elektrical Data         Nominal output (FS) x-Axis         mV/V @ FS         0,5 ¹¹)           Nominal output (FS) y-Axis         mV/V @ FS         0,5 ¹¹)           Nominal output (FS) z-Axis         mV/V @ FS         0,5 ¹¹)           Zero signal tolerance         mV/V @ FS         0,5 ¹¹)           Max. supply voltage         V         10           Input resistance x, y-Axis ²²         Ohm         710 ± 10           Output resistance x, y-Axis ²²         Ohm         710 ± 10           Input resistance z-Axis ²²         Ohm         710 ± 10           Output resistance z-Axis ²²         Ohm         710 ± 10           Insulation resistance         Ohm         > 5 ⋅ 10³           Connection cable teflon STC-32T-12         m         3           Precision         Teresision           Precision         NFS         ≤ 0,2           Backlash width         % FS         ≤ 0,2           Backlash width         % FS         ≤ 0,0           Temp. coeff. of the zero signal         % FS / K         ± 0,02           Temp. coeff. of the nominal output         % RD / K         ± 0,02	Mechanical data		
Operating force         %FS         150           Breaking force         %FS         300           Elektrical Data         Nominal output (FS) x-Axis         mV/V @ FS         0,5 ¹¹)           Nominal output (FS) y-Axis         mV/V @ FS         0,5 ¹¹)           Nominal output (FS) z-Axis         mV/V @ FS         0,5 ¹¹)           Zero signal tolerance         mV/V @ FS         0,5 ¹¹)           Max. supply voltage         V         10           Input resistance x, y-Axis ²²         Ohm         710 ± 10           Output resistance x, y-Axis ²²         Ohm         710 ± 10           Input resistance z-Axis ²²         Ohm         710 ± 10           Output resistance z-Axis ²²         Ohm         710 ± 10           Insulation resistance         Ohm         > 5 ⋅ 10³           Connection cable teflon STC-32T-12         m         3           Precision         Teresision           Precision         NFS         ≤ 0,2           Backlash width         % FS         ≤ 0,2           Backlash width         % FS         ≤ 0,0           Temp. coeff. of the zero signal         % FS / K         ± 0,02           Temp. coeff. of the nominal output         % RD / K         ± 0,02	Nominal force (FS). x- ,y-, z-Axis	N	±10 ±500
Elektrical Data         Nominal output (FS) x-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) y-Axis         mV/V @ FS         0,5 ¹)           Nominal output (FS) z-Axis         mV/V @ FS         0,5 ¹)           Zero signal tolerance         mV/V @ FS         0,5 ¹)           Max. supply voltage         V         10           Input resistance x, y-Axis ²)         Ohm         710 ± 10           Output resistance x, y-Axis ²)         Ohm         710 ± 10           Input resistance z-Axis ²)         Ohm         710 ± 10           Output resistance z-Axis ²)         Ohm         710 ± 10           Insulation resistance         Ohm         > 5 ⋅ 10°           Connection cable teflon STC-32T-12         m         3           Precision         % FS         ≤ 0,2           Backlash width         % FS         ≤ 0,2           Backlash width         % FS         ≤ 0,02           Temp. coeff. of the zero signal         %FS / K         ± 0,02           Temp. coeff. of the nominal output         % RD / K         ± 0,02           Creep error (30 min)         % FS         ≤ 0,1           Eccentricity & Crosstalk           Allowed torque according of eccentric load         Nm         5Nm (Al), 10Nm		%FS	150
Nominal output (FS) x-Axis $mV/V \oplus FS = 0.5^{-1}$ Nominal output (FS) y-Axis $mV/V \oplus FS = 0.5^{-1}$ Nominal output (FS) y-Axis $mV/V \oplus FS = 0.5^{-1}$ Zero signal tolerance $mV/V \oplus FS = 0.5^{-1}$ Zero signal tolerance $mV/V \oplus FS = 0.5^{-1}$ Max. supply voltage $mV/V \oplus FS = 0.5^{-1}$ Input resistance x, y-Axis $mV/V \oplus FS = 0.5^{-1}$ Output resistance x, y-Axis $mV/V \oplus FS = 0.5^{-1}$ Input resistance x, y-Axis $mV/V \oplus FS = 0.5^{-1}$ Output resistance x, y-Axis $mV/V \oplus FS = 0.5^{-1}$ Input resistance x, y-Axis $mV/V \oplus FS = 0.5^{-1}$ Output resistance x, y-Axis $mV/V \oplus FS = 0.5^{-1}$ Input resistance x, y-Axis $mV/V \oplus FS = 0.5^{-1}$ Output resistance x, y-Axis $mV/V \oplus FS = 0.5^{-1}$ Input resistance x, y-Axis $mV/V \oplus FS = 0.5^{-1}$ Output resistance x, y-Axis $mV/V \oplus FS = 0.5^{-1}$ Input r	Breaking force	%FS	300
Nominal output (FS) y-Axis $mV/V @ FS = 0,51$ ) Nominal output (FS) z-Axis $mV/V @ FS = 0,51$ ) Zero signal tolerance $mV/V = 0,1$ Max. supply voltage $V = 0,1$ Input resistance x, y-Axis $V = 0,1$ Output resistance x, y-Axis $V = 0,1$ Input resistance z-Axis $V = 0,1$ Insulation resistance $V = 0,1$ Insulation	Elektrical Data		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Nominal output (FS) x-Axis	mV/V @ FS	0,5 1)
Zero signal tolerance $mV/V$ $\pm 0,1$ Max. supply voltage $V$ $10$ Input resistance x, y-Axis $2$ ) Ohm $710 \pm 10$ Output resistance x, y-Axis $2$ ) Ohm $710 \pm 10$ Input resistance z-Axis $2$ ) Ohm $710 \pm 10$ Output resistance z-Axis $2$ ) Ohm $710 \pm 10$ Output resistance z-Axis $2$ ) Ohm $710 \pm 10$ Insulation resistance Ohm $710 \pm 10$ Insulation resistance $90 + 10$ Connection cable teflor STC-32T-12 $90 + 10$ Precision  Precision class $90 + 10$ Linearity error $90 + 10$ Backlash width $90 + 10$ Temp. coeff. of the zero signal $90 + 10$ Temp. coeff. of the nominal output $90 + 10$ Creep error (30 min) $90 + 10$ Eccentricity & Crosstalk  Allowed torque according of eccentric load $90 + 10$ Influence of eccentric load FS $90 + 10$ Crosstalk from x to y at fullscale $90 + 10$ Crosstalk from y to x at fullscale $90 + 10$ Some $90 + 10$ To set all from y to x at fullscale $90 + 10$ To set all from y to x at fullscale $90 + 10$ Tender of the set of th	Nominal output (FS) y-Axis	mV/V @ FS	0,5 1)
Max. supply voltageV10Input resistance x, y-Axis $^2$ )Ohm $710 \pm 10$ Output resistance x, y-Axis $^2$ )Ohm $710 \pm 10$ Input resistance z-Axis $^2$ )Ohm $710 \pm 10$ Output resistance z-Axis $^2$ )Ohm $710 \pm 10$ Insulation resistanceOhm $> 5 \cdot 10^9$ Connection cable teflon STC-32T-12m3PrecisionPrecision class%1Linearity error% FS $\leq 0,2$ Backlash width% FS $\leq 0,02$ Temp. coeff. of the zero signal%FS / K $\pm 0,02$ Temp. coeff. of the nominal output% RD / K $\pm 0,02$ Creep error (30 min)% FS $\leq 0,1$ Eccentricity & CrosstalkAllowed torque according of eccentric loadNm5Nm (Al), 10Nm (VA)Influence of eccentric load FS% FS @ 50mm1Crosstalk from x to y at fullscale% FS $< 2$ Crosstalk from y to x at fullscale% S $< 2$	Nominal output (FS) z-Axis	mV/V @ FS	0,5 1)
Input resistance x, y-Axis $^2$ ) Ohm $710 \pm 10$ Output resistance x, y-Axis $^2$ ) Ohm $710 \pm 10$ Input resistance z-Axis $^2$ ) Ohm $710 \pm 10$ Output resistance z-Axis $^2$ ) Ohm $710 \pm 10$ Insulation resistance $710 \pm 10$ Insulation	Zero signal tolerance	mV/V	± 0,1
Output resistance x, y-Axis $^2$ ) Ohm $710 \pm 10$ Input resistance z-Axis $^2$ ) Ohm $710 \pm 10$ Output resistance z-Axis $^2$ ) Ohm $710 \pm 10$ Insulation resistance Ohm $710 \pm 10$ Insulation resistance Ohm $710 \pm 10$ Connection cable teflon STC-32T-12 m $700 \pm 10$ Precision Precision Class $700 \pm 10$ Backlash width $700 \pm 10$ Backlash width $700 \pm 10$ Temp. coeff. of the zero signal $700 \pm 10$ Temp. coeff. of the nominal output $700 \pm 10$ Backlash width $700 \pm 10$ Temp. coeff. of the nominal output $700 \pm 10$ Backlash width $700 \pm 10$ Temp. coeff. of the sero signal $700 \pm 10$ Temp. coeff. of the nominal output $700 \pm 10$ Temp. coeff. of the nominal output $700 \pm 10$ Temp. coeff. of the nominal output $700 \pm 10$ Temp. coeff. of the nominal output $700 \pm 10$ Temp. coeff. of the nominal output $700 \pm 10$ Temp. coeff. of the nominal output $700 \pm 10$ Temp. coeff. of the nominal output $700 \pm 10$ Temp. coeff. of the nominal output $700 \pm 10$ Temp. coeff. of the nominal output $700 \pm 10$ Temp. coeff. of the nominal output $700 \pm 10$ Temp. coeff. of the nominal output $700 \pm 10$ Temp. coeff. of the zero signal $700 \pm 10$ Temp. coeff.	Max. supply voltage	V	10
Input resistance z-Axis $^2$ ) Ohm $710 \pm 10$ Output resistance z-Axis $^2$ ) Ohm $710 \pm 10$ Insulation resistance Ohm $> 5 \cdot 10^9$ Connection cable teflon STC-32T-12 m $3$ Precision Precision class $%$ 1 Linearity error $%$ FS $$\leq 0,2$ Backlash width $%$ FS $$\leq 0,02$ Temp. coeff. of the zero signal $%$ FS $$\leq 0,02$ Temp. coeff. of the nominal output $%$ RD $/$ K $$\neq 0,02$ Temp. coeff. of the nominal output $%$ RD $/$ K $$\neq 0,02$ Creep error (30 min) $%$ FS $$\leq 0,1$ Eccentricity & Crosstalk Allowed torque according of eccentric load Nm $$\leq 0,1$ Influence of eccentric load FS $%$ FS $@\leq 50$ mm $$\leq 0,1$ Crosstalk from x to y at fullscale $%$ FS $$\leq 0,2$ Crosstalk from y to x at fullscale $%$ FS $$\leq 0,2$	Input resistance x, y-Axis <sup>2)</sup>	Ohm	710 ± 10
Output resistance z-Axis $^2$ )Ohm $710 \pm 10$ Insulation resistanceOhm $> 5 \cdot 10^9$ Connection cable teflon STC-32T-12m3PrecisionPrecision class%1Linearity error% FS $\leq 0,2$ Backlash width% FS $\leq 0,02$ Temp. coeff. of the zero signal%FS / K $\pm 0,02$ Temp. coeff. of the nominal output% RD / K $\pm 0,02$ Creep error (30 min)% FS $\leq 0,1$ Eccentricity & CrosstalkAllowed torque according of eccentric loadNm5Nm (Al), 10Nm (VA)Influence of eccentric load FS% FS @ 50mm1Crosstalk from x to y at fullscale% FS $<2$ Crosstalk from y to x at fullscale% S $<2$	Output resistance x, y-Axis 2)	Ohm	710 ± 10
$\begin{array}{ c c c c c }\hline \text{Insulation resistance} & Ohm & > 5 \cdot 10^9\\\hline \text{Connection cable teflon STC-32T-12} & m & 3\\\hline \textbf{Precision} & & & \\\hline Precision class & & & & 1\\\hline \text{Linearity error} & & & & & \\\hline \text{Backlash width} & & & & & \\\hline \text{Temp. coeff. of the zero signal} & & & & & \\\hline \text{Temp. coeff. of the nominal output} & & & & & \\\hline \text{Creep error (30 min)} & & & & & \\\hline \textbf{Eccentricity & Crosstalk} & & & \\\hline \text{Allowed torque according of eccentric load} & Nm & 5Nm (Al), 10Nm (VA) \\\hline \text{Influence of eccentric load FS} & & & & & \\\hline \text{Crosstalk from x to y at fullscale} & & & & & \\\hline \text{Crosstalk from y to x at fullscale} & & & & & \\\hline Some size of the $	Input resistance z-Axis <sup>2)</sup>	Ohm	710 ± 10
Connection cable teflon STC-32T-12 m 3  Precision  Precision class % 1  Linearity error % FS $\leq 0,2$ Backlash width % FS $\leq 0,02$ Temp. coeff. of the zero signal %FS / K $\pm 0,02$ Temp. coeff. of the nominal output % RD / K $\pm 0,02$ Creep error (30 min) % FS $\leq 0,1$ Eccentricity & Crosstalk  Allowed torque according of eccentric load Nm 5Nm (AI), 10Nm (VA)  Influence of eccentric load FS % FS @ 50mm 1  Crosstalk from x to y at fullscale % FS $\leq 2$ Crosstalk from y to x at fullscale % S $\leq 2$	Output resistance z-Axis <sup>2)</sup>	Ohm	710 ± 10
Precision         Precision class       %       1         Linearity error       % FS       ≤ 0,2         Backlash width       % FS       ≤ 0,02         Temp. coeff. of the zero signal       %FS / K       ± 0,02         Temp. coeff. of the nominal output       % RD / K       ± 0,02         Creep error (30 min)       % FS       ≤ 0,1         Eccentricity & Crosstalk         Allowed torque according of eccentric load       Nm       5Nm (Al), 10Nm (VA)         Influence of eccentric load FS       % FS @ 50mm       1         Crosstalk from x to y at fullscale       % FS       <2	Insulation resistance	Ohm	> 5 · 10 <sup>9</sup>
Precision class       %       1         Linearity error       % FS       ≤ 0,2         Backlash width       % FS       ≤ 0,02         Temp. coeff. of the zero signal       %FS / K       ± 0,02         Temp. coeff. of the nominal output       % RD / K       ± 0,02         Creep error (30 min)       % FS       ≤ 0,1         Eccentricity & Crosstalk         Allowed torque according of eccentric load       Nm       5Nm (Al), 10Nm (VA)         Influence of eccentric load FS       % FS @ 50mm       1         Crosstalk from x to y at fullscale       % FS       <2	Connection cable teflon STC-32T-12	m	3
Linearity error% FS $\leq 0.2$ Backlash width% FS $\leq 0.02$ Temp. coeff. of the zero signal%FS / K $\pm 0.02$ Temp. coeff. of the nominal output% RD / K $\pm 0.02$ Creep error (30 min)% FS $\leq 0.1$ Eccentricity & CrosstalkNm5Nm (Al), 10Nm (VA)Allowed torque according of eccentric loadNm5Nm (Al), 10Nm (VA)Influence of eccentric load FS% FS @ 50mm1Crosstalk from x to y at fullscale% FS $<2$ Crosstalk from y to x at fullscale% S $<2$	Precision		
Backlash width % FS $\leq 0,02$ Temp. coeff. of the zero signal %FS / K $\pm 0,02$ Temp. coeff. of the nominal output % RD / K $\pm 0,02$ Creep error (30 min) % FS $\leq 0,1$ Eccentricity & Crosstalk Allowed torque according of eccentric load Nm 5Nm (AI), 10Nm (VA) Influence of eccentric load FS % FS @ 50mm 1 Crosstalk from x to y at fullscale % FS $< 2$ Crosstalk from y to x at fullscale % S $< 2$	Precision class	%	1
Temp. coeff. of the zero signal %FS / K $\pm 0,02$ Temp. coeff. of the nominal output % RD / K $\pm 0,02$ Creep error (30 min) %FS $\leq 0,1$ Eccentricity & Crosstalk  Allowed torque according of eccentric load Nm 5Nm (AI), 10Nm (VA)  Influence of eccentric load FS %FS @ 50mm 1  Crosstalk from x to y at fullscale %FS <2  Crosstalk from y to x at fullscale % S <2	Linearity error	% FS	≤ 0,2
Temp. coeff. of the nominal output % RD / K $\pm$ 0,02 Creep error (30 min) % FS $\leq$ 0,1 <b>Eccentricity &amp; Crosstalk</b> Allowed torque according of eccentric load Nm 5Nm (Al), 10Nm (VA) Influence of eccentric load FS % FS @ 50mm 1 Crosstalk from x to y at fullscale % FS $<$ 2 Crosstalk from y to x at fullscale % S $<$ 2	Backlash width	% FS	≤ 0,02
Creep error (30 min)% FS $\leq$ 0,1Eccentricity & CrosstalkNm5Nm (Al), 10Nm (VA)Allowed torque according of eccentric loadNm5Nm (Al), 10Nm (VA)Influence of eccentric load FS% FS @ 50mm1Crosstalk from x to y at fullscale% FS $<$ 2Crosstalk from y to x at fullscale% S $<$ 2	Temp. coeff. of the zero signal	%FS / K	± 0,02
Eccentricity & Crosstalk  Allowed torque according of eccentric load  Influence of eccentric load FS  Crosstalk from x to y at fullscale  Crosstalk from y to x at fullscale  Second Solution  Nm Solution (VA)  FS @ 50mm  Crosstalk from x to y at fullscale  Second Solution  Nm Solution (VA)  FS @ 50mm  Crosstalk from y to x at fullscale  Second Solution  Solution (VA)	Temp. coeff. of the nominal output	% RD / K	± 0,02
Allowed torque according of eccentric load  Influence of eccentric load FS  Crosstalk from x to y at fullscale  Crosstalk from y to x at fullscale  Nm 5Nm (AI), 10Nm (VA)  FS © 50mm  1  Crosstalk from y to x at fullscale  % FS  <2	Creep error (30 min)	% FS	≤ 0,1
Influence of eccentric load FS % FS @ 50mm 1  Crosstalk from x to y at fullscale % FS <2  Crosstalk from y to x at fullscale % S <2	Eccentricity & Crosstalk		
Crosstalk from x to y at fullscale % FS <2 Crosstalk from y to x at fullscale % S <2	Allowed torque according of eccentric load	Nm	5Nm (AI), 10Nm (VA)
Crosstalk from y to x at fullscale % S <2	Influence of eccentric load FS	% FS @ 50mm	1
,	Crosstalk from x to y at fullscale	% FS	<2
One and the frame of the selection of th	Crosstalk from y to x at fullscale	% S	<2
Crosstaik from z to x/y fullscale   % FS   <2	Crosstalk from z to x/y fullscale	% FS	<2
Temperature	Temperature		
Nominal temperature range °C -10+70	Nominal temperature range	°C	-10+70
Operating temperature range °C -10+85	Operating temperature range	°C	-10+85
Storage temperature range °C -10+85			-10+85

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**

Wire assignment		Description	Colour of wire
X-Axis	+ Us	Sensor supply	brown
	- Us	Sensor supply	white
	+ Ud	Bridge output	green
	-Ud	Bridge output	yellow
Y-Axis	+ Us	Sensor supply	pink
	- Us	Sensor supply	gray
	+ Ud	Bridge output	blue
	- Ud	Bridge output	red
Z-Axis	+ Us	Sensor supply	purple
	- Us	Sensor supply	black
	+ Ud	Bridge output	orange
	- Ud	Bridge output	transparent

Connecting cable: 3 m cable, 12-pin with teflon sheath and shield, diameter 2.0mm

Version: 07.04.2016



# **A**nhang

## **Dimensions K3D60**

Year of manufacture 2009...2015

