

## Special Features

- Piezo electric sensor for recording forces in highly rigid machine assemblies
- 1 or 3 measuring signals\* for force components
- Charge amplifying electronics integrated in sensor
- Degree of protection IP66/IPx7, resistant to cooling lubricants

\* only 1 measuring signal if operated with the GENIOR MODULAR system



Illustration similar

## PIEZO ELECTRIC FORCE SENSOR

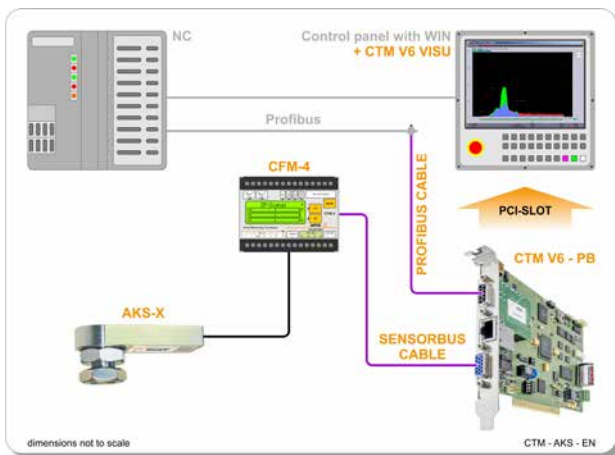


Illustration similar

Application example:  
**AKS-X** and CFM-4 with the CTM Tool and Process Monitoring System

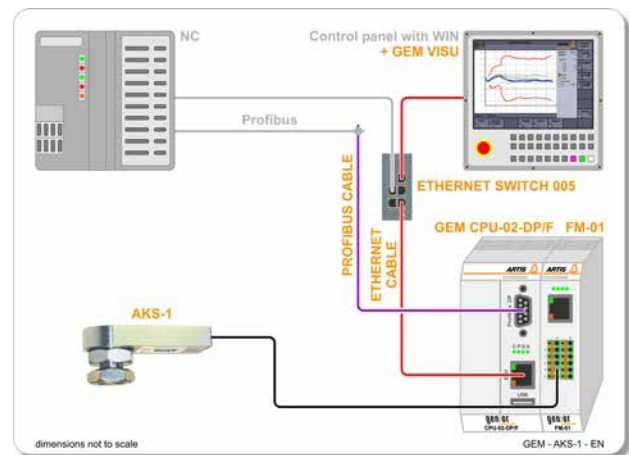
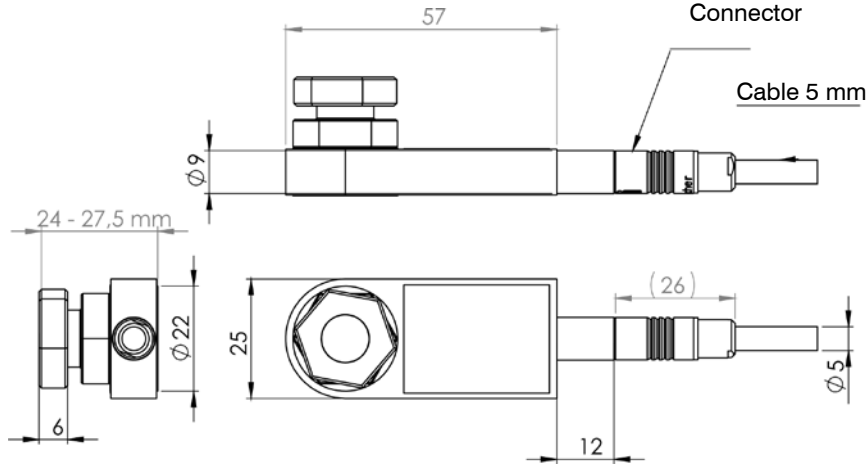


Illustration similar

Application example  
**AKS-1** and FM-01 with the GENIOR MODULAR Tool and Process Monitoring System

# Piezo electric force sensor

## AKS-1, AKS-3



		<b>O3PZ021100x</b> (x – see variant)	
Variant AKS-1	O3PZ0211001	1-component force sensor	
Variant AKS-3	O3PZ0211002	3-components force sensor	
Dimensions	see drawing		
Weight	AKS-1	0.968 kg	
	AKS-3	0.525 kg	
Material	Chromium nickel steel		
Operating temperature	10 °C – +60 °C		
Voltage supply	via measuring transducer 11 – 30 V DC		
Wire break detection	via force measuring transducer		
Degree of protection	IP66/IPx7, resistant to cooling lubricants		
Noise	< 2 mV		
Offset	< 15 mV		
Control signals Operate			
Reset	Input open or 0 – 1 V DC		
Operate	3 – 30 V DC		
Control signals range			
Range 1#	Input open or 6 – 30 V DC		
Range 2	0 – 1 V DC		
<b>Specification AKS-1</b>	<b>Fz</b>		
Measuring range 1	± 5 kN		
Measuring range 2	± 1000 N		
Overload	20 %		
Sensitivity Range 1	approx. 1 mV/N		
Sensitivity Range 2	approx. 5 mV/N		

<b>Specification AKS-3</b>	<b>Fz</b>	<b>Fx, Fy</b>
Measuring range 1	± 5 kN	± 2,5 kN
Measuring range 2	± 1000 N	± 500 N
Overload	20 %	20 %
Sensitivity Range 1	approx. 1 mV/N	approx. 2 mV/N
Sensitivity Range 2	approx. 5 mV/N	approx. 10 mV/N
Scope of delivery	Force sensor, 15 m cable included, pre-loading screw	
Conformity	CE	

<b>Sensor connection</b>	<b>Color</b>	<b>Description</b>
AKS-1	white	+ 15 V
	yellow/black	GND (Ground)
	green	± 10 V (Uout)
	brown	+5 V... + 15 V (Operate)
AKS-3	red	+ 15 V
	brown	GND (Ground)
	white	± 10 V (X-axis)
	gray	± 10 V (Y-axis)
	pink	± 10 V (Z-axis)
	green	+5 V... + 15 V (Operate)



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