



**MEMS ACCELERATION SENSOR**

- ◆ High precision
- ◆ High stability
- ◆ High response frequency



**Product Introduction**

AKF390B three-axis accelerometer is a widely used accelerometers produced by RION's with patented Swiss technology. It can be used in vibration testing, impact testing and other fields. The product adopts analog voltage output, different address codes can be set, and multiple sensors are used together in long distance to facilitate multi-point measurement and data analysis. The AKF390B is a monocrystalline silicon capacitive sensor consisting of a micromachined silicon chip (a low-power ASIC for signal conditioning), a microprocessor for storing compensation values, and a temperature sensor. This product with low power consumption has been calibrated, and has a solid structure and stable output. The new electronic configuration provides solid-state power for reset, providing full protection for over-current. This series of products has the characteristics of strong structure, low power consumption and excellent deviation stability, which guarantees outstanding output reliability.

**Product features**

- ★ three axis (X、Y、Z)
- ★ power supply: 9-36V
- ★ working temperature: -40°C ~ +85°C
- ★ size: L34.4×W34.4×H38mm
- ★ excellent bias stability
- ★ Good environmental performance (impact, vibration and temperature)
- ★ output voltage: 0-5V
- ★ anti-impact: 2000G
- ★ store temperature: -55°C ~ +100°C
- ★ weight: 73.5g

**Application**

- ★ Crash record, fatigue monitoring and prediction
- ★ Traffic system monitoring, roadbed analysis and high-speed railway fault detection
- ★ Large machinery, engine
- ★ Low frequency vibration and automatic monitoring
- ★ Bridge
- ★ Vehicle
- ★ Wind power generation
- ★ Medical equipment
- ★ Road roller



For pricing or any further information, please contact Omni Instruments Ltd.

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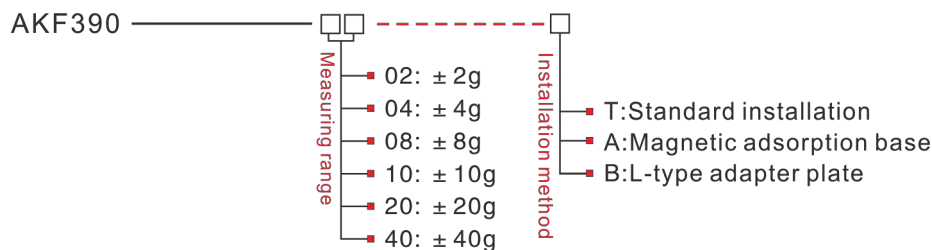
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 Mid Craigie Trading Estate, Mid Craigie Road,  
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## Product parameters

Parameters	AKF390			Unit
Range	±2	±4	±8	g
Bias calibration	<1	<1	<1	mg
Measuring axis	X,Y,Z	X,Y,Z	X,Y,Z	轴
Power on/down repeatability	<2	<2	<2	mg(max value)
Bias temperature coefficient [3]	0.05	0.05	0.05	mg/°C typical value
Resolution/threshold (@ 1Hz)	< 1	< 1	< 1	mg(max value)
Nonlinearity	<3	<3	<3	% FS ( max value)
Bandwidth [4 ]	500	500	500	Hz
resonance frequency	5	5	5	kHz
Output voltage	0~5V			
Reliability	MIL-HDBK-217, grade 2			
Anti-impact	100g@11ms、Triaxial and identical (half sine wave)			
Restore time	<1ms(1000g, 1/2 sin 1ms, impact on i axis)			
Vibration	20g rms,20~2000Hz (Random noise, o, p, i acting on each axis for 30 minutes)			
Input (VDD_VSS)	9-36 VDC			
Operating current consumption	<60mA @ 12 VDC			
Connector	Industry standard M12 connector			
Weight	73.5g			
Size	34.3*34.3*38.5mm			

## Order instruction



Eg : AKF390-02-T : indicate ±2g range, standard installation.

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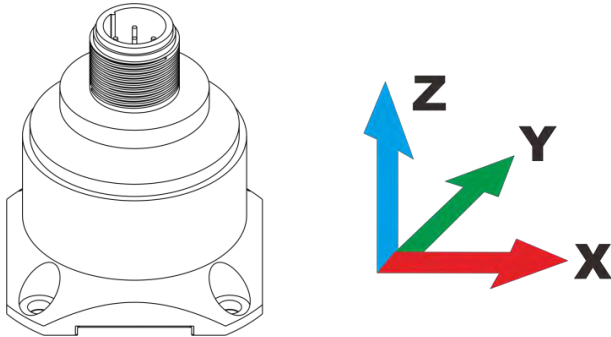
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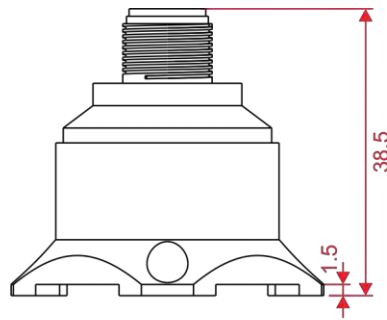
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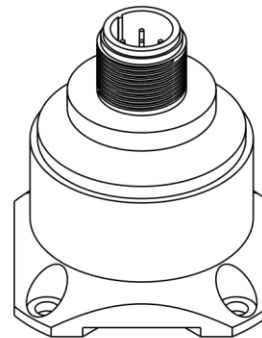
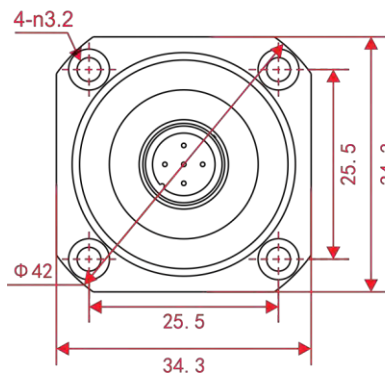
### Measuring direction



### Dimension

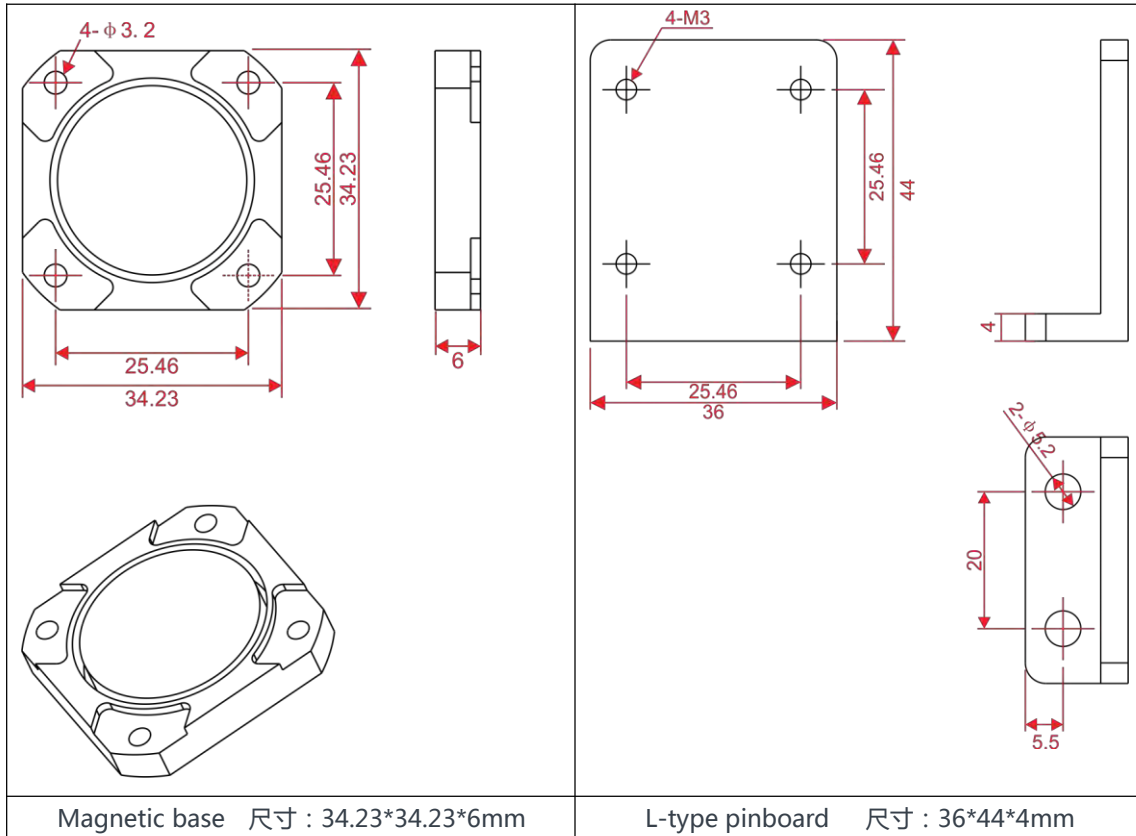


Size: 34.3\*34.3\*38.5mm



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### Mounting accessories size



### Electrical connection

Color Function	BLACK	WHITE	BLUE	BROWN	GRAY
	Power GND	X-axis voltage signal	Y-axis voltage signal	Vcc 9~36V Power supply positive pole	Z-axis voltage signal



Whilst every effort has been made to ensure the accuracy of this specification, we cannot accept responsibility for damage, injury, loss or expense from errors or omissions. In the interest of technical improvement, this specification may be altered without notice.

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