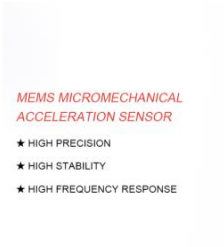
Accéléromètre triaxe MEMS Série AKF



PRODUCT INTRODUCTION

AKF398B 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 current 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 AKF398B 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)
★ output voltage: 4-20mA
★ power supply：9-36V
★ anti-impact：2000G
★ working temperature: -40°C ~ +85°C
★ store temperature: -55°C ~ +100°C
★ size: L34.3×W34.3×H38.5mm
★ weight: 73.5g
★ excellent bias stability
★ Good environmental performance (impact, vibration and temperature)

APPLICATIONS

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

PM Instrumentation | 59 rue Emile Deschanel | F-92400 Courbevoie | France
+33(0)1 46 91 93 32 | contact@pm-instrumentation.com | www.pm-instrumentation.com

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AKF398	PARAMETER						UNIT
Range	±2	±4	±8	±10	±20	±40	g
Deviation Calibration	<1	<1	<1	<1	<1	<1	mg
Measuring Axial	X,Y,Z	X,Y,Z	X,Y,Z	X,Y,Z	X,Y,Z	X,Y,Z	axis
Up/Off Power Repeatability	<2	<2	<2	<2	<2	<2	mg(max)
Sensitivity (± 10%)	4	2	1	0.8	0.4	0.2	mA/g
Deviation temperature coefficient	0.01	0.01	0.01	0.05	0.05	0.05	%/℃
Resolution/Threshold (@ 1Hz)	< 1	< 1	< 1	< 1	< 1	< 1	mg(max)
Nonlinearity	<0.5	<0.5	<0.8	<1	<1	<1	% FS（max）
Frequency response	500	500	500	500	500	500	Hz
Bandwidth (3Db)	1000	1000	1000	1000	1000	1000	Hz
Cross-axis sensitivity	1	1	1	2	2	2	%
Lateral vibration sensitivity ratio	1	1	2	5	5	5	%
Resonant frequency	2.4	2.4	2.4	5.5	5.5	5.5	kHz
noise density	21	21	21	86.6	86.6	86.6	μg/√Hz
0g output 12mA	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	mA
Output signal	4~20mA						
Reliability	MIL-HDBK-217，grade two						
Shock Resistance	100g@11ms、Triaxial And Identical (Half Sine Wave)						
Recovery Time	<1ms(1000g, 1/2 sin 1ms, Shock Acting On The i Axis)						
Vibration	20g Rms,20~2000Hz (Random Noise ， o ,p,i Per Axis For Action 30 Minutes)						
Input（VDD_VSS）	9-36 VDC						
Running current consumption	<60mA @ 12 VDC						
Connector	Industrial Standard M12 Connector						
Weight	73.5g						
Dimension	34.3*34.3*38.5mm						

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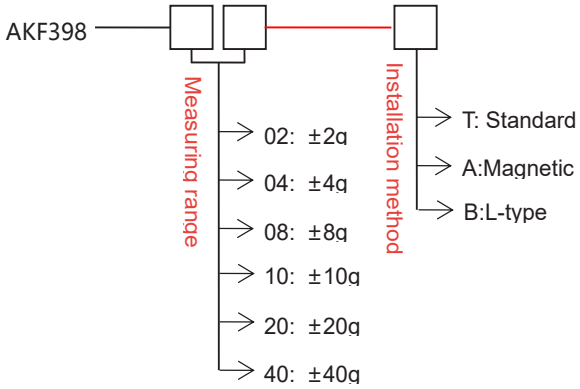
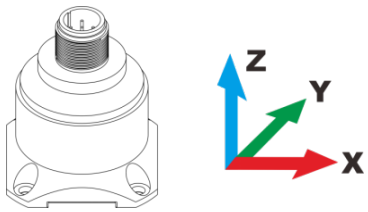
ORDER INSTRUCTION

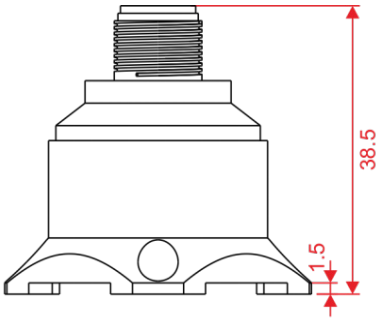


E.g: AKF398-02-T: ±2g measure range, standard installation

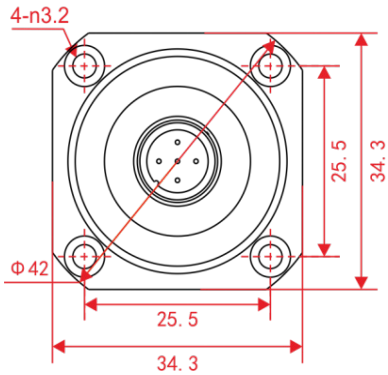
MEASURING DIRECTION

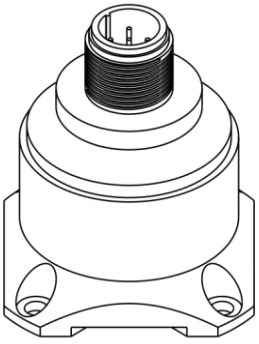


DIMENSIONS



Size:34.3*34.3*38.5mm





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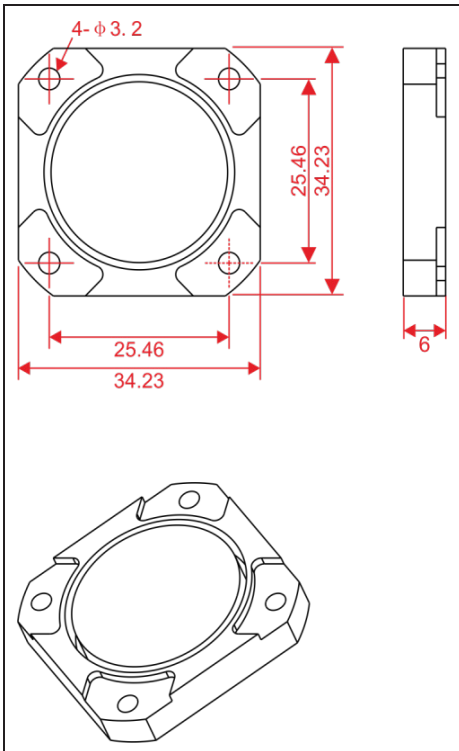
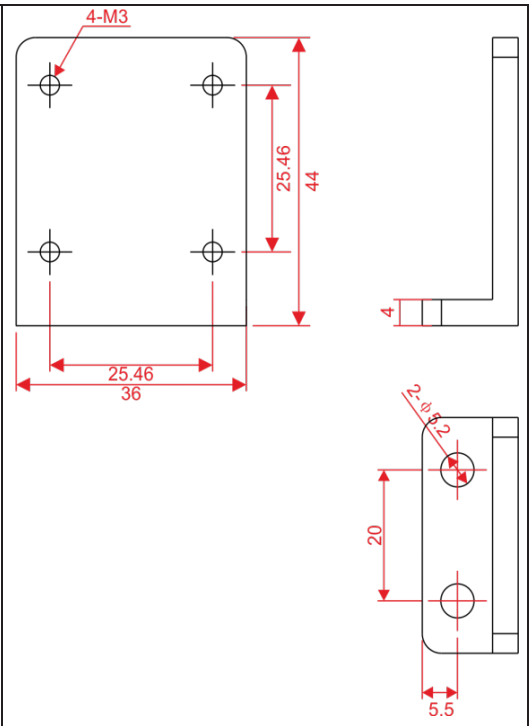
MOUNTING ACCESSORIES SIZE



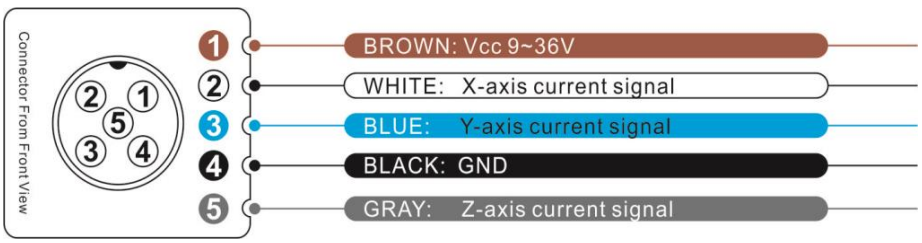
Magnetic base size：34.23*34.23*6mm，Material: stainless steel



Type L transfer plate size: 36*44*4mm, material: aluminum alloy

ELECTRICAL CONNECTION

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



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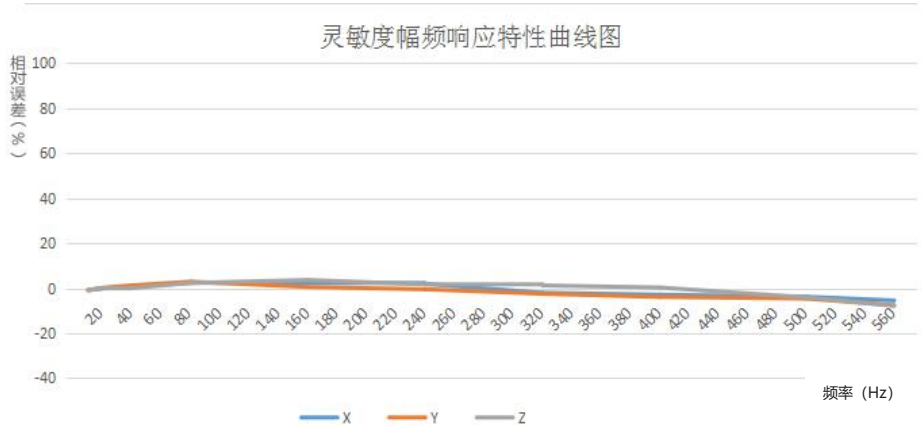
SENSITIVITY AMPLITUDE-FREQUENCY RESPONSE CHARACTERISTIC CURVE（reference condition：f=20.000Hz，a=2.000G）



Reference diagram of measuring range ±8G

SENSITIVITY LINEARITY GRAPH