BAM100
Acceleration Sensor

Bachmann offers piezoelectric accelerometers. Our sensors follow the tried and tested industry standard design for acceleration sensors, including an extremely robust housing, hermetic sealing and an insulated housing. This means that they are suitable for demanding ambient conditions.

The small size and simple mounting arrangement, via a threaded stud, make them suitable for a wide variety of measurement points. Straight or angled cable connectors are available for the standard 4-pin M12 connector to ensure optimum cable runs.

The built-in electronics of the piezoelectric acceleration sensors offer sensitivity down to frequencies of 0.5 Hz, and a flat response over a wide frequency range. Signals are delivered by the IEPE constant current method and are connected to (and driven from) the IEPE inputs of the AIC2xx modules.

The BAM100 sensor has a nominal sensitivity of 100 mV/g, generally used for rotating machines with speeds over 2 Hz (120 rev/min).

Item	Item-No.
BAM100	00020455-00
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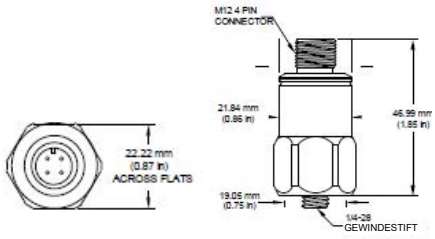
Accessories	
M8 Mounting Stud	00020459-00
Mounting plate	00020458-00

Acceleration Sensor	**BAM100**
Technical Data	
	
Dynamic	
Sensitivity (±5 % at 25 °C)	100 mV/g
Acceleration range (VDC >22V)	80 g
Amplitude non-linearity	1 %
Frequency response ±3 dB	0.5 to 14,000 Hz
Resonance frequency	30 kHz
Transverse sensitivity, max.	5 % of axial
Temperature response:	
-50 °C	-10 %
+120 °C	+10 %
Electrical	
Power requirement:	
Voltage source	18 to 30 VDC
Current regulating diode	2 to 10 mA
Electrical noise, equiv g:	
Broadband 2.5 Hz to 25 kHz	700 µg
Spectral 10 Hz	10 µg/√Hz
100 Hz	5 µg/√Hz
1000 Hz	5 µg/√Hz
Output impedance, max.	100 Ω
Bias output voltage	12 VDC
Grounding	Case isolated, internally shielded
Environmental	
Temperature range	-50 to 120 °C
Vibration limit	500 g peak
Shock limit	5,000 g peak
Electromagnetic sensitivity, equiv g, max.	70 µg/gauss
Sealing	Hermetic (IP67)
Base strain sensitivity, max.	0.0002 g/µ strain

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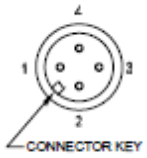
Physical	
Sensing element design	PZT, shear
Weight	90 g
Case material	316L stainless steel
Output connector	4 pin, M12-style
Mating connector	M12-style
Recommended cabling	shielded, twisted pair
Mounting	1/4-28 UNF tapped hole
Connections 	<table><tr><td>Connector pin</td><td>Function</td></tr><tr><td>shell</td><td>Ground</td></tr><tr><td>1</td><td>Signal ground</td></tr><tr><td>2</td><td>N/C</td></tr><tr><td>3</td><td>Power / signal</td></tr><tr><td>4</td><td>N/C</td></tr></table>

Note: Frequency response limits, spectral and noise values are typical
Accessories supplied: 1/4-28 – M8 mounting stud