11207AC Angular Rate Gyro Sensor



High Stability, Low Noise Vibration Rejecting Rate Gyro ±250, ±300, ±450°/sec Interchangeable, Rugged Design

Uniaxial Angular Rate Gyro

An advanced differential sensor design rejects linear acceleration and vibration influences, making the Measurement-Specialties 11207AC Angular Rate Gyro extremely stable, even in high shock and vibration environments. A tough, compact housing holds potted electronics and a shielded 22 AWG cable. Its cubical form allows mounting with the sensing axis oriented in any direction.

The voltage output of the 11207AC is directly proportional to the rotational rate about its axis. The DC-coupled output is fully scaled, referenced, and temperature compensated. When used in demanding temperature environments, gain compensation makes the 11207AC one of the most accurate angular rate gyros available.

IdentiCal[™] Interchangeable Sensors eliminate the management of calibration data and allow convenient interchangeability of individual sensors. With standardized sensitivity and offset, there is no need to enter new parameters for each unit. Perfect for high volume use.

✓ CONS

dimensions 10 10 1-Ð 1.073 (F) 0.295 0.945 3 mm x 0.5 mm Thread Dimensions in inches [mm], identical for each view when 0.138 in [3.5 mm] Deep (6) Mounting Holes on 3 sides identical fe 0.354 0,295 Gyros measure rotation around each axis as defined by right hand rule. 0.945 0.354 [24.00] [9.0] - 22 AWG Cable 1-

6061-T6 aluminum case with electroless nickel finish plus integrated cable with shield bonded at the case.



Shown with mounting adapter 34170B (sold separately)

connections



FEATURES

- High Stability and Low Noise
- IdentiCal[™] Interchangeable Sensor
- Rugged for Harsh Environments
- High Accuracy and Linearity over Wide
 Temperature Range
- Small Size
- Robust Power Supply Regulation
- Three Year Warranty

APPLICATIONS

- Accurate measurement of angular rates
- Monitor rotation rates for safety, maintenance, and usage
- Specialized configurations available



Specifications for 11207AC - improved specifications available upon request

 $T_A = T_{min}$ to T_{max} ; $10 \le V_S \le 36$ V; Acceleration = ±1 g, Angular Rate = 0°/sec unless otherwise noted; within one year of calibration

PARAMETERS	MIN	TYPICAL	MAX	UNITS	CONDITIONS/NOTES
Range & Sensitivity* at 25 °C					Must specify via Option Rnnn, See Ordering Info
Option R250		9		mV/º/sec	
Option R300		7.5		mV/º/sec	
Option R450		5.		mV/º/sec	
Sensitivity Drift 25°C to T _{min} or T _{max}			±1.0	% FSR	
Offset at 25 °C Zero g Bias Level		2.500		V	
Offset Drift 25 °C to T _{min} or T _{max}		±1.0	±6.0	°/sec	
Alignment		±1.5		degrees	Deviation from ideal axes
g Sensitivity		0.015		°/sec/g	Affects offset
Nonlinearity		0.01		% FSR	Best fit straight line
Frequency Response	0		1000	Hz	Upper cutoff per Option Bnnn, -3dB pt ±10%
Noise Density		0.01		°/sec/√Hz	T _A = 25°C
Output Voltage Swing	0.25		4.75	V	I _{out} = 1 mA, capcitive load <1000 pF
Power Supply (V _S)					
Input Voltage Limits	-80		+80	V	-80V continuous, >38 V if \leq 550ms, duty <1%
Input Voltage - Operating	+10		+36	V	
Input Current		10	mA		No load, quiescent
Rejection Ratio		>120	dB		DC
Temperature Range (T _A)	-40		+85	°C	
Mass		38		grams	
Shock Survival	-10,000		+10,000	g	Any axis for 0.5ms, powered or unpowered

Data subject to change without notice

*IndentiCal[™] sensors are interchangeable, any with same range have same value

ordering info

