



iDentiCal
Eliminates management
of calibration data



11206AC Angular Rate Sensor

SPECIFICATIONS

- Rugged Uniaxial Angular Rate Gyro
- Silicon MEMS Gyro, DC Response
- $\pm 50^\circ/\text{sec}$ to $\pm 180^\circ/\text{sec}$ Range
- Interchangeable Sensors, Identical Calibrations
- $\pm 0.5\%$ Typical Accuracy from -40°C to $+85^\circ\text{C}$
- 8.5 to 36Vdc Excitation Voltage

FEATURES AND BENEFITS

IdentiCal™ Interchangeable Sensor

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.

Rugged for Harsh Environment

The 11206AC is robust to perform well in harsh environments. The 6061-T6 case with electroless nickel finish plus a PTFE cable with a shield bonded to the case provide improved resistance to EMI, lightning, or other disturbances.

High Accuracy and Linearity over Wide Temperature Range

The output of the 11206AC 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 11206AC one of the most accurate angular rate gyros available.

The TE Connectivity model 11206AC Angular Rate Sensor is a rugged uniaxial analog gyroscope capable of accurately measuring angular rate under severe environmental conditions. The sensor is packaged in a tough, compact housing with fully encapsulated and protected electronics and a shielded 22 AWG cable. Its cubical form allows mounting with the sensing axis oriented in any direction.

The model 11206AC Gyroscope Sensor provides enhanced accuracy and durability features to meet the challenges of harsh installations. In addition to its robust construction, increased precision is achieved through enhanced offset and gain compensation over full operating temperature range

Each angular rate sensor has been accurately tested and compensated over the full -40°C to $+85^\circ\text{C}$ temperature range and has a nominal full scale output swing of $\pm 2.25\text{V}$. The zero rate output level is nominally $+2.5\text{Volts}$.

PERFORMANCE SPECIFICATIONS

All values are typical at +24°C and 8.5Vdc excitation for L000 option or 12Vdc excitation for L001 option unless otherwise stated. TE Connectivity reserves the right to update and change these specifications without notice.

Parameters

DYNAMIC

Parameter	-R050	-R180
Dash Number	-R050	-R180
Range (deg/sec)	±50	±180
Sensitivity (mV/deg/sec)	25.0 ±1%	10.0 ±1%
Frequency Response (Hz)	0-50	0-50
Non-Linearity (%FSO)	±0.1	±0.1
Alignment (deg)	±1.5	±1.5
Influence of Linear Acceleration (°/sec/g)	0.2	0.2
Shock Limit (g)	±1500	±1500
Noise Density (°/sec/√Hz)	0.05	0.05

Notes

See Ordering Info
 IdentiCal, see note 1 below
 Upper cutoff -3dB
 BFSL
 Deviation from ideal axes
 Affects offset
 0.5msec pulse

ELECTRICAL

Zero Acceleration Output (V)	2.50 ±0.10
Excitation Voltage (Vdc)	8.5 to 36 for L000 option 12 to 36 for L001 option
Excitation Current (mA)	10
Rejection Ratio (dB)	>120
Full Scale Output Voltage (Vpk)	0.25 to 4.75
Insulation Resistance (MΩ)	>100
Output Impedance (Ω)	100
Turn On Time (msec)	<100
Ground Isolation	Isolated from Mounting Surface

No load, quiescent
 DC
 I_{out} = 1mA, cap load <1000pF
 @100Vdc

ENVIRONMENTAL

Thermal Zero Shift (°/sec)	±3.0 typical (±6.0 max)	-40 to +85°C
Thermal Sensitivity Shift (%)	±1.0	-40 to +85°C
Operating Temperature (°C)	-40 to +85	
Humidity (Active Element & Electronics)	Hermetically Solder Seal	
Humidity (Housing)	Epoxy Sealed, IP65	
Electromagnetic Compatibility	EN 61000-6-2: Immunity for Industrial Environments EN 61000-6-4: Emission Standard for Industrial Environments	

PHYSICAL

Case Material	Electroless Nickel Plated 6061-T6 Aluminum
Cable	4x, #22 AWG Conductors, PTFE Insulated, Tin Plated Shield, PTFE Jacket
Weight (cable not included)	38 grams
Mounting	2x M3-0.5 Machine Screws
Mounting Torque	5 lbf-in (0.56 N-m)

Note 1 IdentiCal are interchangeable, all units have same range and sensitivity

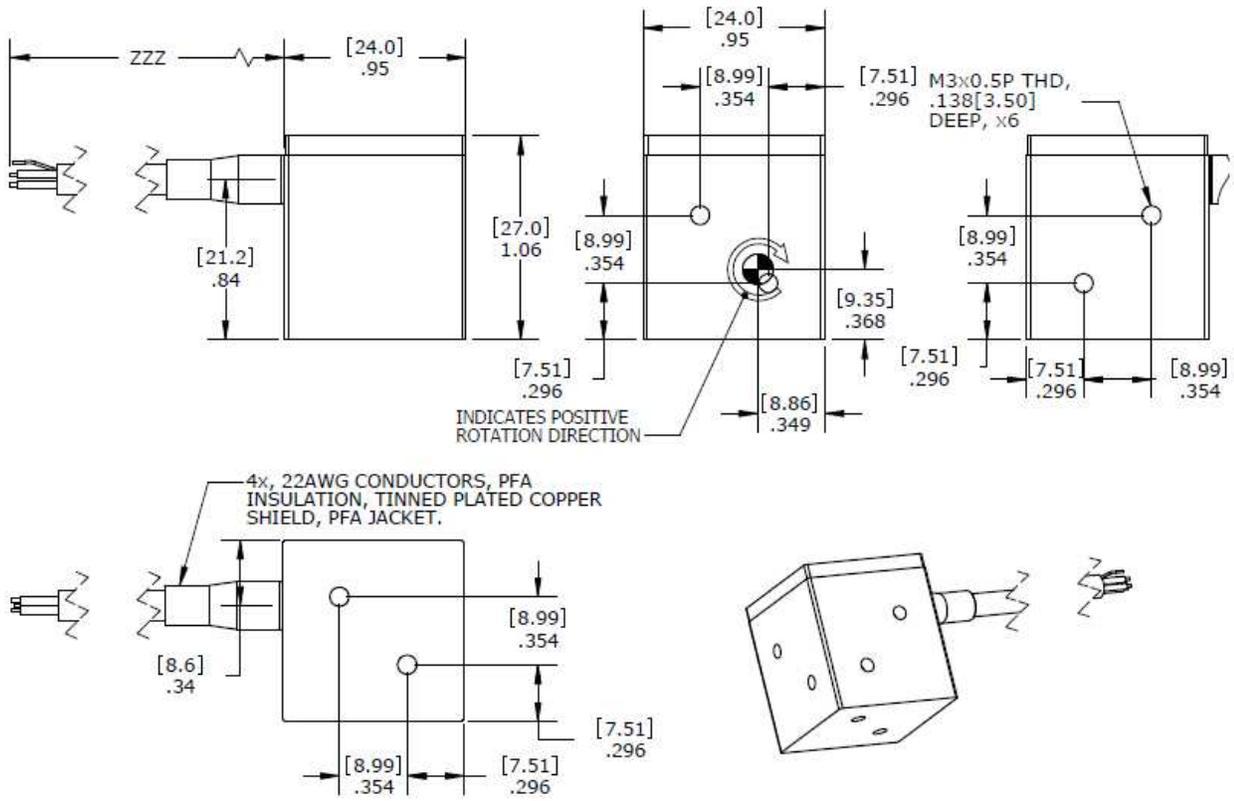


Calibration supplied: CS-ARLIN NIST Traceable Calibration with Sensitivity and Offset

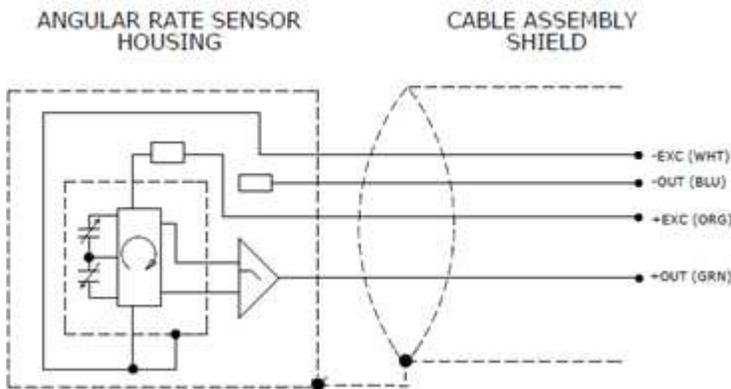
Optional accessories: 34170B Adaptor Plate for Flange Mounting

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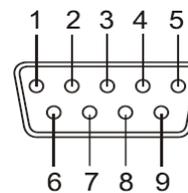
DIMENSIONS



SCHEMATIC



Option D: DB9 Male Connector



- Pin 1: +OUTPUT SIGNAL
- Pin 2: -OUTPUT SIGNAL
- Pin 3: NOT USED
- Pin 4: NOT USED
- Pin 5: NOT USED
- Pin 6: NOT USED
- Pin 7: NOT USED
- Pin 8: +EXCITATION VOLTAGE
- Pin 9: -EXCITATION VOLTAGE (GND)

ORDERING INFORMATION

11206AC	RXXX	BYYY	TZZZA	L000
Range R050 = ±50deg/sec R180 = ±180deg/sec				
Bandwidth B050 = 0 to 50Hz (standard option) BYYY = Contact factory for wider bandwidth option				
Cable Length T004 = 4ft cable (standard option) TZZZ = Contact factory for custom length (ZZZ in feet)				
Cable Termination A = None, flying leads D = 9-pin DB9 male connector				
Dielectric Rating L000 = 2kV fast transient (standard option) L001 = 4kV fast transient				

Example; 11206AC-R180-B050-T004A-L000

Model 11206AC, ±180deg/sec range, 0-50Hz bandwidth, 4ft cable length, flying leads, 2kV dielectric rating

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