



Eliminates management  
of calibration data



# 11207AC Angular Rate Sensor

## SPECIFICATIONS

- Rugged Uniaxial Angular Rate Gyro
- Low Noise Vibration Rejecting Rate Gyro
- $\pm 300^\circ/\text{sec}$  Dynamic Range
- Interchangeable Sensors, Identical Calibrations
- High Stability, Temperature Compensated
- 10 to 36Vdc Excitation Voltage

The TE Connectivity model 11207AC Angular Rate Sensor is a rugged uniaxial analog gyroscope capable of accurately measuring angular rate under severe environmental conditions. The Gyro Sensor design rejects linear acceleration and vibration influences, making the model 11207AC Angular Rate Gyro extremely stable, even in high shock and vibration environments.

The angular rate 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.

Each angular rate sensor has been accurately tested and compensated over the full  $-40^\circ\text{C}$  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  $+2.5\text{Volts}$ .

## 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 11207AC 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 11207AC sensor 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.

## PERFORMANCE SPECIFICATIONS

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

### Parameters

#### DYNAMIC

Dash Number	-R300
Range (deg/sec)	±300
Sensitivity (mV/deg/sec)	7.5 ±1%
Frequency Response (Hz)	0-100
Non-Linearity (%FSO)	±0.01
Alignment (deg)	±1.5
Influence of Linear Acceleration (°/sec/g)	0.015
Shock Limit (g)	±10,000
Noise Density (°/sec/√Hz)	0.01

#### 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)	10 to 36
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  
Iout = 1mA, cap load <1000pF  
@100Vdc

#### ENVIRONMENTAL

Thermal Zero Shift (°/sec)	±1.0 typical (±6.0 max)
Thermal Sensitivity Shift (%)	±1.0
Operating Temperature (°C)	-40 to +85
Humidity (Active Element & Electronics)	Hermetically Solder Seal
Humidity (Housing)	Epoxy Sealed, IP65

-40 to +85°C  
-40 to +85°C

#### 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

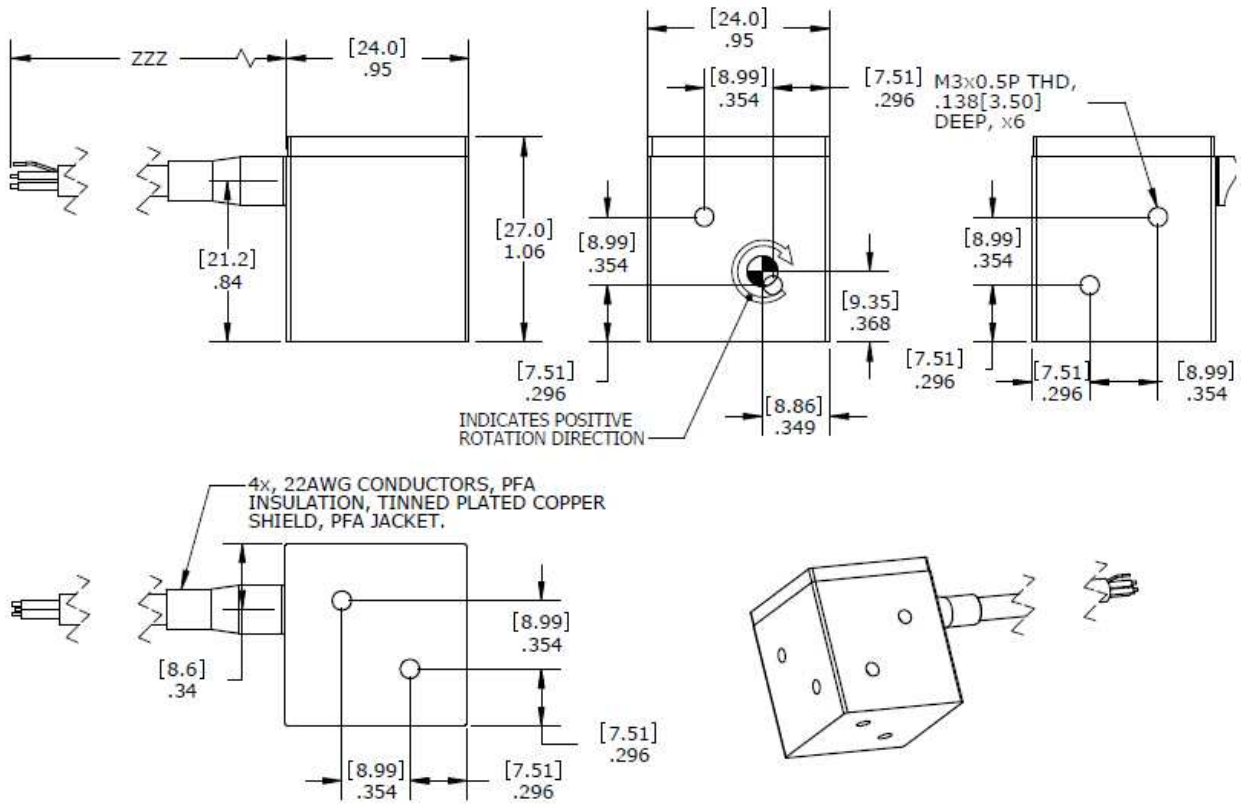


<b>Calibration supplied:</b>	CS-ARLIN	NIST Traceable Calibration with Sensitivity and Offset
<b>Optional accessories:</b>	34170B	Adaptor Plate for Flange Mounting

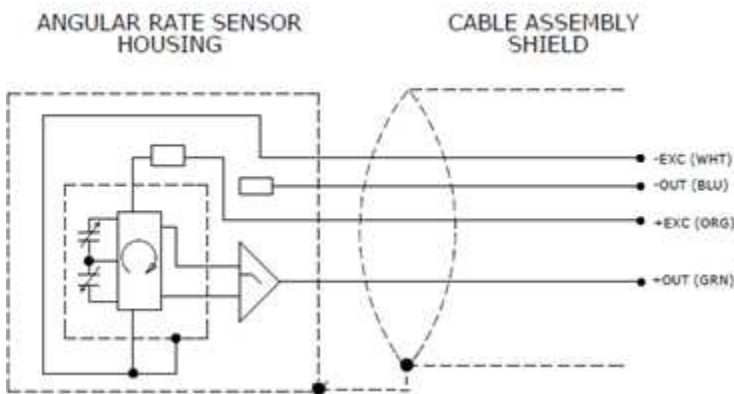
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# 11207AC ANGULAR RATE SENSOR

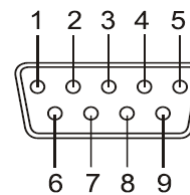
## DIMENSIONS



## 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

11207AC                      RXXX                      BYYY                      TZZZA

### Range

R300 =  $\pm 300$ deg/sec

### Bandwidth

B100 = 0 to 100Hz (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

Example; 11207AC-R300-B100-T004A

Model 11207AC,  $\pm 300$ deg/sec range, 0-100Hz bandwidth, 4ft cable length, flying leads

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