

Drawing Title: ARS-01 INSTALLATION AND OPERATION MANUAL	Drawing Number: S001013	ATA Sensors A Division of A-Tech, Inc. Albuquerque, New Mexico
Model: ARS-01 and ARS-01S	CAGE Code: 6M566	

**INSTALLATION AND OPERATION MANUAL
FOR
MODEL ARS-01
ANGULAR RATE SENSOR**

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Handling

 **ESD Risk: The ARS contains sensitive electronic devices, observe proper ESD handling procedures.**

Unpacking

Unpack the ARS at a clean and static safe workstation. The handler should be properly grounded with a wrist strap.

Transporting

The ARS should only be transported in a static dissipative or conductive container. Remove the ARS from the container only at a clean and static safe workstation. Take care not to drop the ARS as sharp impacts can damage it.

Storage

The ARS should be stored in a static dissipative or conductive container.

Storage/Operating Temperature: -18°C to +50°C

Storage/Operating Humidity: 20% to 80%

Cleaning

The ARS was cleaned at the manufacturer before shipment. If necessary, the ARS can be re-cleaned with a lint-free cloth and 2-Propanol.

Electrical Connection

The cable assembly required for the ARS is the CA-01. The CA-01 has a flat, round connector on one end that mates to the pins on the ARS. The other end is normally pig-tailed with no connector. The leads are stranded 30 gauge. If both ends of the cable are supplied with connectors, disregard the connection instructions given below.

Lead Color	Pin Number	ARS-01	ARS-01S
		Connection	Connection
Red	1	+5 VDC to +18 VDC	+10 VDC
White	2	-5 VDC to -18 VDC	Power Common (0 VDC)
Black	3	Common (0 VDC)	Signal Common*
Yellow	4	Output Signal	Output Signal

*The signal common for the ARS-01S model is an internally generated reference voltage. If multiple ARS-01S sensors are used, the signal commons should not be tied together.

Health and Status

When power is applied to the ARS the signal voltage will swing between its maximum output voltages before settling out at the null. The signal voltage should settle to its null within 2-3 minutes. When the ARS is quiescent (no motion) the signal voltage should remain between +/- 10 mV. Note that very small motions are detectable by the ARS and can cause the signal voltage to change.

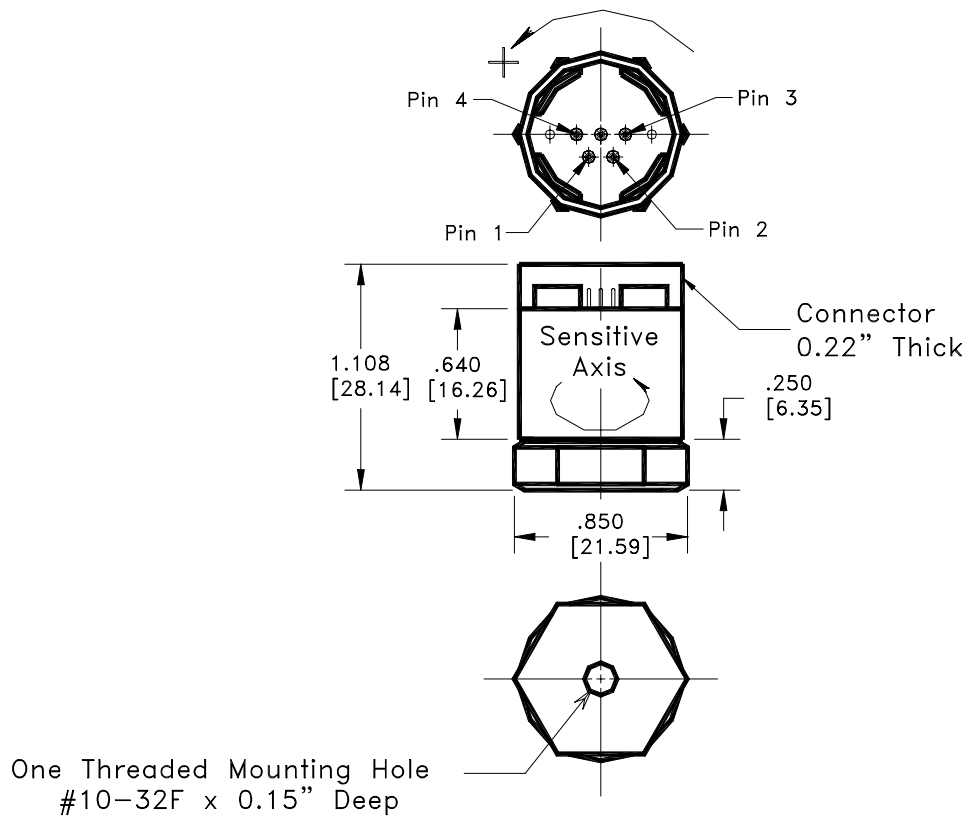
Mounting

ESD Risk: The ARS contains sensitive electronic devices, observe proper ESD handling procedures.

Individual Sensors

There is a 10-32 threaded hole in the bottom of the hex base of the ARS for mounting. A double-sided 10-32 screw is supplied with the ARS for mounting. The recommended torque on the screw is 33 in-lb. Take care not to twist or otherwise stress the hex base relative to the rest of the ARS.

The case of the ARS above the hex base is connected to signal common. For best results, make sure that this part of the ARS case is electrically isolated from the mounting surface and any other surrounding surfaces.



Triaxial Kit

The triaxial kit consists of a mounting block and plate, three ARS-01 or ARS-01S sensors, four 4-40 x 5/16" flat head screws, and three double-sided 10-32 screws.

The sensors mount to the mounting block with the double sided 10-32 screws. The mounting block mounts to the plate with the 4-40 screws. The torque on the 4-40 screws should not be greater than 96 in-oz.

Two faces of the mounting block have 2-56 and 0-80 threaded holes for mounting linear accelerometers if desired. The plate also has 2-56 and 0-80 holes for linear accelerometers and there is a cutout in the bottom of the mounting block to accommodate them. The accelerometer mounting holes fit the Endevco 7264 and 7265 series.

