

INSTALLATION INSTRUCTIONS FOR HALL EFFECT SPEED SENSORS

Page 1 is for Document Control Only and is not included.

EC COMPLIANCE:

This non sparking device conforms to the requirements of EN 60079-15:2010 & EN 60079-0:2012 for use in a Group II category 3 G, zone 2 hazardous environment. The safety of operation is assured by the design and construction of the unit. Its operating circuitry features low energy capability, very low capacitance and inductance and is mounted in a fully encapsulated, stainless steel housing with no significant amount of light metal. It has a very low temperature rise, <10°C over the ambient or mounting temperature.

MANUFACTURER:

AI-TEK Instruments, LLC.
152 Knotter Drive
Cheshire, CT 06410

Models: RH1512-026, -027, RH1522-026, -027, RH1612-025, -026, -027, RH1622-026, -027

MARKING:

 II 3G

Ex nA II X Gc

-40°C ≤ Tamb ≤ 125°C

AI-TEK RH(Model Number) xxx ← Date Code (Two Digit Year, Single Digit Month Code)

DATE CODE					
MONTH	CODE	MONTH	CODE	MONTH	CODE
JAN	A	MAY	E	SEPT	K
FEB	B	JUN	G	OCT	L
MAR	C	JUL	H	NOV	M
APR	D	AUG	J	DEC	N

UL/CSA/ATEX Required Marking

TEMPERATURE RATING:

Operating/Mounting temperature: -40°C to 125°C

SIZE A	CODE IDENT. NUMBER 1XP56	DWG NO. 960-0109-001	REV H
			SHEET 2

STANDARD HALL SENSOR INSTALLATION SEE FIGURE #1:

CAUTION: Target must be stationary before installing the sensor!

1. Thread the sensor into the mounting bracket. If a feeler gauge can be used, select the gauge with the proper thickness for the maximum allowable air gap and place it over the highest point on the target. Screw the sensor in until it touches the selected gauge. Remove the gauge. Tighten the locknut.
2. If the mounting bracket uses a clearance hole instead of a threaded hole, lock nuts are required on both sides of the bracket. Hold the sensor in the correct orientation against the feeler gauge and tighten both lock nuts.
3. If a feeler gauge cannot be used, thread the sensor into the threaded hole finger tight against a tooth or the largest diameter of the stationary target. Back the sensor out of contact to the desired air gap and correct orientation, then tighten the locknut. A full CCW revolution results in an air gap of: one divided by the number of threads per inch.
EXAMPLE: $5/8 - 18 \text{ THREAD} = 1/18 = .056''$.
4. Connect the sensor leads as follows:
 - a. RED (Vin): 4.5 to 24 VDC Power Supply
 - b. WHITE (Output): To system Input
 - c. BLACK (Common): To system common
 - d. GRN/YEL (Housing): Earth Ground

CAUTION: Incorrect wiring of the Output and Power Leads can result in irreparable damage to the sensor.

SENSORS WITH INTERNAL PIPE THREADS FOR CONDUIT FITTINGS:

Install the conduit fitting into the sensor egress internal thread and finger tighten. While holding the sensor hex body with a 1" wrench, tighten the conduit fitting and locknut(s). Install a conduit seals if required or desired.

DO NOT EXCEED 100 POUND-INCHES FOR 5/8" OR 3/4" HOUSINGS.

MAINTENANCE:

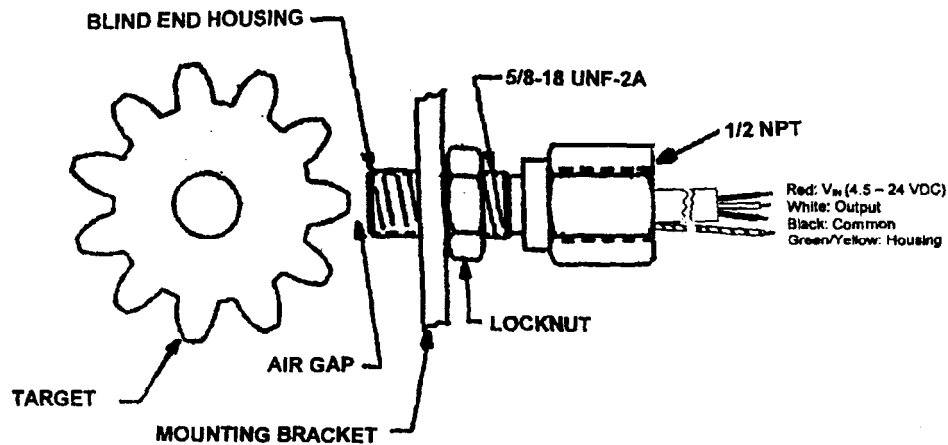
This component requires no maintenance or recalibration other than periodic checks to ensure that it is relatively clean and secure (no loose locknuts).

SIZE A	CODE IDENT. NUMBER 1XP56	DWG NO. 960-0109-001	REV F
			SHEET 3

USER PRECAUTIONS:

Contact between the sensor and a rotating target may cause damage to the sensor. Always adjust the air gap between the sensor tip and the target while the target is motionless with its largest diametrical feature, i.e. a tooth, in front of the sensor. After the adjustment, slowly rotate the target by hand, if possible, to ensure that there is no contact due to run out.

FIGURE #1



TYPICAL HALL SENSOR INSTALLATION

SIZE A	CODE IDENT. NUMBER 1XP56	DWG NO. 960-0109-001	REV F
			SHEET 4