



# INSTALLATION INSTRUCTIONS FOR MAGNETIC 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 60079-15:2005 & EN 60079-0:2006 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. It's 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: 70085-1010-404, -406, -417, -420, 70085-101040430, 70085-101040630,  
 70085-101041730 & 70085-101042030

**MARKING:**

Ⓔ II 3G  
 Ex nA II T2  
 -20°C ≤ Tamb ≤ 220°C  
 ITS09ATEX46246X



AI-TEK/70085-1010-nnn xxx ← Date Code (Two Digit Year,  
 | Single Digit Month Code)  
 |  
 |\_\_ Model Number

OR  
 AI-TEK/70085-1010nnn30 xxx ← Date Code (Two Digit Year,  
 | Single Digit Month Code)  
 |  
 |\_\_ Model Number

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

Factory Mutual and ETL Required Marking.

SIZE <b>A</b>	CODE IDENT. NUMBER <b>1XP56</b>	DWG NO.: <b>960-0125-001</b>	REV <b>E</b>
			SHEET 2

**TEMPERATURE RATING:**

Operating/Mounting temperature: -20°C to 220°C

**MECHANICAL SENSOR INSTALLATION SEE FIGURE #1:**

1. If a feeler gauge can be used, select the gauge with the proper thickness and place it over the highest point on the target. Thread the sensor into the mounting bracket until it touches the selected gauge, then tighten the locknut.
2. 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 until the desired air gap is set, then tighten the locknut. A full CCW revolution results in an air gap of: .056”.

***DO NOT EXCEED 100 POUND-INCHES TORQUE ON LOCKNUT(S)***

**INTERNAL PIPE THREADS FOR CONDUIT FITTINGS:**

Install the conduit fitting into the sensor egress internal thread and hand tighten. While holding the sensor hex body with a 1” wrench, tighten the conduit fitting as required.

**ELECTRICAL INSTALLATION:**

All connecting wiring must be done in accordance with all applicable codes and requirements for the Class and Division or Zone of the location the sensor is being installed in.

**ONLY if installed in a Class 1, Division 1 location:**

An intrinsic safety barrier, meeting the entity parameters listed on the Product Specification, must be used.

**If installed in a Class 1, Zone 2 or ATEX Zone 2 location:**

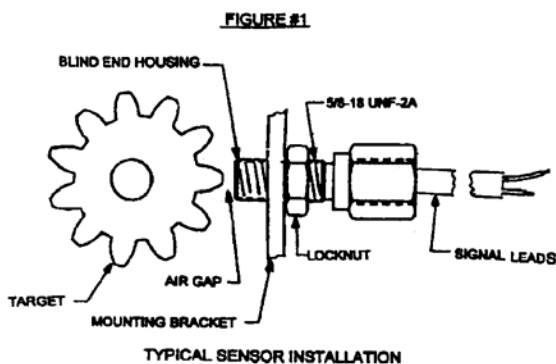
The use of an intrinsic safety barrier is not required.

**MAINTENANCE:**

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

**USER PRECAUTIONS:**

1. **DO NOT connect to power source! Ne filé pas a la source de pouvoir!**
2. 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 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.



SIZE <b>A</b>	CODE IDENT. NUMBER <b>1XP56</b>	DWG NO.: <b>960-0125-001</b>	REV <b>E</b>
			SHEET 3