



## Approved Passive Sensors

AI-Tek has been producing Passive sensors for over 60 years. We have taken our years of experience and developed a line of passive sensors for hazardous duty locations for use in Industrial, Energy and Oil & Gas markets. AI-TEK Instruments, LLC has been granted approval for a line of IEC Ex approved Passive sensors for Zone 1 applications.

### CHARACTERISTICS

**ELECTRICAL:** All measurements at 25 C unless otherwise specified.

**OUTPUT:** Voltage to be 13.4 volts peak to peak minimum when sensing an 8 pitch, 12 tooth steel gear with a 100,000 ohm load, an air gap of (.030) 0.76 mm and surface speed of (500 IPS) 12.7 m/s. See Wiring Schematic Figure 2.

**COIL DC RESISTANCE:** 185 - 240 ohms.

**POLARITY:** White lead to be positive with respect to black lead upon approach of ferrous material. See Figure 2 Wiring Schematic.

**INSULATION RESISTANCE:** 100 Meg-ohms.

**DIELECTRIC:** Sustain 1200 VAC min for 1 sec or 1000 VAC min for 1 minute between coil and case.

**GENERATED CURRENT:** 50 mA max.

**ENVIRONMENTAL:**

**OPERATING TEMPERATURE:** -65C TO +95C.

**MATERIALS:**

**HOUSING:** Type 303 SST.

**INTERNAL:** Units are encapsulated with materials appropriate for the unit's rated temperature.

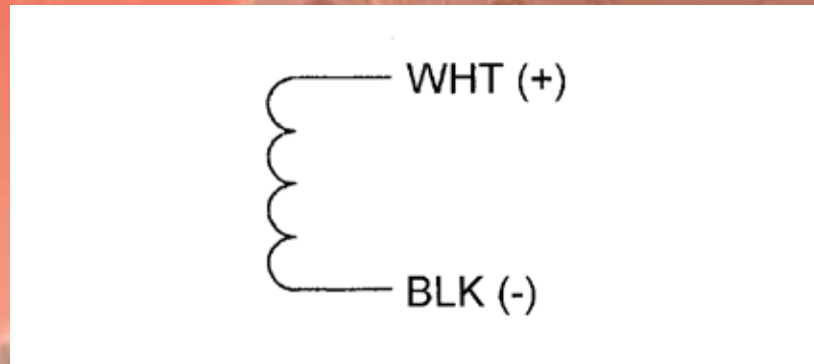
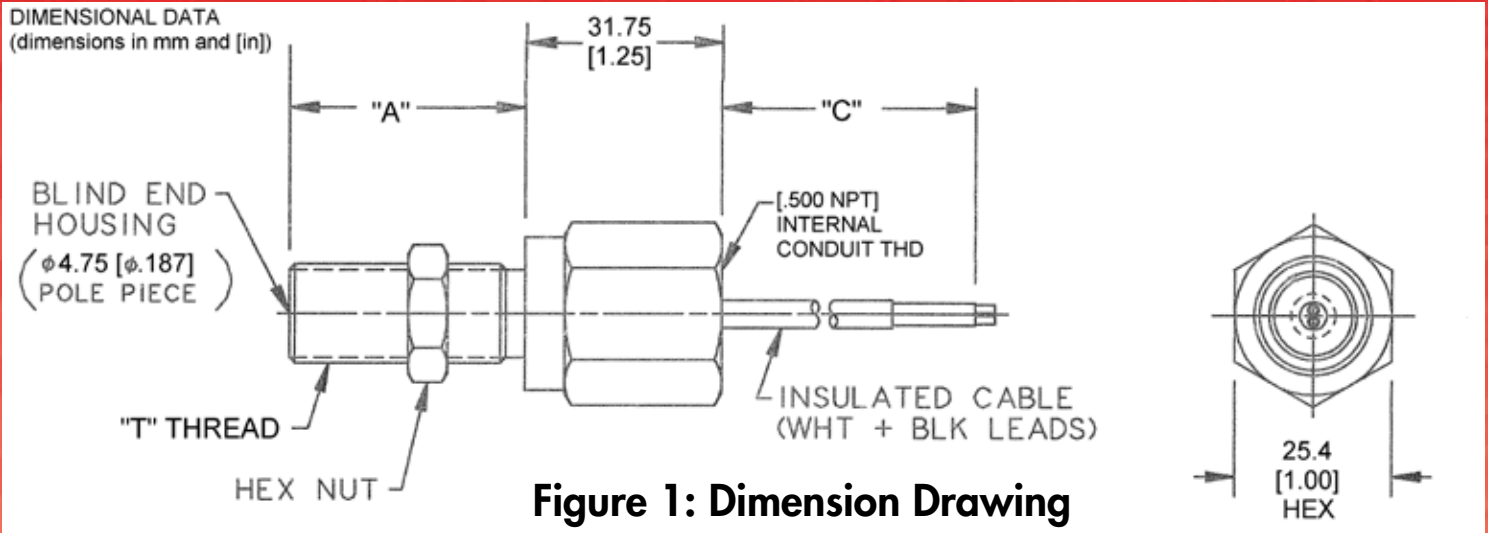
**CABLE:** PTFE jacketed, 2 conductor shielded cable.

### KEY FEATURES

- Approved for IEC Ex and ATEX Zone 1 locations (Ex ia Gb)
- Available in a range of inch and metric thread lengths and sizes and cable lengths of 3 or 10 meters – below are standard products

PART NUMBER	DESCRIPTION
70085-3030-111	5/8-18 thrd, 1.5" LONG, 3 m cable
70085-3030-112	5/8-18 thrd, 2.75" LONG, 3 m cable
70085-3030-113	5/8-18 thrd, 4" LONG, 3 m cable
70085-3030-114	5/8-18 thrd, 6" LONG, 3 m cable
70085-3030-211	5/8-18 thrd, 1.5" LONG, 10 m cable
70085-3030-212	5/8-18 thrd, 2.75" LONG, 10 m cable
70085-3030-213	5/8-18 thrd, 4" LONG, 10 m cable
70085-3030-214	5/8-18 thrd, 6" LONG, 10 m cable
70085-3030-222	3/4-20 thrd, 2.75" LONG, 10 m cable
70085-3030-235	M16 x 1.5 thrd, 40mm LONG, 10 m cable
70085-3030-237	M16 x 1.5 thrd, 100mm LONG, 10 m cable

**It is the customer's responsibility to determine whether these products are suitable for their application.**



**NOTES:**

- When used in a IEC Ex Zone 1 location, these sensors **MUST** be used with a MTL # 7764ac Intrinsic Safety barrier and installed in such a manner as to limit the output voltage to less than 12V Pk-Pk and a total energy of less than 26 microjoules,
- Data is reference only and subject to change. Refer to factory for details.



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