

5/8-18-2A UNF SS 304 MAGNETIC PICK-UP SENSOR

Precision Electrodynamics | Engineered for reliable non-contact speed sensing



Designed for demanding industrial environments, the 5/8-18-2A UNF SS 304 Magnetic Pick-Up Sensor provides reliable rotational speed detection for engines, transmissions, and other rotating machinery. Its passive Variable Reluctance Speed (VRS) technology enables operation without an external power supply. The sensor features an integrated magnetic assembly and coil that generate an electrical signal in response to the movement of ferrous targets. As gear teeth pass the sensing tip, changing magnetic conditions produce an alternating voltage output. The signal frequency corresponds to rotational speed, while its amplitude varies with operating conditions. Featuring a robust 304 stainless steel body and a 5/8-18-2A UNF threaded mounting configuration, the sensor is designed for integration into compatible heavy-duty vehicles, generators, and industrial equipment. It supports engine speed monitoring, timing applications, and rotational feedback for control and protection systems.

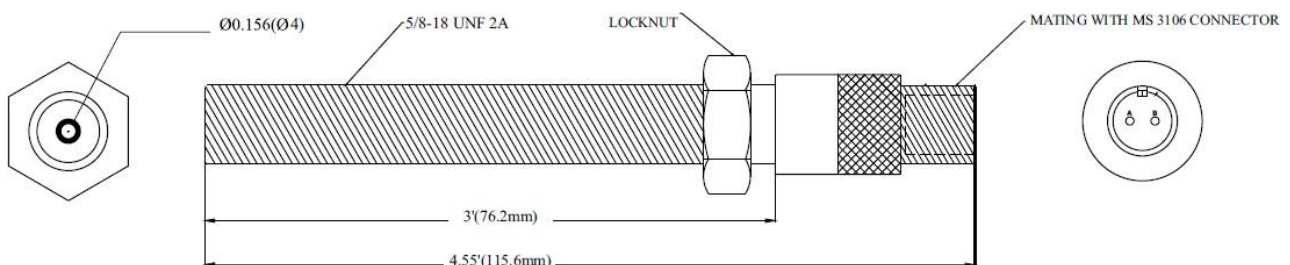
PRODUCT AT A GLANCE

THREAD	SIGNAL	OPERATING TEMP.
5/8-18-2A UNF	30 V PP minimum	-40°C to +107°C

KEY PRODUCT INFORMATION

- SS304 body with metallic finish.
- 30 V PP minimum signal under the stated test condition.
- Operating temperature range of -40°C to +107°C.
- Military connector mates with MS3106A-10SL-4S.
- Customised connectors are optional.

DIMENSION AND CONFIGURATION





TECHNICAL SPECIFICATIONS

PARAMETER	SPECIFICATION
Thread specification	5/8-18-2A UNF
Signal amplitude	Tested with 60-tooth gear, 1 mm air gap, 1000 RPM; signal 30 V PP minimum
Polarity	Pin B positive with respect to pin A on approach of a ferrous target
High-pot test	1000 Vrms (lead wire to case)
Sensing configuration	N-pole facing sensing gear
Operating conditions	-40°C to +107°C; resistant to moisture, gases, petroleum lubricants and fuels, salts, mild acids and alkalis
Pick-up connector	Military connector mates with MS3106A-10SL-4S
Case material	Stainless steel 304 grade
Potting material	Elantas insulating Debofil 60 + Hardener 758

APPLICATIONS

- **Engine RPM monitoring** – Measures crankshaft or flywheel speed in diesel and gas engines.
- **Generator speed sensing** – Provides reliable RPM feedback for generator control and protection systems.
- **Gearbox speed measurement** – Detects rotational speed of gears and shafts.
- **Turbine & rotating machinery monitoring** – Measures shaft speed for performance and condition monitoring.
- **Speed control & protection systems** – Provides pulse signals for governors, tachometers, overspeed protection, and control systems.

CUSTOMIZATION

Customised connectors are available / optional as specified in the supplied product documentation. Harness length and connector configuration can be customer-specific where indicated.

OPERATING PRINCIPLE



TARGET APPROACHES

A ferrous gear tooth approaches the sensor's sensing area.



FLUX CHANGES

The moving target changes the magnetic flux around the internal coil.



AC SIGNAL

The changing flux induces an AC voltage at the output terminals.



PRECISION ELECTRODYNAMICS

NOMENCLATURE: 5/8-18-2A UNF MAGNETIC PICKUP SENSOR

	P	M	2	B	1	G	0	ML	
Make									Connector type
P PED									AT Automotive connector
Sensor type									ML Mil connector mating MS 3106
M MPU									MM Mil connector + mating MS 3106
H Hall Sensor									PC Packard connector
									PM Packard + mating connector
									CO Cable only
Thread length									Cable Type
0 0-0.99"(0-25.1mm)									0 No cable
1 1-1.99"(25.4-50.5mm)									1 1ft Flying leads
2 2-2.99"(50.8-75.9mm)									2 3ft Flying leads
3 3-3.99"(76.2-101.3mm)									3 1ft Two-core cable
4 4-4.99"(101.6-126.7mm)									4 3ft Two-core cable
5 5-5.99"(127-152.1mm)									5 6ft Two-core cable
6 6-6.99"(152.4-177.5mm)									6 1ft Braided cable
									7 3ft Braided cable
Thread size									8 6ft Braided cable
B 5/8-18-2A UNF									9 15ft Braided cable
Material									Resistance
1 Stainless Steel 304									A 60-150Ω / 100 Ω
									B 151-250Ω / 200 Ω
									C 251-350Ω / 300 Ω
									D 351-500Ω / 400 Ω
									E 501-900Ω / 700 Ω
									F 901-1200Ω / 1000 Ω
									G 1201-1700Ω / 1500 Ω
									H 1701-2200Ω / 2000 Ω
									I 2201-2500Ω / 2400 Ω

Order Guide

1 - Make	PED
2 - Sensor type	M=MPU, H = Hall effect sensor
3 - Thread length	0 to 6 (Refer Thread length table)
4 - Thread size	B 5/8-18-2A UNF(Refer Thread size table)
5 - Material	1 = SS 304, 2= Anodized aluminium
6 - Resistance range	A to I (Refer Resistance table)
7 - Cable type	0 to 9 (Refer Cable type table)
8 - Connector type	AT/ML/MM/PC/PM/CO (Connector type)

Sample part number : **P M 2 B 1 G 0 ML**

Description : PED make magnetic pickup 2-2.99", thread length 5/8-18UNF, SS304, 1500 Ohms, mating with Ms3106 Mil connector

Note:

Always specify the complete part number when placing order. All dimensions are in inches unless specified. Customised sensors will be manufactured as per requirement.

Please contact- info@precisionelectrodynamics.com for technical specification and clarification