

Inductive Speed Sensor

O 030 350 001 XXX

Inductive sensors give a voltage output when subjected to a changing magnetic field.

The field is set up by a magnet inside the sensor body and changes when ferromagnetic teeth are passed beneath the sensor (no magnets are required in the target).

The voltage increases with increasing speed and with a reduction of the gap between the sensor and the target.

The sensors are suitable for use with interfaces that trigger on threshold or zero crossing.

TYPICAL APPLICATIONS

- Cam speed
- Crank speed
- Gear speed and position
- Wheel speed

ELECTRICAL

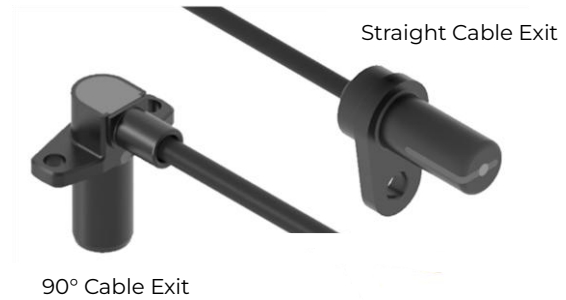
- Typical Resistance:
 - 8mm: 510 Ω to 630 Ω
 - 10mm: 450 Ω to 600 Ω
 - 13mm: 1000 Ω to 1200 Ω
- Typical Cut-in speed :
 - 8mm: 58 RPM (3kΩ load) 51 RPM (no load)
 - 10mm: 40 RPM (3kΩ load) 38 RPM (no load)
 - 13mm: 29 RPM (3kΩ load) 21 RPM (no load)
- Output polarity follows tooth form, that is a rising metal edge on the wheel generates a rising voltage output from the sensor.

CABLE AND CONNECTION

- 22 AWG un-screened¹ cable
- Any cable length is available on request
- Various Autosport and military standard connectors are available
- Connection:

Wire/Pin 1	Signal +
Wire/Pin 2	Signal -

Typical inductive sensors, for illustrative purposes only



MECHANICAL

- See attached drawings for dimensions:
 - D100 350 001 269
- Air gap 1.0 mm (max), 0.8 mm (nominal)
- Available body types:
 - Closed
 - Eddy current reduction slot
 - Exposed core with eddy current reduction slot
- Available Cable exit types:
 - 90° Cable Exit
 - Straight Exit
- Weight typically less than 50 g (including cable)
- Sensor is axisymmetric, special orientation is not required
- Aluminium alloy body, hard anodised and dyed black
- Integrated cable boss for strain relief

ENVIRONMENTAL

- Vibration 50 Hz - 2.5 kHz @ 40 g, 8 hrs per axis
- Resistant to standard motorsport fluids
- Maximum humidity 100 %
- Typical Operating temperature limitations:
 - Sensor body and sensing element:
 - -10 °C to +170 °C
 - Cable boss:
 - Polyester - 150 °C max.
 - Aluminium - 170 °C max.
 - Cable:
 - DR-25 - 150 °C max.
 - Viton - 200 °C max.

¹ Optionally, the cable can be screened. If screened, the isolation between the screen and sensor wires is tested to be >100 MΩ @ 250 V

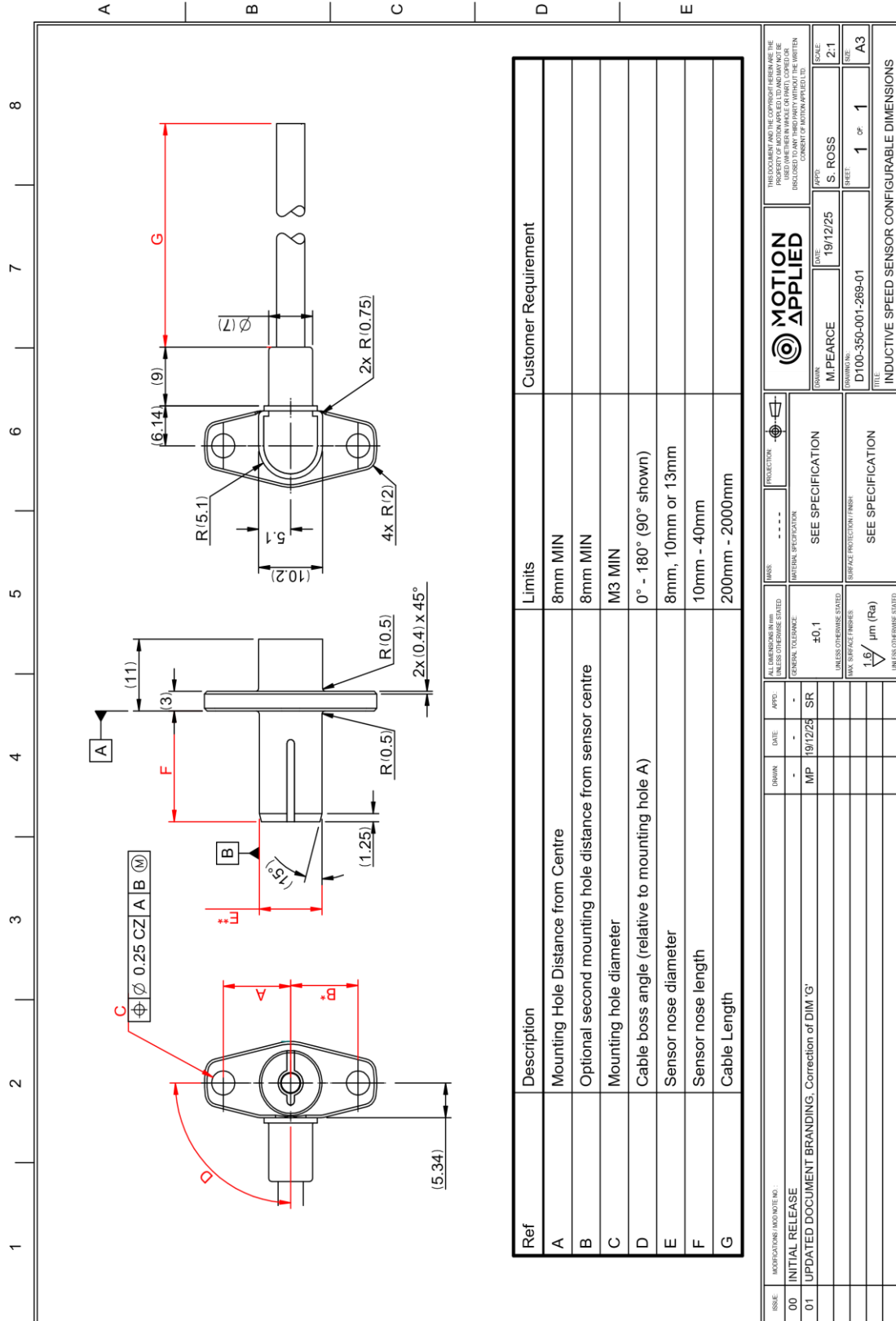
Get in touch

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ISSUE	MODIFICATIONS (NOTE NO.)	DATE	APPROVED	PROJECTION	SCALE
00	INITIAL RELEASE	-	-	SEE SPECIFICATION	2:1
01	UPDATED DOCUMENT BRANDING, Correction of DIM 'G'	19/12/25	MP	SEE SPECIFICATION	A3
DRAWN BY: M. PEARCE		DATE: 19/12/25	APPROVED BY: S. ROSS	SHEET 1 OF 1	
DRAWING NO: D100-350-001-289-01		TITLE: INDUCTIVE SPEED SENSOR CONFIGURABLE DIMENSIONS		SIZE: A3	