



# Inductive Speed Sensor IA



- ▶ Crankshaft/wheel speed
- ▶ 32.2 mm depth/lead
- ▶ Bore diameter 12.5 mm
- ▶ Max. operating temperature 230°C

This sensor is designed for incremental measurement of rotational speed (e.g. crankshaft or wheel speed).

The inductive sensor consists of a bar magnet with a soft magnetic pole pin supporting an induction coil with two connections. Every time a ferromagnetic ring gear turns past this sensor, it generates a voltage in the coil which is directly proportional to the periodic variation in the magnetic flux. The rotational speed is reflected on a periodic interval between the voltage's zero transition points.

The main benefit of this sensor is the combination of a high quality production part and robust, high temperature resistance. Additionally the installation depth can be changed according to the customer request.

## Application

Application	Speed
Max. frequency	≤ 15 kHz
Target wheel air gap AG	0.8 ± 0.3 mm
Operating temp. range (sensing head)	-40 to 230°C
Storage temperature range	0 to 100°C
Max. vibration	800 m/s <sup>2</sup> max. 80 h

## Technical Specifications

### Mechanical Data

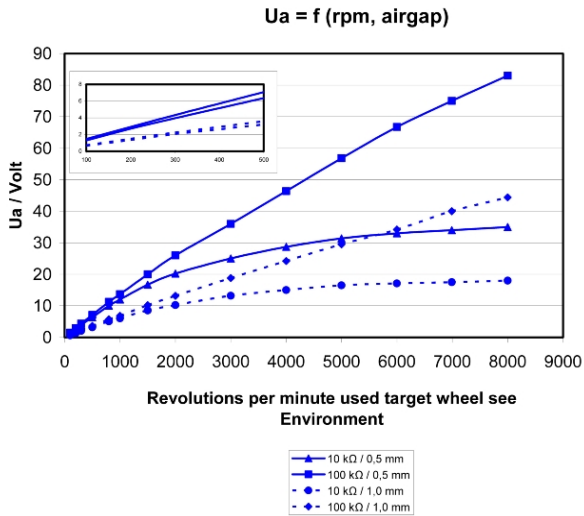
Magnetic pole	Round
Bore diameter	12.5 mm
Weight w/o wire	30 g
Installation depth L2	32.2 mm

### Electrical Data

Coil resistance	1,200 Ω
Inductance max.	400 mH
Output voltage max.	190 V <sub>p-p</sub>

### Environment

Target wheel diameter D	160.43 mm
Thickness t	> 5 mm
Width of teeth b1	4.1 mm
Width of gap b2	4.3 mm
Depth of teeth h1	3.5 mm
Depth of teeth h2	1.75 mm
Number of teeth	60-2



**Connectors and Wires**

Connector	ASL 6-06-05SN-HE
Mating connector	ASL 0-06-05PN-HE
Pin 1	-
Pin 2	Gnd
Pin 3	Sig

Pin 4	-
Pin 5	Scr
Various motorsport and automotive connectors are available on request.	
Sleeve	DR-25
Wire size	AWG 24
Wire length L	10 to 100 cm
Please specify the required wire length with your order.	

**Installation Notes**

The inductive speed sensor IA is developed for wheels made of ferromagnetic material.

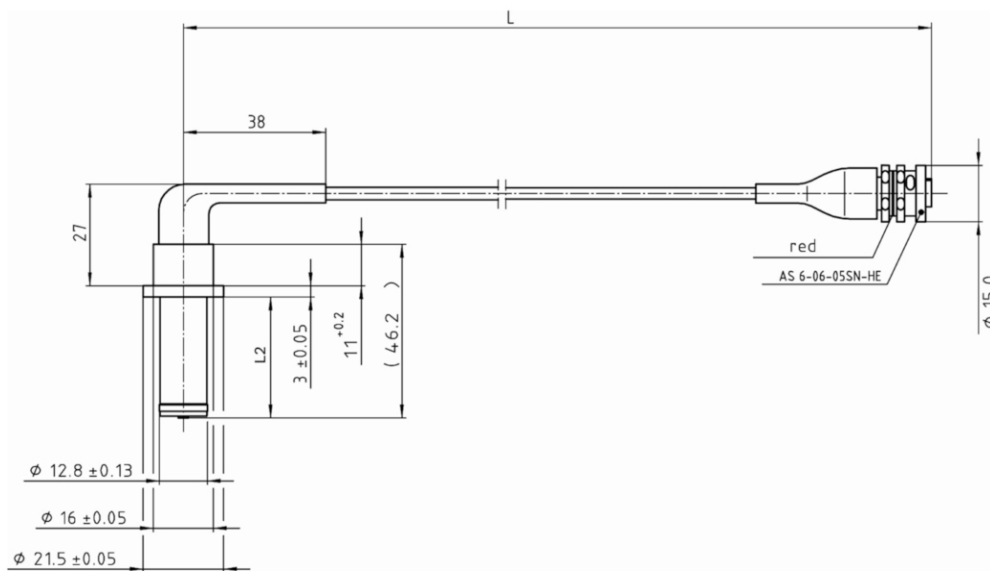
If a wheel with different dimensions is used (see Environment), the technical function has to be tested individually.

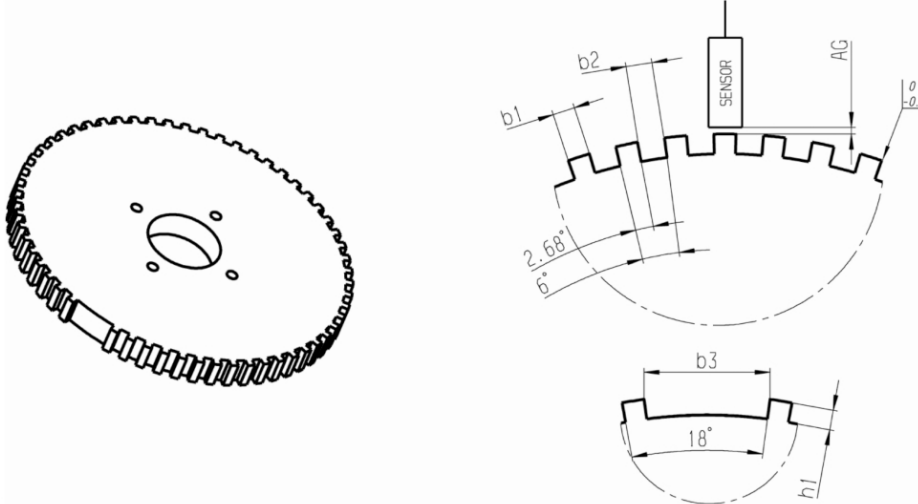
The installation depth L2 can be changed individually according to customer request.

Please contact our technical consultancy for more information.

Please find further application hints in the offer drawing at our homepage.

**Dimensions**





### Ordering Information

Inductive Speed Sensor IA

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