

Inductive Speed Sensor IA-C

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

The inductive sensor consists of a bar magnet with a soft magnetic pole pin supporting an induction coil with two connections. When 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.

It is available in a DR-25 sleeve with various connector options.

The main benefit of this sensor is the combination of a high quality production part and robust, compact design.



Application	
Application	speed
Max. frequency	≤ 15 kHz
Target wheel air gap AG	0.8 ± 0.3 mm
Operating temp. range (sensing head)	-40 ... 130 °C
Storage temperature range	-40 ... 100 °C
Max. vibration	800 m/s ² max. 80 h

Electrical Data	
Coil resistance	860 Ω ± 10 %
Inductance max.	370 mH ± 15 %
Output voltage max.	200 V _{P-P}

Mechanical Data	
Magnetic pole	round
Bore diameter	18 mm
Tightening torque	8 Nm
Weight w/o wire	40 g
Installation depth L2	23.7 mm

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	1 928 404 227
Mating connector	D 261 205 335
Pin 1	Sig+
Pin 2	Sig-
Pin 3	Scr
Various motorsport and automotive connectors are available on request.	
Please specify the required wire length with your order.	

Application Hint

The inductive speed sensor IA-C 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.

Please contact our technical consultancy for more information.

Please find further application hints in the offer drawing (<http://www.bosch-motorsport.com>).

Part Number

Inductive Speed Sensor IA-C **0 261 210 136**

Ua = f (rpm, airgap)



