

Hall-Effect Speed Sensor Mini-HA-P

www.bosch-motorsport.com



BOSCH
Invented for life



- ▶ Wheel/camshaft speed
- ▶ Max. frequency ≤ 10 kHz
- ▶ High vibration resistance
- ▶ Low weight
- ▶ Small housing

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

Due to the rotation of a ferromagnetic target wheel in front of the Mini-HA-P, the magnetic field is modulated at the place of the Hall probe. A Hall-effect sensor element with integrated signal conditioning circuit detects this change and generates a digital output signal. The main feature and benefit of this sensor is the combination of a high quality production part and robust design with a very small housing.

Application

Application	Speed
Max. frequency	≤ 10 kHz
Target wheel air gap	0.2 to 1.5 mm
Temperature range	-40 to 150°C
Output circuit	Open collector for 1 k Ω
Output type	Active low
External magnetic fields	≤ 0.3 mT
Max. vibration	1,200 m/s ² at 10 Hz to 2 kHz

Technical Specifications

Variations

Connector	ASL 6-06-05PC-HE	1 234 482 092
Mating connector	ASL 0-06-05SC-HE	F 02U B00 555-01
Pin 1	U _s	Gnd
Pin 2	Gnd	Sig
Pin 3	Sig	U _s
Pin 4	Nc	-
Pin 5	Nc	-

Mechanical Data

Weight w/o wire	19.2 g
Mounting	With screw 1 x M6
Bore diameter	11.5 mm
Installation depth L2	9 mm
Tightening torque	8 Nm

Electrical Data

Power supply	5 to 18 V
Current I _S	10 mA

Characteristic

Accuracy repeatability of the falling edge of tooth	< 3 % (\leq 6 kHz) < 5 % (\leq 10 kHz)
Signal output	0.4 V to $< U_s$

Environment

Target wheel diameter D	162.34 mm
Thickness t	12.5 mm
Width of teeth b ₁	3.8 mm
Width of gap b ₂	4.7 mm
Width of sync. gap b ₃	20.79 mm
Depth of teeth h	3.4 mm
Number of teeth	60-2

Connectors and Wires

Connector	Please see Variations
-----------	-----------------------

Various motorsport and automotive connectors available on request.

Sleeve	HT wire \varnothing 5.2 mm
--------	------------------------------

Wire size	AWG 20
-----------	--------

Wire length L	< 27 cm
---------------	---------

Please specify the required wire length with your order.

Installation Notes

The Mini-HA-P can be connected directly to most control units and data logging systems.

Please avoid abrupt temperature changes.

For mounting please use only the integrated plug.

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

Please ensure that the environmental conditions do not exceed the sensor specifications.

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

Ordering Information**Mini-HA-P**

ASL 6-06-05PC-HE

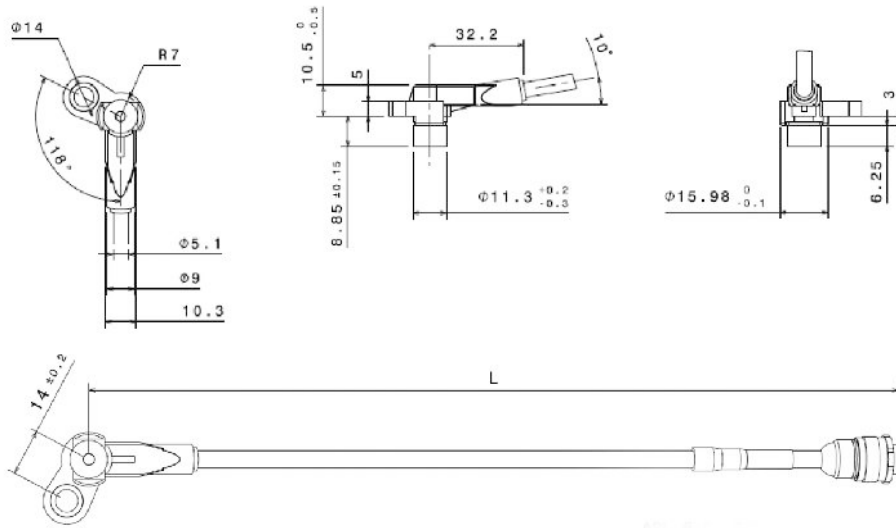
Order number **F 02U V00 564-02**

Mini-HA-P

1 234 482 092

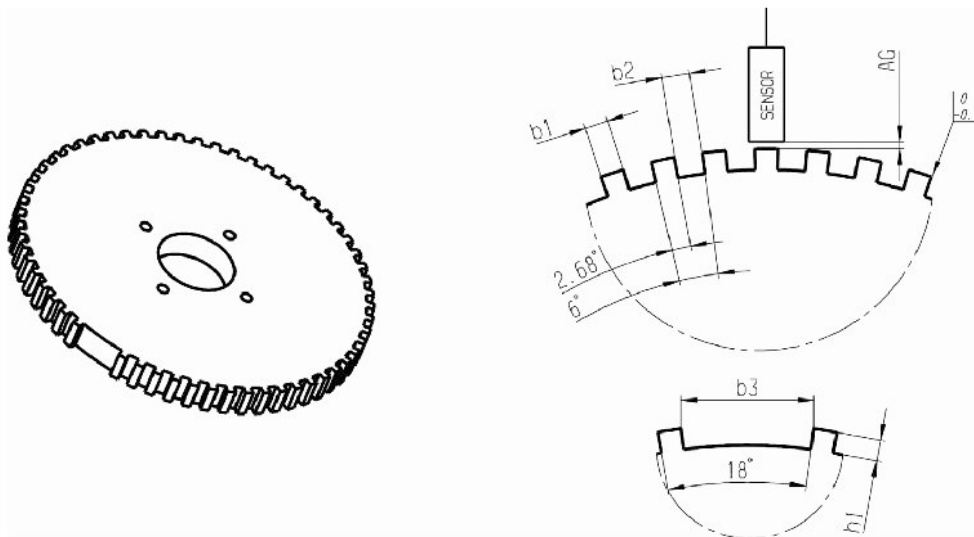
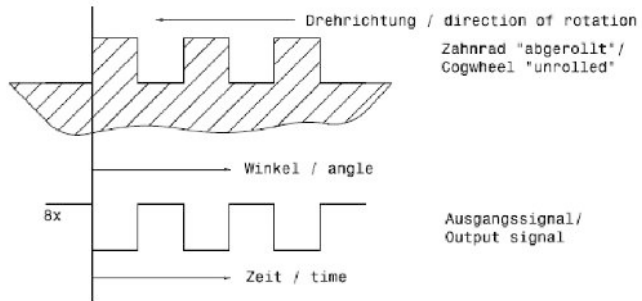
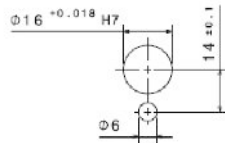
Order number **F 02U V00 566-02**

Dimensions



Einbauvorschrift
Mounting requirement

Signal-Definition
Signal definition



Represented by:

Europe:

Bosch Engineering GmbH
Motorsport
Robert-Bosch-Allee 1
74232 Abstatt
Germany
Tel.: +49 7062 911 79101
Fax: +49 7062 911 79104
motorsport@bosch.com
www.bosch-motorsport.de

North and South America:

Bosch Engineering North America
Motorsports
38000 Hills Tech Drive
Farmington Hills, MI 48331-3417
United States of America
Tel.: +1 248 876 2977
Fax: +1 248 876 7373
motorsport@bosch.com
www.bosch-motorsport.com

Asia-Pacific:

Bosch Engineering Japan K.K.
Motor Sport Department
3-33-8 Tsuruya-cho, Kanagawa-ku, Yokohama-shi
Kanagawa 221-0835
Japan
Tel.: +81 45 410 1650
Fax: +81 45 410 1651
motorsport@bosch.com
www.bosch-motorsport.com