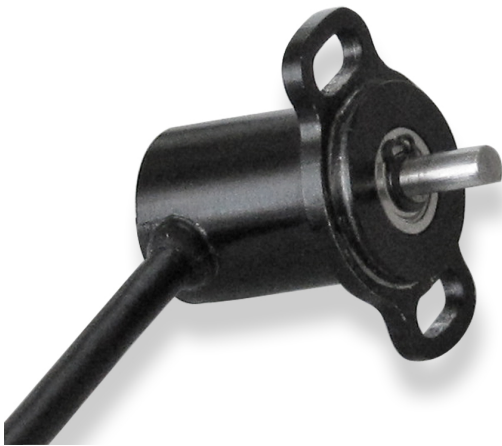


Rotary Position Sensor Mini-RP 360-H

www.bosch-motorsport.com



- ▶ Rotational movement measurement
- ▶ Measurement range 360°
- ▶ Operating temperature -40 to 150°C
- ▶ Superior accuracy <math>< \pm 0.25\% \text{ FS}</math>

This sensor is designed to measure rotational movement, e.g. throttle angle, spring travel, gearbox position or steering angle.

The electronic is designed with a magnetic rotary sensor with Hall elements and digital signal processing. The angular position is provided by a two pole magnet integrated in the sensor shaft. A Hall effect sensor is disposed between two magnets in association with a movable specially formed ferromagnetic part. This is used to control flux in the sensor in order to produce a linearly varying output voltage dependent on the position.

The main benefit of this sensor is its contactless Hall effect technology and its robust design for motorsport applications. Other measurement ranges are available on request.

Application

Application	360°
Operating temperature range	-40 to 150°C
Max. vibration	Vibration Profile 1 (see www.bosch-motorsport.com)

Technical Specifications

Mechanical Data

Weight w/o wire	22 g
Protection class	IP68 & IP69K
Mounting	2 x M3
Lifetime	500 x 10 ⁶ rotations
Housing	Aluminum

Electrical Data

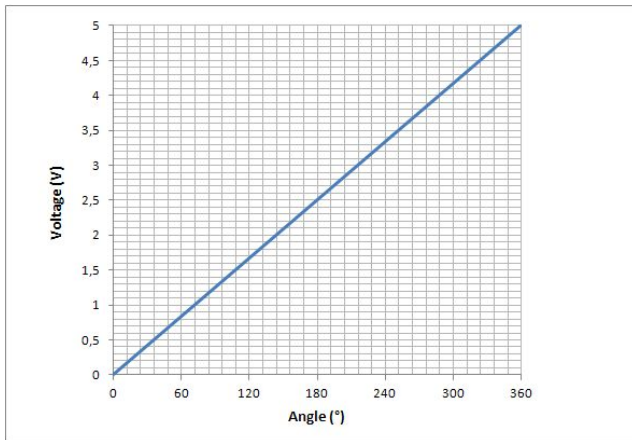
Power supply U_s	5 V \pm 0.5 V
Current I_S	< 15 mA
Resolution	0.025 % of measurement range

Characteristic

Max. rotation speed	600 min ⁻¹
Temperature coefficient	<math>< \pm 0.003\% \text{ FS}/^\circ\text{C}</math>
Superior accuracy	<math>< \pm 0.25\% \text{ FS}</math>

Direction of rotation Clockwise

Both rotation directions and other rotation angles available on request.



Connectors and Wires

Connector ASU 6-03-03 PA-HE

Mating connector F 02U 000 194-01
ASU 0-03-03SA

Pin 1 Power 5 V

Pin 2 Ground

Pin 3 Signal 0.05 to 4.95 V

Sleeve FDR-25

Wire size AWG 26

Wire length L 10 to 30 cm

Various motorsport and automotive connectors on request.

Please specify the requested wire length with your order.

Installation Notes

The sensor can be connected directly to most control units.

The sensor is designed with contactless Hall effect technology.

Each mounting orientation is possible.

Sensor is at mid point of electrical angle when shaft and wire exit are aligned as shown in the offer drawing.

Safety Note

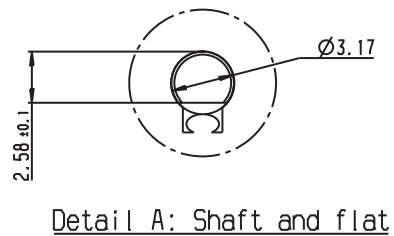
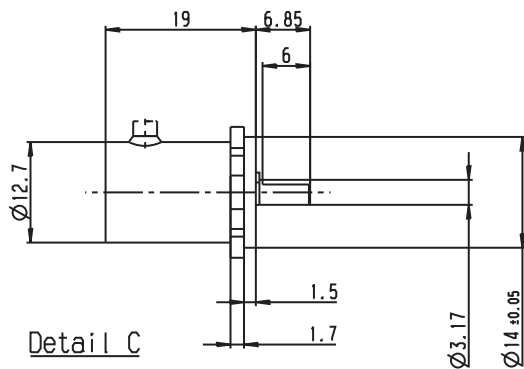
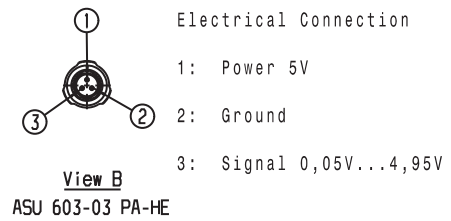
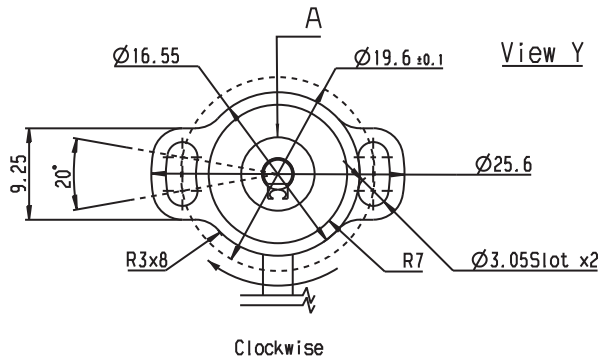
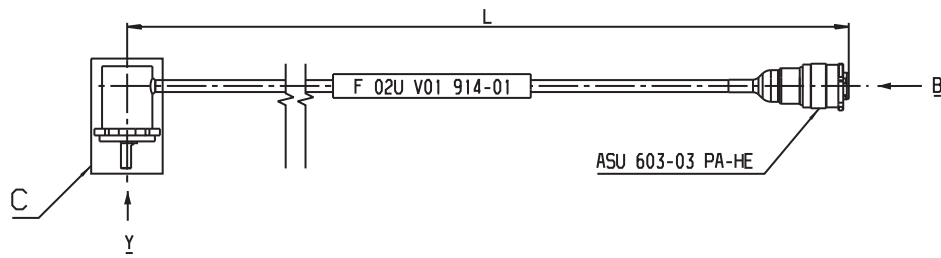
The sensor is not intended to be used for safety related applications without appropriate measures for signal validation in the application system.

Ordering Information

Rotary Position Sensor Mini-RP 360-H

Order number **F 02U V01 914-01**

Dimensions



Represented by:

Europe:
Bosch Engineering GmbH
Motorsport
Robert-Bosch-Allee 1
74232 Abstatt
Germany
Tel.: +49 7062 911 9101
Fax: +49 7062 911 79104
motorsport@bosch.com
www.bosch-motorsport.de

North America:
Bosch Engineering North America
Motorsport
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

Latin America:
Robert Bosch Ltda
Motorsport
Av Juscelino Kubitscheck de
Oliveira 11800
Zip code 81460-900
Curitiba - Parana
Brazilia
Tel.: +55 41 3341 2057
Fax: +55 41 3341 2779

Asia-Pacific:
Bosch Engineering Japan K.K.
Motorsport
18F Queen's Tower C, 2-3-5 Minato Mirai
Nishi-ku, Yokohama-shi
Kanagawa 220-6218
Japan
Tel.: +81 45 650 5610
Fax: +81 45 650 5611
www.bosch-motorsport.jp

Australia, New Zealand and South Africa:
Robert Bosch Pty. Ltd
Motorsport
1555 Centre Road
Clayton, Victoria, 3168
Australia
Tel.: +61 (3) 9541 3901
motor.sport@au.bosch.com