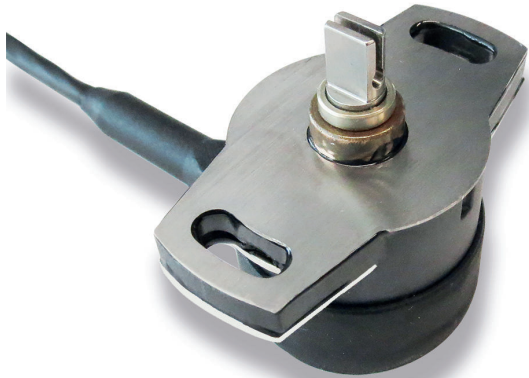


Rotary Position Sensor RP 40-H red

www.bosch-motorsport.com



BOSCH
Invented for life



- ▶ Rotational position measurement
- ▶ Measurement range 40° full redundancy
- ▶ Operating temperature -40 to 125°C
- ▶ Accuracy $\leq \pm 0.5\%$ FS

This sensor is designed to measure the rotational position of the acceleration pedal.

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.

Application

Application	40° full redundancy
Operating temperature range	-40 to 125°C
Max. Vibration	Vibration Profile 1 (see Appendix or www.bosch-motorsport.com)

Technical Specifications

Mechanical Data

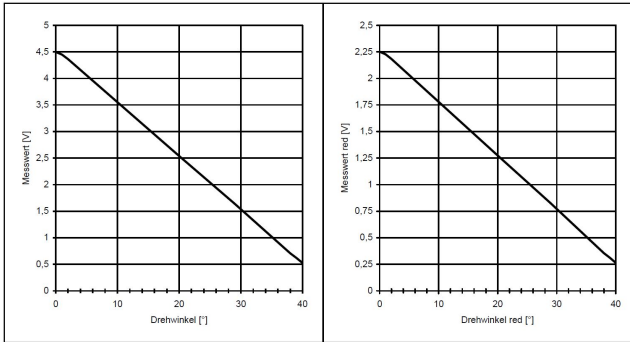
Weight w/o wire	50 g
Protection class	IP67
Mounting	2 x M4
Lifetime	500 x 10 ⁶ rotations
Housing	Temperature resistant plastic

Electrical Data

Power supply U_s	5 V \pm 0.5 V
Current I_S	< 40 mA

Characteristic

Max. rotation speed	120 min ⁻¹
Accuracy	< $\pm 0.5\%$ FS
Direction of rotation	Clockwise



Signal 1 / Signal 2

Connectors and Wires

Connector AS 6-07-35PN	F 02U 000 424-01
Mating connector AS 0-07-35SN	F 02U 000 238-01
Pin 1	Power 5 V Sensor 1
Pin 2	Ground Sensor 1
Pin 3	Signal Sensor 1
Pin 4	Power 5 V Sensor 2
Pin 5	Ground Sensor 2
Pin 6	Signal Sensor 2
Sleeve	FDR-25
Wire size	AWG 24
Wire length L	150 to 1,000 ± 5 mm

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.

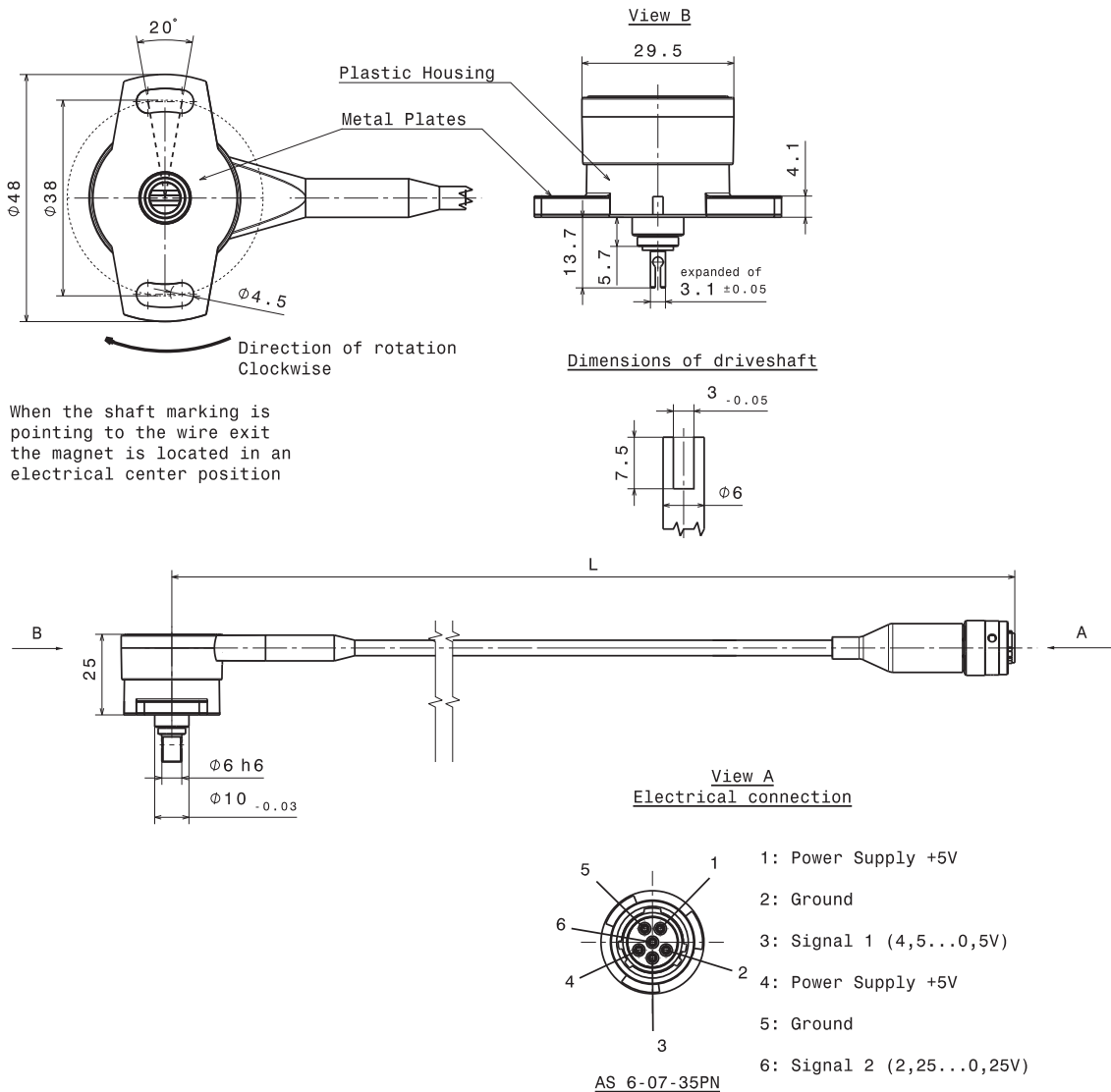
Safety Note

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 RP 40-H red
Order number **F 02U V01 997-01**

Dimensions



When the shaft marking is pointing to the wire exit the magnet is located in an electrical center position

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