

Rotary Potentiometer RP 360-H

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.

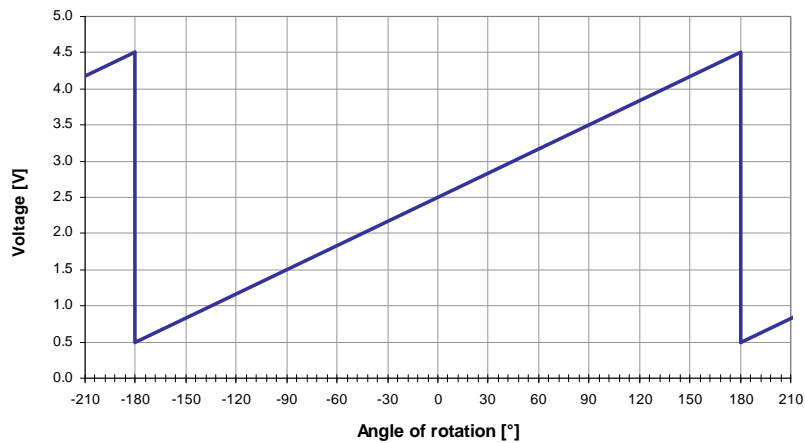


Application	
Application	0 ... 360°
Operating temperature range	-40 ... 140 °C (5 V supply)
Storage temperature range	-55 ... 140 °C
Max. vibration	200 m/s ² @ 5 ... 2,000 Hz

Electrical Data	
Power supply U _s	5 V regulated 9 V ... 30 V unregulated
Max. power supply	30 V
Total resistance	10 kΩ
Current I _s	< 12.5 mA
Resolution	0.025 % of measurement range
Output voltage range	0.5 ... 4.5 V
Output load	10 kΩ

Mechanical Data	
Weight w/o wire	< 35 g
Protection class	IP68
Mounting	2 x M4
Lifetime	20 x 10 ⁶ operations of ±75°
Housing	synthetic material

Characteristic	
Max. rotation speed	600 min ⁻¹
Temp. coefficient	< 30 ppm/°K in 5 V supply mode < 90 ppm/°K in 9 V ... 30 V supply mode
Direction of rotation	Anti-Clockwise
Both rotation directions are available on request.	
Redundancy	No



Connectors and Wires

Connector	ASL 6-06-05PA-HE
Mating connector	ASL 0-06-05SA-HE
Pin 1	Us
Pin 2	Gnd
Pin 3	Sig
Pin 4	-
Pin 5	-
Sleeve	DR-25
Wire size	AWG 22
Wire length L	16 cm

Various motorsport and automotive connectors are available on request.

Please specify the required wire length with your order.

Application Hint

The products of the RP series can be connected directly to most control units.

The sensor is designed with contactless Hall effect technology.

Any 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.

Operating temperature range for unregulated supply: -40 ... +137 °C (9 V supply). Derate upper temperature limit by 0.57 °C for every 1 V increase in supply, e.g. -40 ... +125 °C @ 30 V.

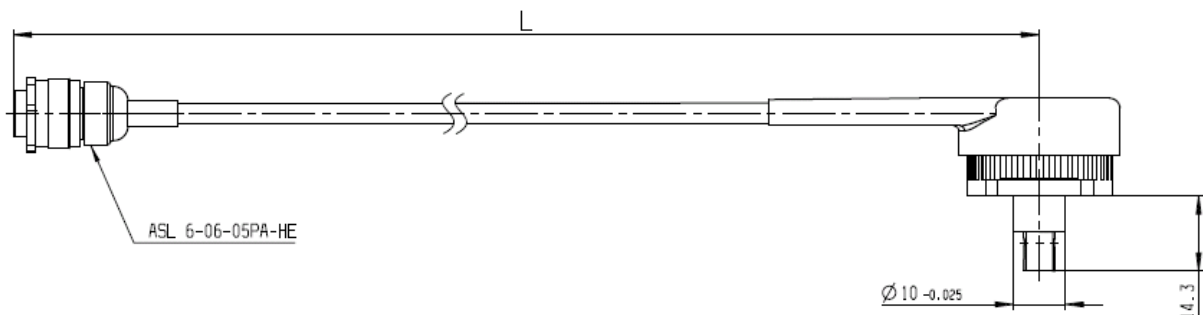
Both rotation directions and other measurement ranges are available on request.

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

Part Number

RP 360-H

F 02U V00 641-01





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