

ROTARY POSITION SENSOR

RPPS-FS SERIES ROTARY POTENTIOMETER ANGLE POSITION SENSOR

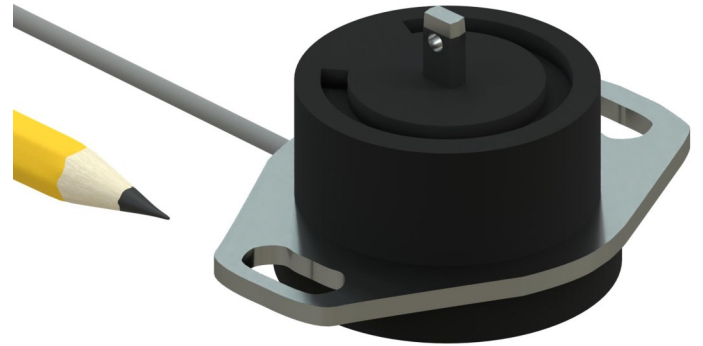
Flat Shaft Rotary Position Sensor

FEATURES

- 0° to 200° rotational angle
- 200° rotation technology
- Non-linearity less than $\pm 0.5\%$ of FRO
- Environmentally sealed to IEC IP61
- DC-in / DC-out electronics

APPLICATIONS

- Quarter-turn valves
- Flue dampers
- Throttle position
- Dancer arm tensioning



OVERVIEW

The HGSI RPPS-FS series rotary position potentiometer sensors are used to track the rotational position of a target. They provide an analog voltage output proportional to shaft rotation over a total range of 200°. Typical termination for this sensor is a 3-wire 1 meter (36 in) cable, custom options may be available upon request.

RPPS-FS series sensors are enclosed in a 40mm diameter housing, with a centered flat shaft. Mechanically, the sensor can rotate 200° before it reaches mechanical stops on both ends of the measuring range. The measuring range is indicated by the flats on the shaft of the sensor. The output signal is ratiometric; from 0% to 100% of excitation voltage, increasing as it is rotated counter-clockwise.

This RPPS-FS has an absolute output characteristic, which is a benefit over incremental output sensors like optical encoders that lose their position information in the event of a power failure.

SPECIFICATIONS

Input Voltage:	10 VDC max
Full Scale Output:	0 to 100% of input voltage (potentiometer circuit)
Resolution:	Infinite
Element Type:	Conductive plastic
Operating Current:	Input voltage / Potentiometer resistance value

Non-linearity, Full stroke: $\pm 0.5\%$ (typical), $< \pm 1.0\%$ (max)
Best Fit Straight Line (BFSL)

Operating temperature: -40°C to 85°C (-40°F to 185°F)
Temperature coefficient: $\pm 0.03\%$ of FSO/°C nominal
Resistance: 5,000 Ω $\pm 20\%$
Repeatability: 0.1°

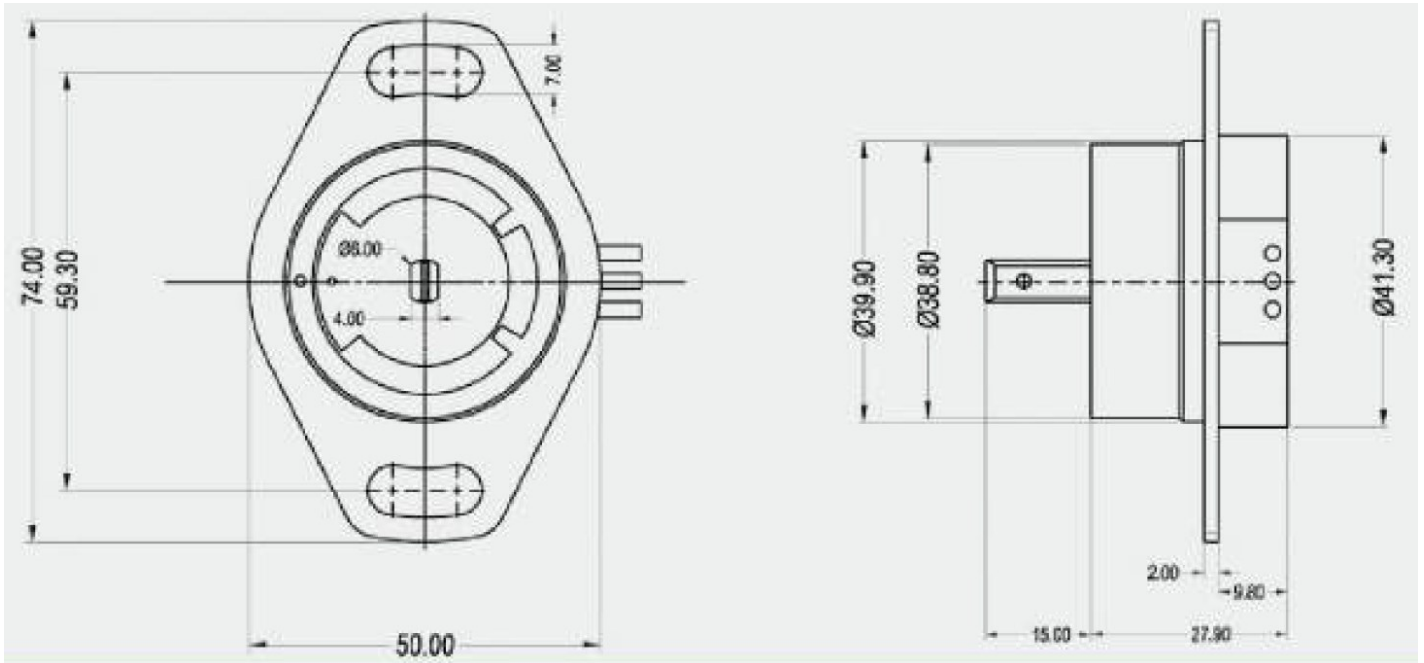
Shock Rating: 50g (single hit) / IEC68-2-29
Vibration Rating: 20g / IEC68-2-6
IP Rating: IP61



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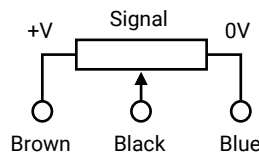
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Dimensions in mm

WIRING PIN OUT

	Integral Cable
DC Power In	Brown
Signal Output	Black
Ground	Blue



IMPORTANT !
DO NOT CONNECT THE BLACK WIRE TO POWER SUPPLY
THIS WILL CAUSE DAMAGE TO THE SENSOR

ORDERING INFORMATION

Model	Body OD	Measuring Range	Cable Length	Termination
RPPS-FS	- □ □	- □ □ □	- □ □ □	- □
	40 40 mm	200 200°	036 36 inch	N Leads

ORDERING EXAMPLE

RPPS-FS-40-200-036-N: 40 mm diameter body, 200° measuring range, 36 inch cable with leads

