

PSE-290

Compact Panel Mount Hall-Effect Rotary Sensor with Mechanical Stop

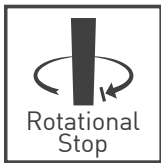


KEY FEATURES



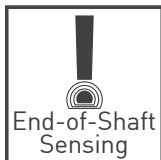
Non-contacting technology

Without any internal gears or mechanical interfaces there are no contacting parts in the sensor subject to mechanical failure.



Mechanical stop

Reliably stops the rotary movement at a maximum rotational travel of 290 degrees.



Integrated shaft

The magnet is securely fastened to the shaft and acts as only moving component in the sensor.



Made for harsh environments

Protection from dust, moisture, vibration and extreme temperatures allows the use in the most demanding environments.



Adaptable to your requirements

Custom mechanical design, programmable transfer function as well as different output protocols and redundancy levels available.

DESCRIPTION

Piher Sensing Systems' PSE Series Rotary Position Sensors are based on contactless hall-effect technology and deliver high accuracy and linearity in a compact package. Increased rotational life and robustness against humidity, vibration and shock make them perfectly suited for harsh industrial and transportation environments. These absolute sensors will not lose its values even after a power failure.

By integrating a mechanical stop at 290 degrees unintentional over travel is mechanically prevented. This makes the PSE-290 especially suitable for human machine input.

Custom versions with different shafts, mechanical or electrical rotational angle can be delivered on request.

APPLICATIONS

Off-Highway

- ▶ Cab controls

Industrial

- ▶ Paint spray systems
- ▶ Test and measurement equipment
- ▶ Machine tool control

Medical

- ▶ Equipment control

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MECHANICAL SPECIFICATIONS

Mechanical Angular Range ¹	290° ±5°
Connection	Fly leads, connector assembly on request
Mounting Method	Panel mount
Shaft diameter	6,25mm

¹ Other specifications on request

ELECTRICAL SPECIFICATIONS

Linearity ¹	±1% absolute (±0.5% upon request)	
Electrical Angular Range ²	270°	
Output Protocol	Analog (Ratiometric), PWM	
Resolution	12 bits	
Output Range ²	standard inverted	10% to 90% Vdc 90% to 10% Vdc
Supply Voltage ²	5V ±10%	
Supply Current	Typ 8.5 mA	
Voltage Protection	±18V	
Self-diagnostic features	yes	

¹ Ferromagnetic materials close to the sensor (i.e. shaft, mounting surface) may affect the sensor's linearity.

² Other specification on request

HOW TO ORDER

Standard Configuration: PSE-290-A-ERA270S-05- - - -

PSE	-	290	-	A	-	ERA 270	S	-	05	-	- - - -
Series		Mechanical rotational angle ¹		Output ²		Electric rotational angle ¹	Output function ³		Voltage supply		PWM Frequency Hz. ⁴
		290		A = analogic P = PWM		ERA270	S = standard I = inverted		05 = 5V ±10%		F250

¹ Other mechanical and/or electrical angular ranges available on request.

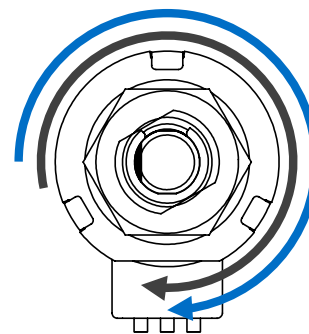
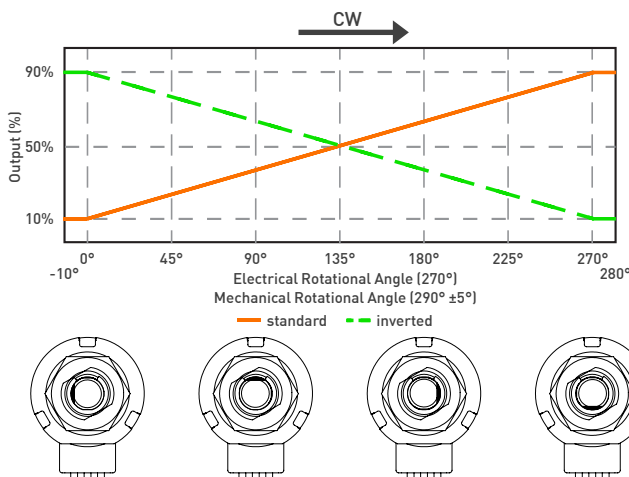
² The analog output is ratiometric, proportional to input voltage.

³ Other output functions available on request. Enter X as long as the new output function is not defined.

⁴ Leave empty if not applicable. Others available on request.

TYPICAL OUTPUT CURVE

ERA-270



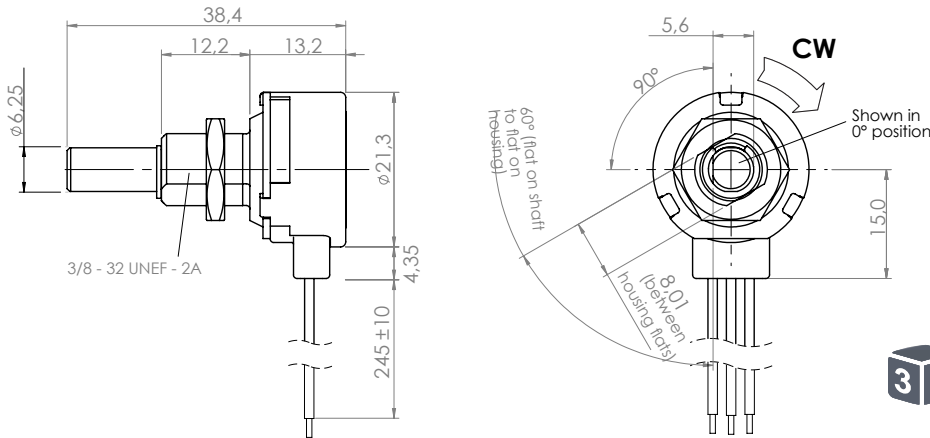
ERA 270°
MRA 290°

Custom output functions available on request.

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DIMENSIONS (IN MM)

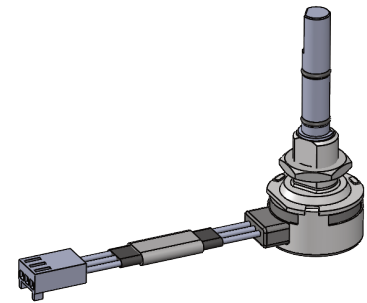


Download the STEP file here:
<https://www.piher.net/piher/?p=5643>

Sensor shipped with one nut installed at base and one lose nut. Other shafts available on request.

MECHANICAL CUSTOMIZATION OPTIONS

- Different shaft sizes
- Additional O-rings
- Connector assembly
- Heat shrink wire protectors



OUR ADVANTAGE

- ▶ Leading-edge innovative position sensing solutions
 - ▷ Contactless (Hall-effect and Inductive Technology)
 - ▷ Contacting (Potentiometers, Printed Electronics)
- ▶ Engineering design-in support
- ▶ All our products can be customized to fit target application and customer requirement
- ▶ Capability to move seamlessly from development to true high-volume production
- ▶ A global footprint with global engineering and commercial support
- ▶ One-stop shop not limited to position sensors (temperature, pressure, gas,...) through group collaboration
- ▶ Flexibility and entrepreneurship of a medium-sized company with the backing of Amphenol Corporation



Please always use the latest updated datasheets and 3D models published on our website.

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