

360° Non-Contacting Rotary Dual Output Hall Effect Sensor

9360 Series

The BEI Sensors 9360 Series rotary sensor is a non-contacting Hall effect device with 360° of rotation and dual outputs. This rugged design is ideally suited for infinite rotation applications where reliability and durability are a priority. The sensor provides absolute position at power on and offers two completely redundant outputs. The packaging is similar to other BEI devices and meets the severe durability requirements that are typical in off-highway and agriculture requirements. The new sensor incorporates a rotating Neodymium disk magnet that enables the sensing element to remain stationary, improving both accuracy and reliability. This combination of magnet, sensor and sealed packaging offers excellent temperature stability and corrosion resistance. The sensor can be configured for Analog (voltage) outputs or with a PWM output. These programmability features are configured at the factory and allow for greater flexibility in creating custom limited electrical angle outputs (i.e. 0-20 degrees for full scale) with short turnaround times.

Fully sealed, (meeting and/or exceeding IP66/IP67 standards) the 9360 is impervious to contamination and moisture. An integrally molded 6-pin connector makes a sealed connection with industry standard Packard Electric connector.

9360 Series Features

Rotating magnet / fixed sensor configuration

Provides improved accuracy and reliability

Fully programmable

The standard sensor provides 0-359.9° electrical degrees. Multiple outputs with limited electrical angles up to 359.9° temperature compensation are also available

Compression molded Neodymium magnets

Provide excellent temperature stability and corrosion resistance

Ratiometric analog output or PWM output

Factory programming through connector

Allows for quick turn-around on custom electrical angles

Sealed construction

IP66 / IP67, 6-pin I/O interface to Packard Electric Metri-Pack Pull-to-Seat 150.2 Series P/N 12162261 or P/N 12162260 connector

Extended temperature range

-40° to +85°C standard, -40° to +125°C available optionally

Extended operating life

Maximum rotational speed limited to 300 RPM



Ordering Information

9360 XXX XX

└ Temperature Rating:
Blank = Standard +85°C
HT = +125°C

└ Requested Electrical Angle:
i.e. 090 = ±45° or 120 = ±60°

SAMPLE: 9360 090

└ Standard +85°C
└ 90° (±45°) Electrical Angle
└ Infinite 360° Rotation Device



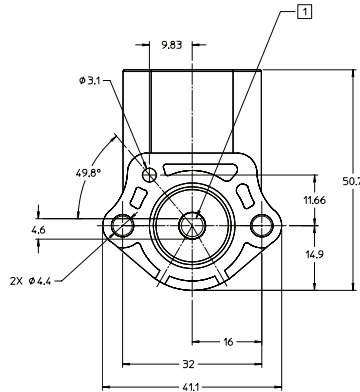
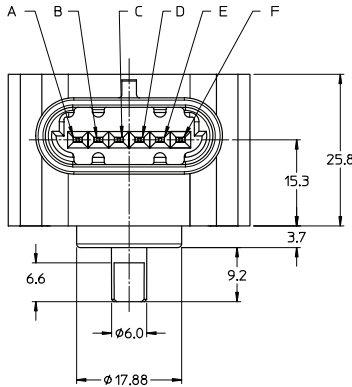
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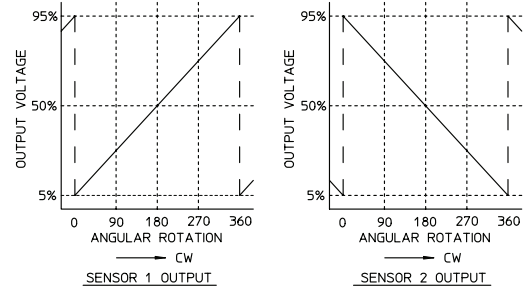
ISO9001 & TS16949 Certified

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Note: All dimensions are shown in millimeters
Note \square : Shaft is positioned at 50% voltage output



CONNECTOR PIN OUTPUT		
	SENSOR 1	SENSOR 2
V _s (INPUT)	F	B
GROUND	E	A
OUTPUT	C	D

Mechanical Specifications

Mechanical travel	0° to +360° with no stops, allowing for infinite rotations
Frequency response	1,000Hz minimum
Rotational torque	0.025 – 0.110 N-m
Weight	35 grams (approx.)

Electrical Specifications

Mechanical input range	0° to +360° (other, custom limited angle ranges available)
Input voltage	5.0 V \pm 0.25V DC
Input current	18mA maximum per output 36mA maximum total (both channels)
Sensor	0.25V – 4.75V for Analog at 5.0V input 5% – 95% duty cycle for PWM (Different outputs and mechanical range(s) available as a custom option)
Accuracy	\pm 0.6% of full scale at room temperature \pm 0.9% of full scale over operating temperature range
Resolution	Analog (continuous)

Environmental Specifications

Electromagnetic compatibility	100V/meter, 14kHz – 1GHz range
Vibration	10G peak, 20 – 2,000 Hz
Shock	50Gs, half sine pulse, 5 m sec duration
Side load	1kg for 1 million cycles
Operating temperature range	-40°C to +85°C (wider operating temperature -40° to +125 C° available)
Storage temperature range	-55°C to +105°C

Specifications subject to change without notice.

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