Mechanical specifications

Rotational life (depends on application and mounting) up to 50,000,000 cycles.

Operating temperature $^1$ -40°C to +125°C.

Electrical specifications

Linear $^1$ ±1% absolute (0.5% upon request).

Angular range Programmable from 15 to 360 degrees.

Output Analog (Ratiometric), PWM, Serial Protocol upon request.

Switch output Upon request, Programmable.

Angular Resolution Analog & PWM: up to 12 bits.

Supply voltage $^1$ Up to 25V.

Supply current Typ 8.5mA for single version.

$^1$ Others: check availability.

Key features

- Simple and robust magnetic design.
- High resolution (up to 14-bit).
- Ratiometric analog or PWM outputs.
- Absolute position feedback up to 360° (keeps position on power loss).
- True full redundant version.
- Sealed construction for harsh environments such as off-highway and marine.
- Protected from dust, moisture, vibration and extreme temperatures.
- Endless rotation.
- Fully programmable transfer function output at the factory with electrical outputs up to 360°.
- Self-diagnostic features.
- Over voltage protection and reverse voltage protection.
- Extended voltage input supply values.

Also upon request:
- Programmable switch output.
- SPI output.
- Lever with return spring.

Industries served

- Automotive and On-highway (road vehicles, trucks, recreational vehicles, road sweepers).
- Off-highway (agriculture, construction and forestry, motorsport, airport operations).
- Material handling.
- Marine engines.
- Medical.
- Industrial.

Applications

- Steering wheel angle sensor.
- Brake and clutch accelerator pedal.
- Arm control.
- Hitch position.
- Throttle control / sensor.
- Bucket position.
- Fork height and mast tilt.
- Transmission gear shifter.
- Suspension and height sensor.
- Steering, accelerator and shifter sensor for marine engine.
Magnetic rotary angle and position sensor-control

Contactless sensor

PSC-360

How to order (example: PSC360G2-F1A-C0000-ERA360-05K)

Simple output (analogic / PWM)

<table>
<thead>
<tr>
<th>PSC360G2</th>
<th>F</th>
<th>1</th>
<th>Output1</th>
<th>Electrical rotation angle</th>
<th>Voltage supply</th>
<th>Temp. range</th>
<th>PWM Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series</td>
<td></td>
<td></td>
<td>Shaft</td>
<td>A = Analogic F = PWM</td>
<td>05 RE</td>
<td>K = -40 to +125ºC</td>
<td>F100</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>1</td>
<td>Type</td>
<td>1 = simple</td>
<td>(see note 1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 = simple</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>F = flat shaft</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Redundant output (analogic / PWM)

<table>
<thead>
<tr>
<th>PSC360G2</th>
<th>F</th>
<th>2</th>
<th>Outputs</th>
<th>Electrical rotation angle</th>
<th>Voltage supply</th>
<th>Temp. range</th>
<th>PWM Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series</td>
<td></td>
<td></td>
<td>Shaft</td>
<td>A = Analogic F = PWM</td>
<td>05 RE</td>
<td>K = -40 to +125ºC</td>
<td>F100</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>2</td>
<td>Type</td>
<td>2 = redundant</td>
<td>(see note 1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 = redundant</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>F = flat shaft</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Full redundant output (analogic / PWM)

<table>
<thead>
<tr>
<th>PSC360G2</th>
<th>F</th>
<th>3</th>
<th>Outputs</th>
<th>Electrical rotation angle</th>
<th>Voltage supply</th>
<th>Temp. range</th>
<th>PWM Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series</td>
<td></td>
<td></td>
<td>Shaft</td>
<td>A = Analogic F = PWM</td>
<td>05 RE</td>
<td>K = -40 to +125ºC</td>
<td>F100</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>3</td>
<td>Type</td>
<td>3 = full redundant</td>
<td>(see note 1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 = full redundant</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>F = flat shaft</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other product configurations will be studied case by case.

Notes

(1) The analog output is a ratiometric output, proportional to:
   - For supply voltage 5V: to input supply voltage.
   - For supply voltage RE: to 5V.

(2) 05: 5V ±10%
    RE: 7V - 25V

(3) Other output functions available check availability. In the How To Order reference, enter CXXXX meanwhile the new output function reference is not defined.

(4) Leave empty if no applicable. Default frequency is 200 Hz
Magnetic rotary angle and position sensor-control

Contactless sensor
PSC-360

Dimensions

Shaft shown at 0º position.

Special version with return spring lever. Check availability.
Mounting instructions

1. Place the component on a flat surface.
2. Fit the actuator onto the shaft avoiding any mechanical play/wobble.
3. Fasten the two M4 screws (M4 washers are recommended).

Connections scheme

Simple analog output connection wiring scheme. Other versions available upon request.

- Brown = Power supply.
- Blue = Ground.
- Black = Signal output.
- White = Not used.
- Grey = Not used.

Fly leads with Wire: 0.35mm². TXL SAE J1128.
Check availability for the connector options.

Output

Others upon request.

Piher Sensing Systems

Our product competencies and services:
- Potentiometers | Position / angle sensors | Rotary switches | Incremental encoders
- Printed circuit resistors | Mechatronics | Value added assemblies
Magnetic rotary angle and position sensor-control

Contactless sensor
PSC-360

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