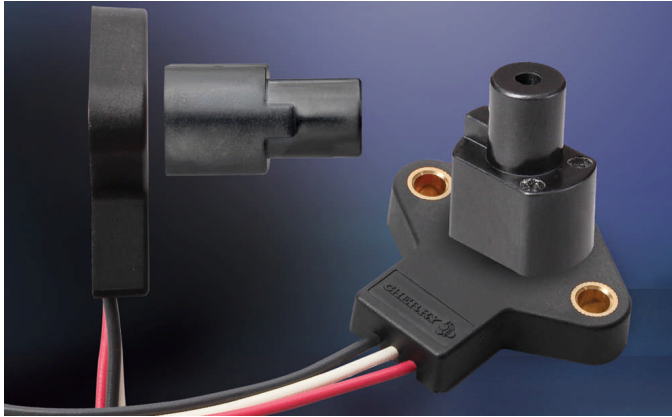


WIRED VERSION

# AN8 Series

Programmable, full 0-360 ° detection  
Contact less angular position sensor  
capable of continuous rotation



## Description

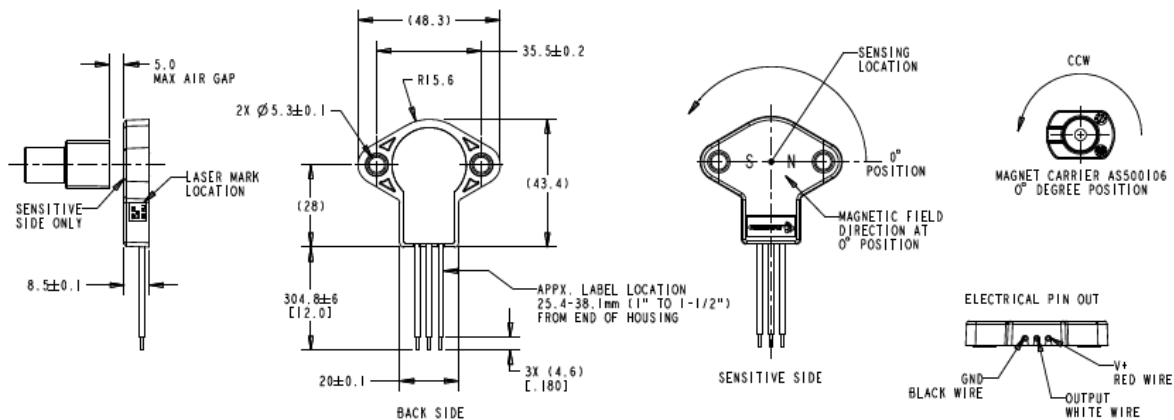
Sensor is operated by rotating a magnetic actuator close to its sensitive face. Output voltage varies according angular position of the magnet.

Optimal performance is achieved with Cherry's **AS500106** magnetic actuator.

## Applications

- Replacement for smart bearings
- PRNDL switch for harsh environments
- Steer wheel position for drive by wire systems
- Throttle position sensor
- Pedal position sensor
- Non contacting Potentiometer

## Dimensions mm



## Features and Benefits

- Angular position sensor with high tolerance for misalignment
- Provides non-contact angular position sensing to full 360° rotation
- No mechanical interface means no parts to wear out
- Sealed design exceeds IEC529 IP68 standard for immersion
- 5VDC ratiometric device.
- Performs with AS500106 standard magnetic carrier
- Provided with EMI/ESD protection to SAE J1113 standards
- Maximum operating temperature of 150°C

## Custom Options

*(Contact factory for minimums and availability)*

- Linear output over specific angular rotation ranges available on request
- Sensor can be programmed for use with custom magnets
- Custom programming option for rising or falling output slope with selectable offset, gain, clamp voltage
- PWM output option available for custom applications

WIRED VERSION

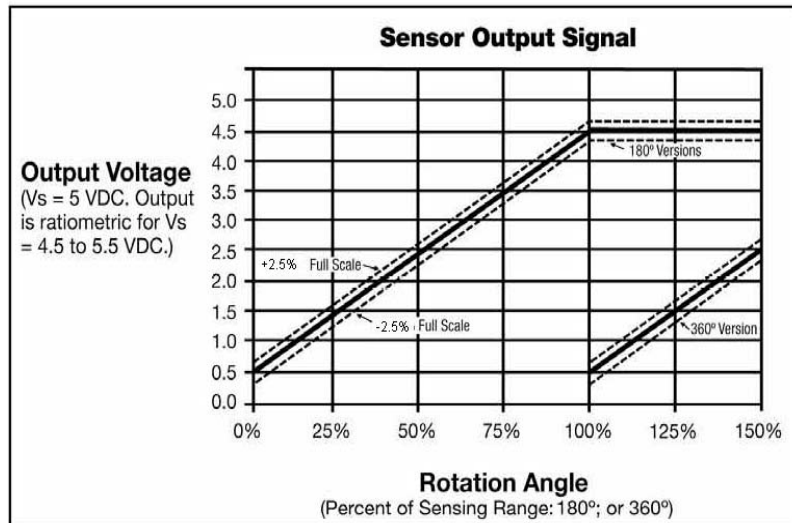
# AN8 Series

## Mechanical Specifications

Mechanical Travel	0 to 360 degrees (continuous)
Dither	No mechanical contact
Termination	300mm Radox 18 AWG
Maximum Air Gap	5mm
Maximum Center-to-Center Offset	1mm (magnet to sensor)

## Electrical Specifications

Sensing Range	0 to 360 degrees of rotation
Input Voltage	5.0 VDC $\pm$ 10%
Output Voltage	0.5 to 4.5 VDC (ratiometric)
Output Accuracy (with supplied magnet) (65°- 360° rotation)	$\pm$ 2.5% Full Scale
Output Smoothness (with supplied magnet) (65°- 360° rotation)	$\pm$ 0.75% Full Scale for any 2% interval
Output Linearity (with supplied magnet) (65°- 360° rotation)	$\pm$ 2.0% Full Scale
Absolute Max Supply Voltage	16 VDC
Absolute Max Reverse Voltage	-14.5 VDC
Maximum Output Current Range	8mA
Output type	Analog
Electrostatic Discharge	SAE J1113-13; Consult factory for details
Immunity to Radiated Electronic Magnetic Fields	SAE J1113-4; 1 MHz to 400 MHz
Conducted Transient Emissions	SAE J1113-42; $\pm$ 25V
Radiated Emissions	SAE J1113-41; Class 3
Conducted Immunity	SAE J1113-2; 30Hz to 250kHz
Conduction and Coupling	SAE J1113-12; Consult factory for details
Operating Temperature	-40 to 150°C



Sensor	Sensing Range
AN820031	180°
AN820032	360°

### Contact

Call, fax or visit our website  
For more information.

### ZF Electronics Corporation

11200 88th Avenue  
Pleasant Prairie, WI 53158

Phone: 262.942.6500  
Web: [www.cherrycorp.com](http://www.cherrycorp.com)

E-Mail: [cep\\_sales@zf.com](mailto:cep_sales@zf.com)  
Fax: 262.942.6566

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