



| 8360 SERIES

360° NON-CONTACTING THROUGH-HOLE POSITION SENSOR

Introduction

The 8360 Series is latest addition to the company's line-up of robust, reliable, and highly accurate non-contacting position sensors. The 8360's low profile and throughhole design make it desirable for applications like steering wheel and boom angle, where space is limited and the sensor must mount around a shaft. The sensor's dual analog output is capable of resolving 360 degrees of motion with high accuracy and 12 bit resolution.

The 8360 Series provides IP65 sealing, 360 degree continuous rotation, a robust package and wide operating temperature range, making it especially well suited for applications with harsh environments like industrial vehicles, agricultural and construction equipment and process controls. Non-contacting, redundant outputs provide the high reliability and long life that are an absolute necessity in applications such as medical equipment or wind/solar energy applications. A wide range of adaptations are available including PWM or Can Bus output, shaft interface, electrical angle, connector type, cable length, output slope and much more.



Features

- **Non-contacting technology:** Provides long life
- **Output signal choices:** Analog, PWM, CAN Bus
- **Electrical angle:** The standard version is available with rotational angles in 15 degree increments, up to 360°
- **Connector:** Flying lead terminated w/6 pin AMP connector P/N 776434-1, contact P/N 1924463-1, other options available
- **Through-hole design:** Fits around shaft, shaft options available
- **Environmental:** IP65-protected from dust and water jets
- **Operating temperature:** -40°C to 125°C
- **Electrical protection:** Overvoltage, short circuit, ESD
- **Magnetic Shielding to 20G**

SPECIFICATIONS

Mechanical

| | |
|------------------------------------|---|
| Mechanical travel | Travel 0° to +360° with no stops, allowing for 360 degree continuous rotation |
| Actuation (starting) Torque | 0.2 N-m (28.5 oz-in) Weight 220 grams max. |
| Rotational Life | 10 million revolutions |

Electrical

| | |
|-------------------------|--|
| Electrical Angle | 15° to 360° in 15 degree increments standard (other options available) |
| Input Voltage | 5.0 V±0.25V DC |
| Input Current | 16mA maximum per output 32mA maximum total (both channels) |
| Sensor Output | 0.25V – 4.75V for Analog at 5.0V input |
| Accuracy | +/- 0.6% |
| Resolution | 12 Bit, 0.088 degree |

Environmental

| | |
|--------------------------------------|--|
| Environmental Sealing | IP65 standard |
| Electromagnetic Compatibility | 100V/meter, 15kHz – 1GHz range |
| Vibration | 10 – 10,000 Hz, Total PSD: 4.94 Grms |
| Shock | 50Gs, half sine pulse, 11 m sec duration |
| Operating temperature range | -40°C to 125°C |
| Storage temperature range | -40°C to +105°C |

ORDERING OPTIONS

Example : 8360075

8360 Sensor with 75 Degrees Active Electrical Angle

Family

8360

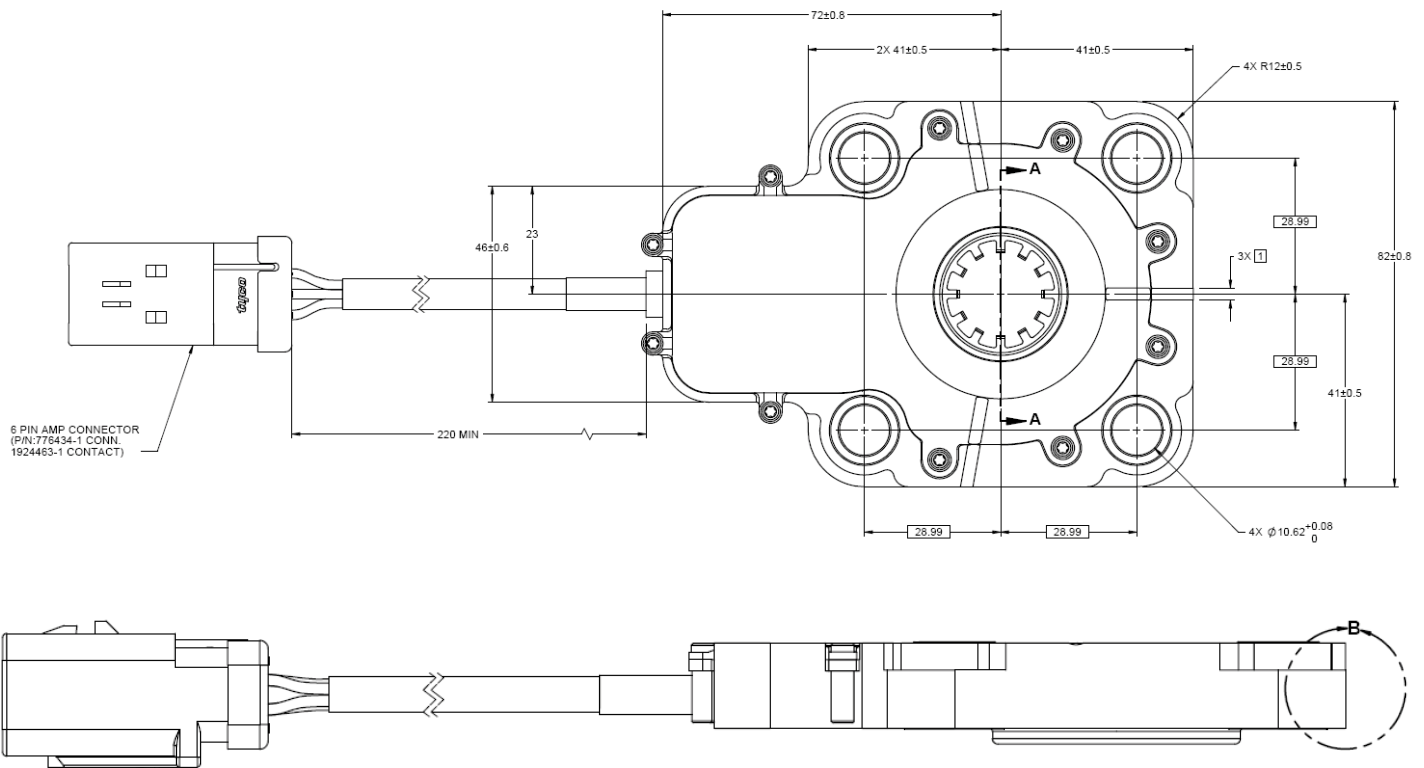
Standard Active Electrical Angles

| | |
|-------------------|-------------------|
| 015 = 15 degrees | 195 = 195 degrees |
| 030 = 30 degrees | 210 = 210 degrees |
| 045 = 45 degrees | 225 = 225 degrees |
| 060 = 60 degrees | 240 = 240 degrees |
| 075 = 75 degrees | 255 = 255 degrees |
| 090 = 90 degrees | 270 = 270 degrees |
| 105 = 105 degrees | 285 = 285 degrees |
| 120 = 120 degrees | 300 = 300 degrees |
| 135 = 135 degrees | 315 = 315 degrees |
| 150 = 150 degrees | 330 = 330 degrees |
| 165 = 165 degrees | 345 = 345 degrees |
| 180 = 180 degrees | 360 = 360 degrees |

Consult factory for options including:

- Non-standard output slope
- Clipped outputs
- Non-standard Active Electrical Angles
- PWM output (pulse width modulation)
- Special marking
- CAN Bus output
- Multi-turn
- Lead length
- Connector type
- IP67 sealing
- Shaft interface

DIMENSIONS





SPLINE DETAILS

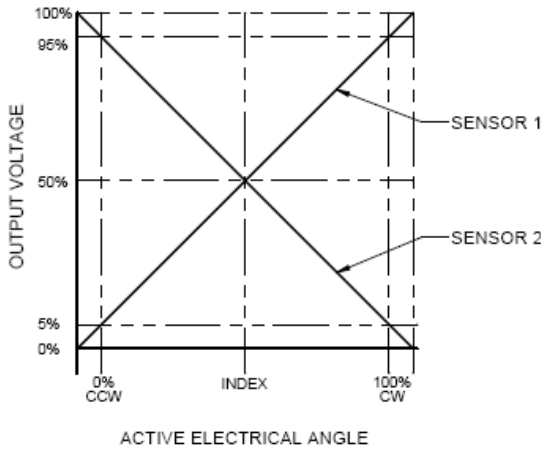
| | |
|---|---------------|
| Rotor Interface is 12 tooth spline | |
| Pitch Angle | 30° |
| Diametral Pitch | 16/32 |
| Pitch Diameter | 19.05 |
| Largest Diameter | 20.3 ± 0.1 |
| Smallest Diameter | 16.5 ± 0.5/-0 |
| (Ref ANSI B92.1 - 1970 Tol. Class B) | |



REF VIEW
MATING SHAFT



OUTPUT FUNCTION



CONNECTOR

| Connector Pin Layout | | | | | | |
|----------------------|----------------|----------|-------|----------------|----------|-------|
| PIN # | 1 | 2 | 3 | 4 | 5 | 6 |
| Pinout | Voltage Supply | Output 1 | GND | Voltage Supply | Output 2 | GND |
| Color | Red | White | Black | Yellow | Green | Brown |

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