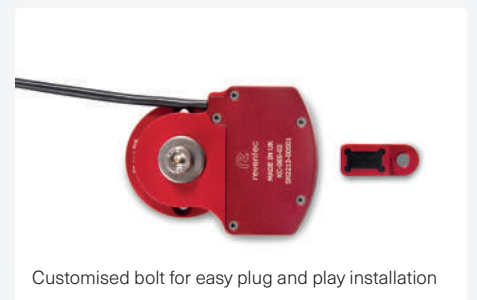


Race Car Rear Suspension Rocker Position Sensor

90° Arc Non-Contacting Rotary Position Sensor

Introducing the KC-065-02, a race car rear suspension rocker position sensor which utilises the latest in solid-state, non-contacting magneto-resistive sensor technology. The device is field proven, and widely accepted to be a step-change in performance over the commonly used linear potentiometer, successfully overcoming the common issues seen with measurement hysteresis, end of travel flat spots and reliability problems associated with contacting measurement technologies.

The sensor has been successfully used by a number of leading race teams, over a variety of different race series, accruing thousands of hours of track time. A must have for race engineers requiring accurate and dependable rocker position measurement.



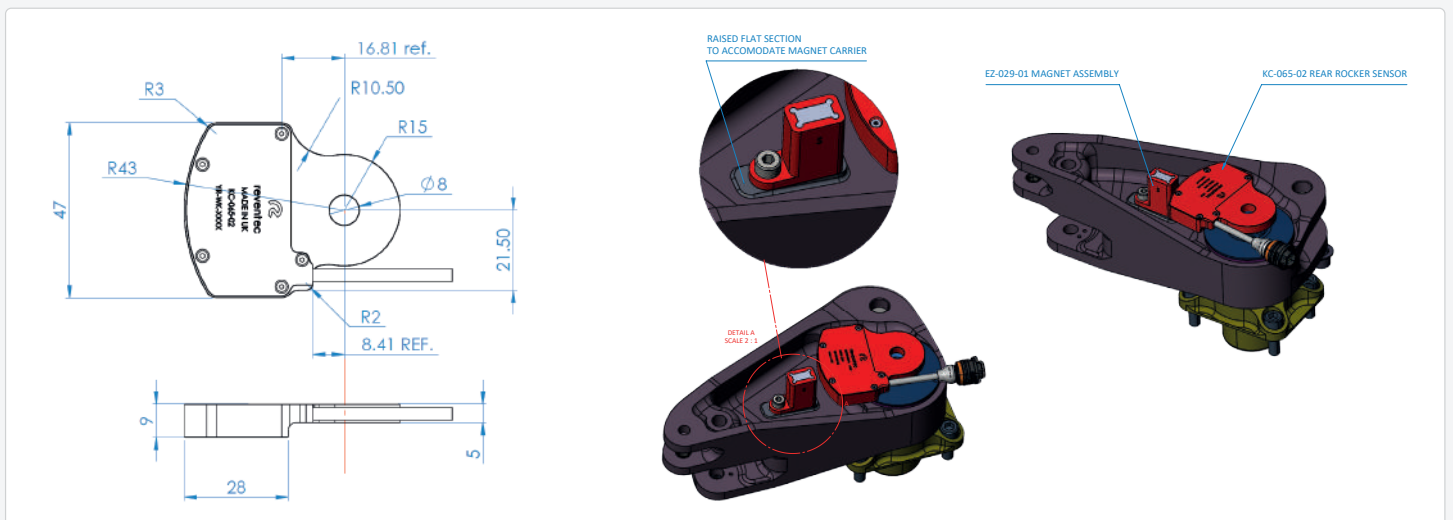
Key Features

- Solid-state, non-contact alternative to potentiometers
- Rapid response rate, 5kHz
- Extremely accurate; $\pm 0.5\%$ of reading
- +/- 45 degrees of shallow arc measurement range
- 12bit Analogue output resolution
- Proven race winning design
- Programmable to different arc sensing range.

Benefits

- Non-contacting position sensor avoids wear and degradation as seen in potentiometers.
- Capable of measuring through up to 40mm of non-ferrous material.
- Multiple output formats available (CAN, 0-5V).

Example Rear Rocker Sensor Dimensions



Measurement

| | |
|--------------------------|----------------------|
| Type | Angular Displacement |
| Typical Accuracy | ±0.5% of reading |
| Measurement Rate | 5kHz |
| Measurement Range | ±45 degrees |

Electrical

| | |
|------------------------------------|--------------------|
| Supply Voltage | +6 VDC to +32 VDC |
| Typical Operating Current | <25mA at +12 VDC |
| Overvoltage Protection | +45 VDC continuous |
| Reverse Polarity Protection | -45 VDC continuous |

Analogue Output

| | |
|-----------------------------------|--|
| Type | Voltage |
| Typical Output Range | 0-5V 0-10V only on 12V supply options |
| Typical Output Calibration | +0.25V to +4.75V (Fully Configurable) |
| Resolution | 12 bit |
| Stability | ±0.1% over full temperature range |

Dimensions

| | |
|---------------|---|
| Sensor | Custom designs available. Contact us for standard drawings or step files. |
|---------------|---|

Environmental

| | |
|------------------------------------|--|
| Environmental Protection | IP67 |
| Vibration | Designed to meet: 10Hz to 2000Hz sine sweep @10G (24hrs per each axis) |
| Shock | Designed to meet: 50G half sine wave for 11ms, 10 times each axis |
| Operating Temperature Range | -40°C to +125°C (Electronics) Up to +150°C (Remote Sensing Head) |

Mechanical

| | |
|------------------------------|------------------------|
| Construction Material | Anodised Aluminium |
| Mass | From 42g (Sensor only) |

Wiring Specification

| | |
|-------------------------|--|
| Harness | Flying lead Custom (Contact us) |
| Sleeve Elastomer | To customer specification; Typically DR-25 or RW-200E |
| Boot Elastomer | Viton FEP |
| Wire Type | 5 core, Type 55, 26 AWG |

Wiring Definition

| Description | Wire Colour | PIN Out |
|----------------------------|-------------|---------|
| Supply (+) | ● Red | 1 |
| Ground (GND) | ● Black | 2 |
| Signal (0.50-4.50V) | ● Yellow | 3 |
| Tx Comms (Transmit) | ○ White | 4 |
| Rx Comms (Receive) | ● Green | 5 |

Accessories

| | |
|------------------------------|----------------|
| USB Calibration Cable | P/N: 07-003-01 |
|------------------------------|----------------|

Configuration Interface

| | |
|-------------|--|
| Type | RS-232 via FTDI USB cable. See Accessories. |
| GUI | Available on request |

Specifications may be subject to change without prior notice.