AiM Infotech

Rear speed wheel sensor for kart

Release 1.02
1

Introduction

AiM devices can measure the wheel speed using a non-contact sensor that needs a metallic trigger to pass in front of it.

The sensor part number is: X05SNVB301

Warning: this sensor can only be connected to MyChron5 through MyChron Expansion (part number X08MYEXUCS)

To better detect the speed AiM strongly recommends to use an optional rear axle collar that already includes a magnet. Different diameter collars are available. Their part numbers are:

- Rear axle collar with 30mm diameter: LCL552190
- Rear axle collar with 32mm diameter: LCL552180
- Rear axle collar with 40mm diameter: LCL552160
- Rear axle collar with 45mm diameter: LCL552200
- Rear axle collar with 50mm diameter: LCL552170

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Installation

- Install the sensor using a bracket;
- install the collar on the kart rear axle and ensure the distance between the sensor and the collar magnet is between 8 and 20 mm
- connect the sensor to AiM device.
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Dimensions, pinout and technical characteristics

The drawings here below shows the sensor dimensions in mm [inches].

Here below are collars dimensions in mm [inches] from the smallest to the biggest.
The speed sensor is cabled with a 4 pins Binder 712 male connector. The table below shows the connector – solder termination view – on the left and its connection table on the right.

<table>
<thead>
<tr>
<th>Binder connector pin</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Speed</td>
</tr>
<tr>
<td>2</td>
<td>GND</td>
</tr>
<tr>
<td>3</td>
<td>V battery</td>
</tr>
<tr>
<td>4</td>
<td>n.c.</td>
</tr>
</tbody>
</table>

Sensor **electrical characteristics:**
- power tension: 6-24 VDC
- power supply: 13.5 mA
- output signal type: pulse 0-5 volt
- max current output: 20 mA
- max operating frequency: 100 kHz
- max sensibility distance: 20 mm
- recommended distance: 10 mm
- number of pulses for wheel revolution: 1

Sensor **mechanical characteristics:**
- operating temperature range: from –20 to +85 °C
- cable length: 1700 mm
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Extension cables

The sensor comes with a 1700 mm cable and standard length extension cables from 0,5m to 3m are available; specific length extension cables are also available on request. Extension cables part number changes according to their length.

Extension for connection with:
- MyChron Expansion

Par numbers:
- V02552620 – cable length: 500mm
- V02552630 – cable length: 1000mm
- V02552640 – cable length: 1500mm
- V02552650 – cable length: 2000mm
- V02552660 – cable length: 3000mm