

AiM InfoTech

5G steering rotary
potentiometer for car/bike

Release 1.06



1

Introduction

This datasheet explains how to install the 5 laps (5G) steering rotary potentiometer kit for car, bike installation and shows its electrical and mechanical characteristics.

AiM loggers can measure an element rotation (i.e. steering angle) using the rotatory potentiometer kit whose items are to be mounted integral with the mobile element and with a fixed reference point on the vehicle chassis.

2

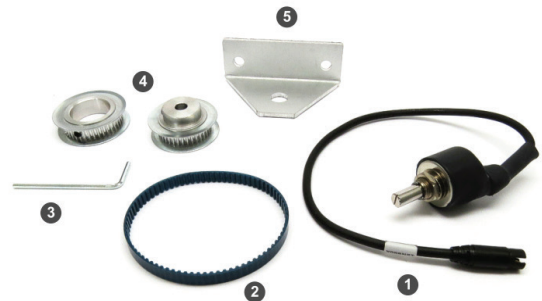
The kit

AiM designed and developed a specific installation kit for 5G steering rotary potentiometer for car/bike.

5G steering rotary potentiometer installation kit includes:

- 5G steering rotary potentiometer (1)
- 1 toothed belt (2)
- 1 Allen key (3)
- 2 toothed pulleys (4)
- 1 bracket (5)

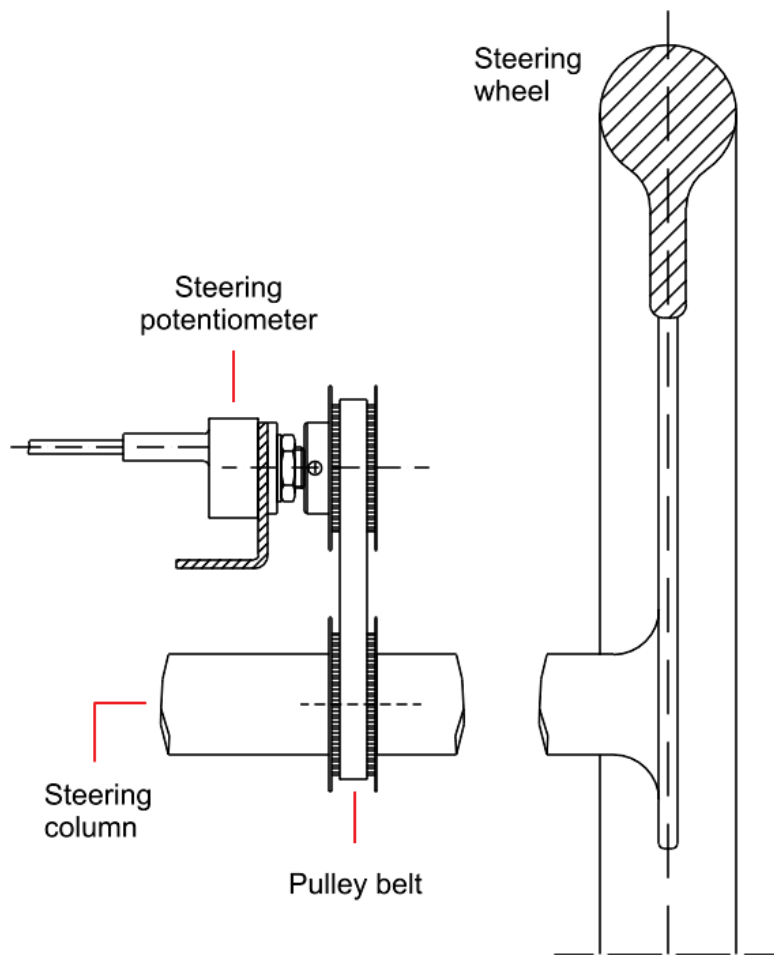
This kit part number is: **X05SNST05G**



3

Installation

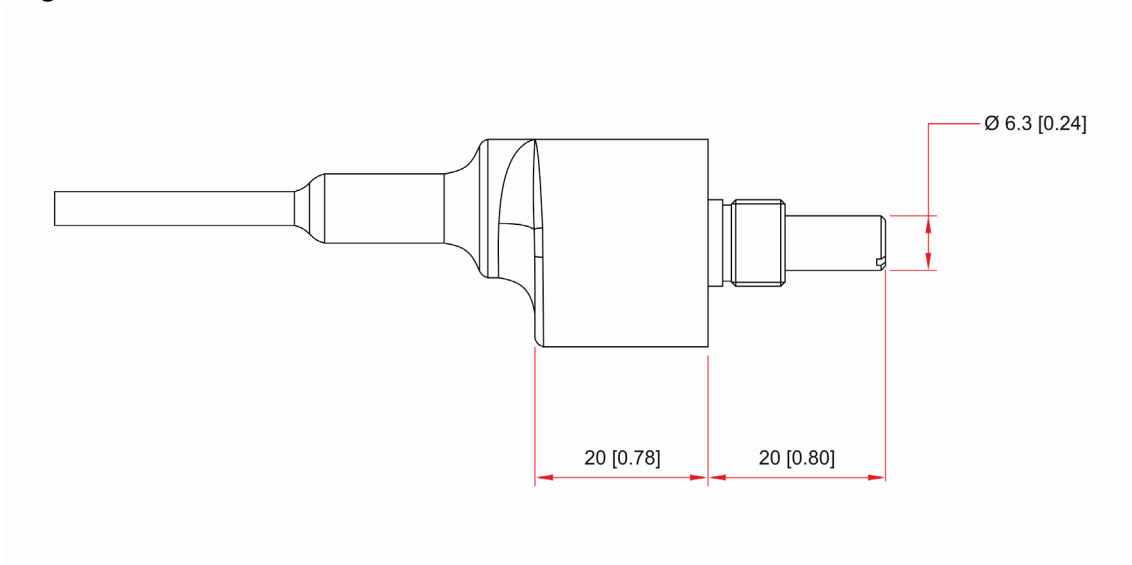
The rotary steering potentiometer can be connected to any analog channel of AiM loggers. The drawing here below shows the potentiometer correctly installed.



4

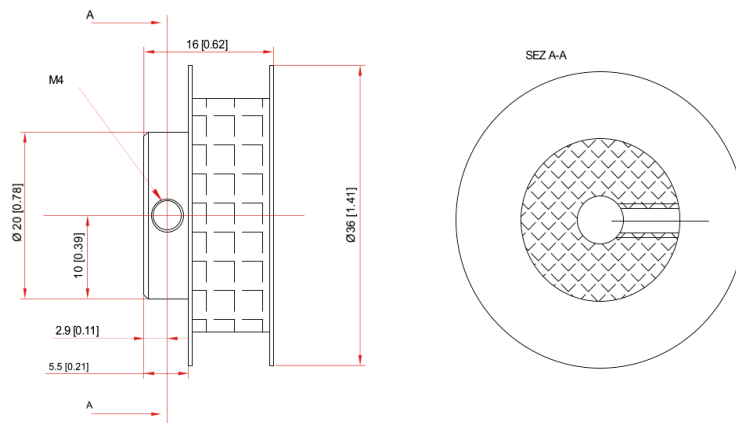
Dimensions, pinout and technical characteristics

The drawing there below shows the sensor dimensions in millimetres [inches].

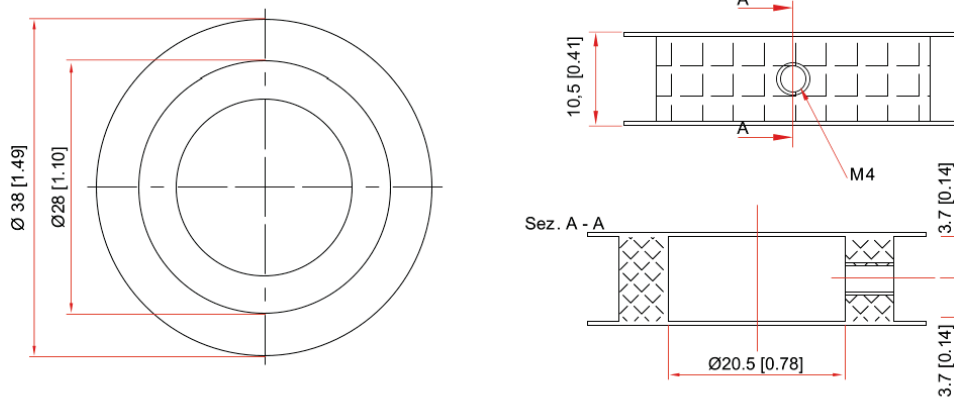


The following images shows the pulleys dimensions in millimetres [inches]:

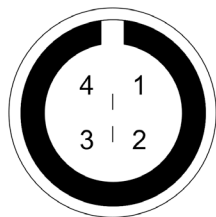
- pulley to be installed on the potentiometer



- 20mm diameter pulley to be installed on the steering wheel for 5G potentiometer



The potentiometer cable ends with a 4pins plastic Binder 719 male connector. Here below it is shown from solder termination view with the related pinout.



Binder connector pin

Function

1	0-5 V Analog signal
2	GND
3	Not connected
4	Vreference (4.5V)

The steering potentiometer **electrical characteristics** are:

- nominal resistance: 10k Ω
- tolerance on resistance value: $\pm 5\%$
- precision (%): 0.034

The steering potentiometer **mechanical characteristics** are:

- mechanical displacement: 1800°
- working temperature range: -55/+125 °C
- power consumption: 500 μ A

6

Extension cables

The sensor is sold with a 30 cm cable. Standard length extension cables are available: 0,5 m, 1m and 1,5 m.

Extension cables part number changes according to their length and to the product the sensor is to be connected to.

Extension cable for connection to:

- MXG/MXG 1.2/MXG 1.2 Strada
- MXS/MXS 1.2/MXS Strada/MXS 1.2 Strada
- MXP/MXP Strada
- MXL2
- MXm
- EVO5
- MXL Strada/Pista/Pro05

Part numbers:

V02PCB05B; cable length: 500mm

V02PCB10B; cable length: 1000mm

V02PCB15B; cable length: 1500mm

V02PCB20B; cable length: 2000mm

V02PCB25B; cable length: 2500mm

V02PCB30B; cable length: 3000mm



Extension cable for connection to:

- Channel Expansion
- EVO4
- EVO4S

Part numbers:

V02PCB05BTXG; cable length: 500mm

V02PCB10BTXG; cable length: 1000mm

V02PCB15BTXG; cable length: 1500mm

V02PCB20BTXG; cable length: 2000mm

V02PCB25BTXG; cable length: 2500mm

V02PCB30BTXG; cable length: 3000mm

