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# Soigeneris TTS-3

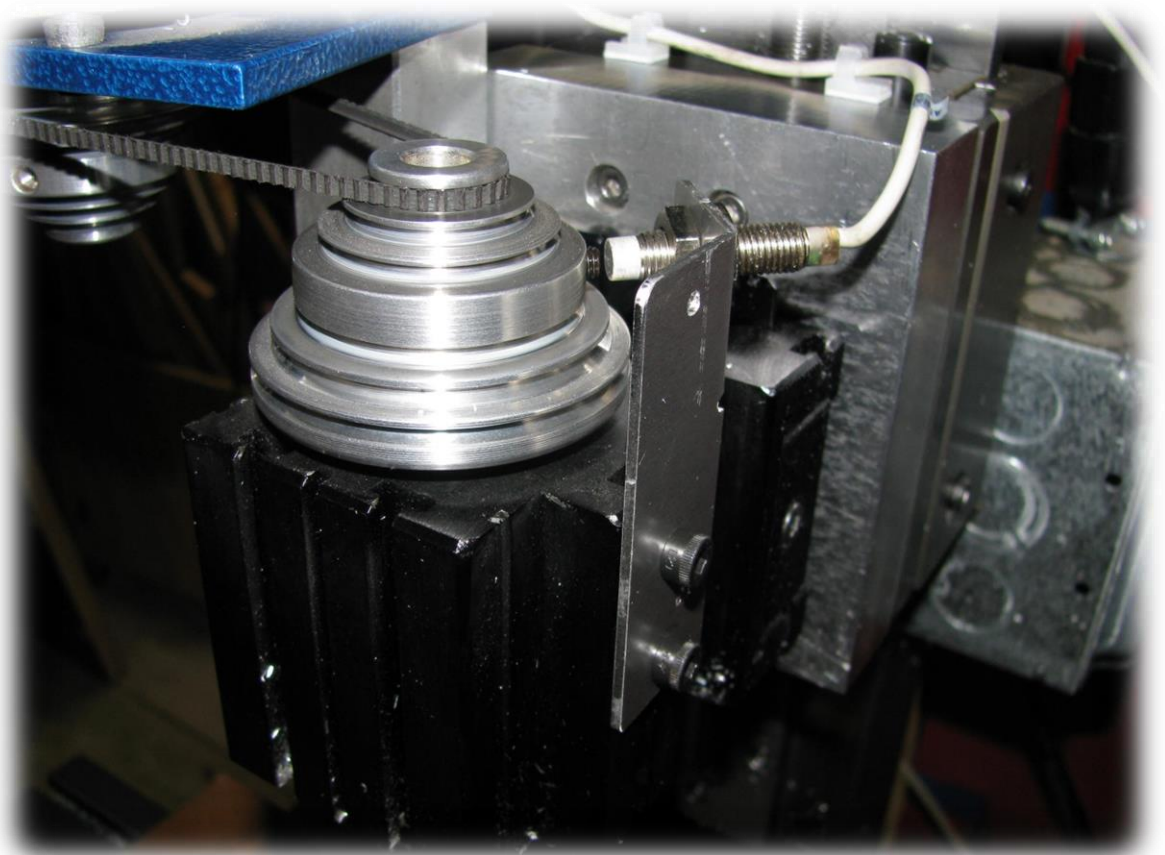
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Taig Tachometer  
Sensor Kit

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User's Manual V1.3

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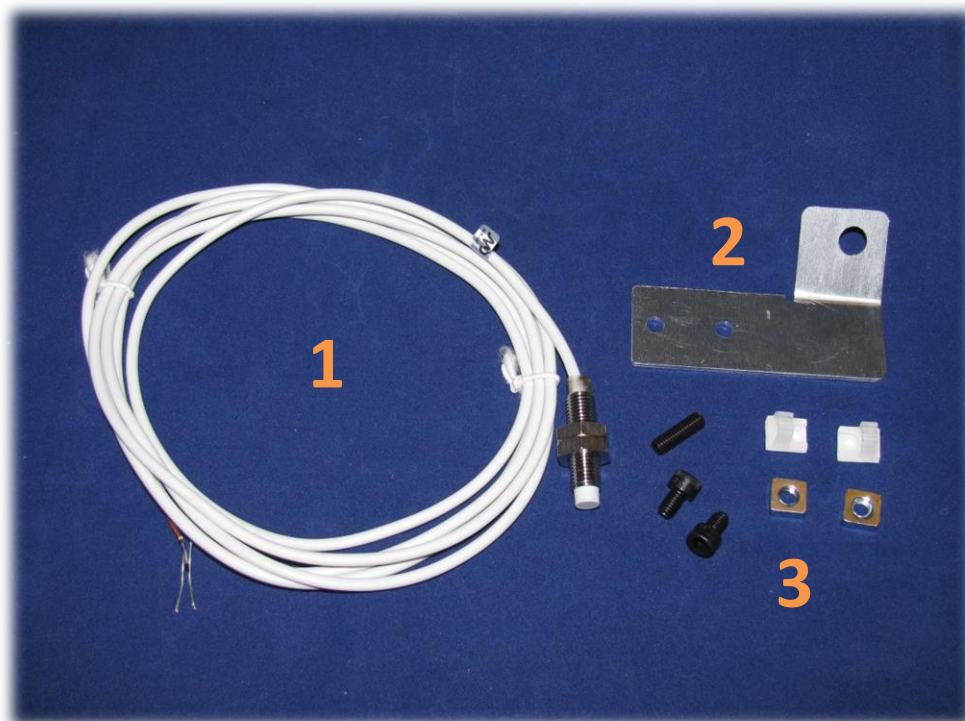


### A word about safety

We at Soigeneris take pride in providing high quality components for small scale CNC systems. While we make every effort to provide in depth and accurate technical information we cannot make any guarantees about their applicability to your particular application. In reality the only person who can keep you safe is you. We strongly suggest that you avail yourself of all the information available for the components you're putting into your CNC system and understand how they will all interact.

### What's Included

- 1) Compact Proximity Sensor
- 2) Mounting Bracket
- 3) Hardware Set – set screw, screw, nuts, wire retainers



## Introduction

The Soigeneris TTS-3 is a tachometer sensor kit intended for the Taig mill though it could be used for any application that uses the Taig headstock provided the mounting location is open.

The sensor itself can be powered from 12VDC to 28VDC, the output is pulled to ground when the sensor is triggered, and a LED is built into the sensor base that illuminates when the sensor is triggered. A set screw in the spindle pulley (slightly longer than the original) is used as the sensors target.

## Installation

**Note: If you are going to add a connector to the sensor it would be best to do so before beginning the installation. Wiring information is on Page 5.**

First remove the set screw from the spindle pulley and replace it with the longer screw from the hardware set.

Next install the sensor mounting bracket. It is easier to start the square nuts on the Allen head screws 1-2 turns and then slip the bracket assembly down into the slot on the right side of the headstock. Snug the screws up enough to keep it in place but don't tighten them down yet.

Now install the sensor through the large hole in the bracket. One nut goes on each side of the bracket, you want a gap of about 1/16" between the tip of the sensor and the pulley set screw. Adjust the bracket so that the sensor is centered on the set screw and tighten down the two Allen head screws. Re-adjust the sensor if needed to correct the sensor tip gap.

Finally install the self-adhesive cable holders. Clean the top of the Z-axis truck with alcohol and let it dry thoroughly. Remove the adhesive protection and stick the holders down, press firmly to ensure a good bond. These will keep the sensor cable from getting caught up in the Z axis mechanism.

**See figure 1 for visual guide.**

## Proper installation of tachometer sensor

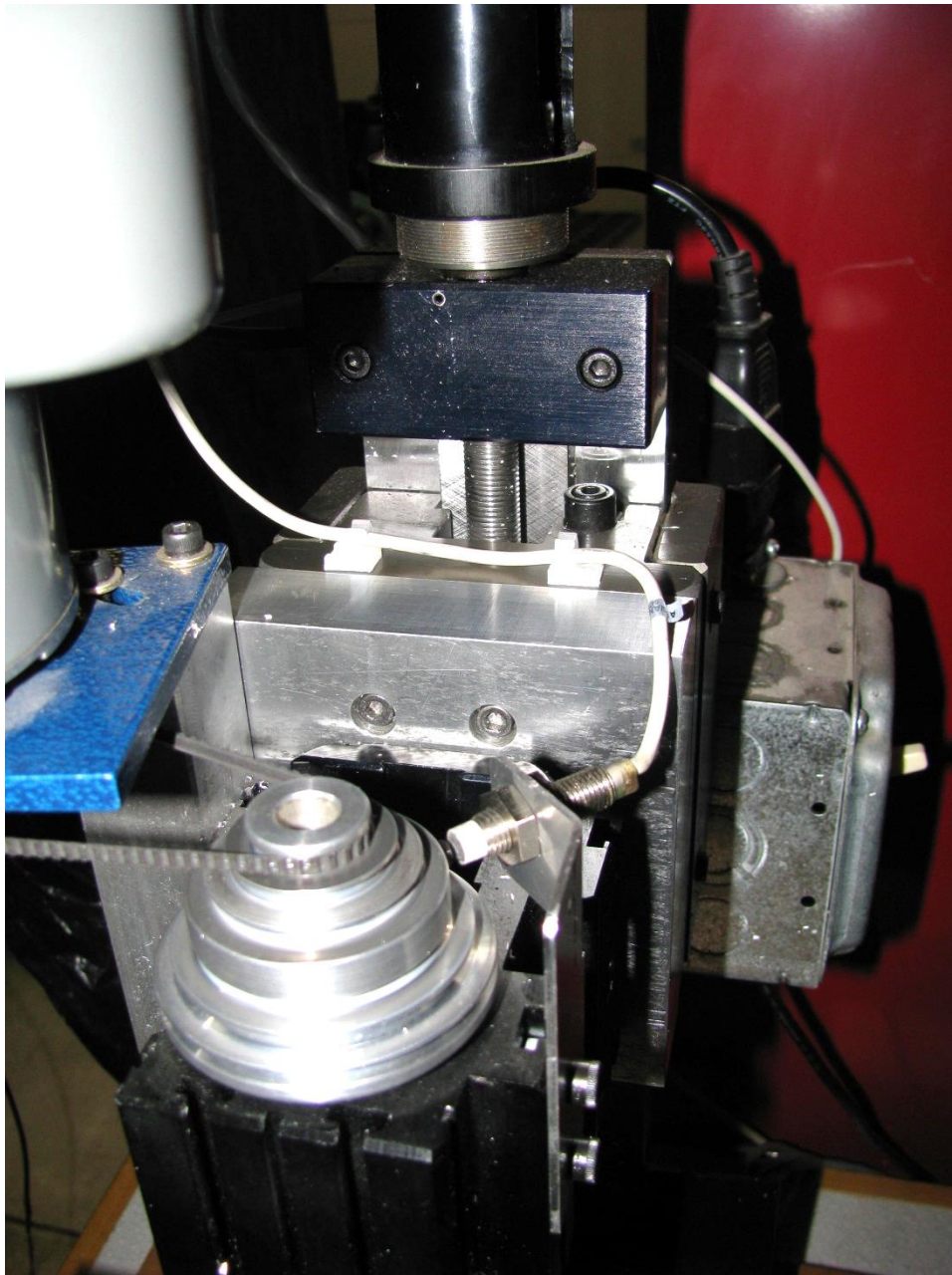
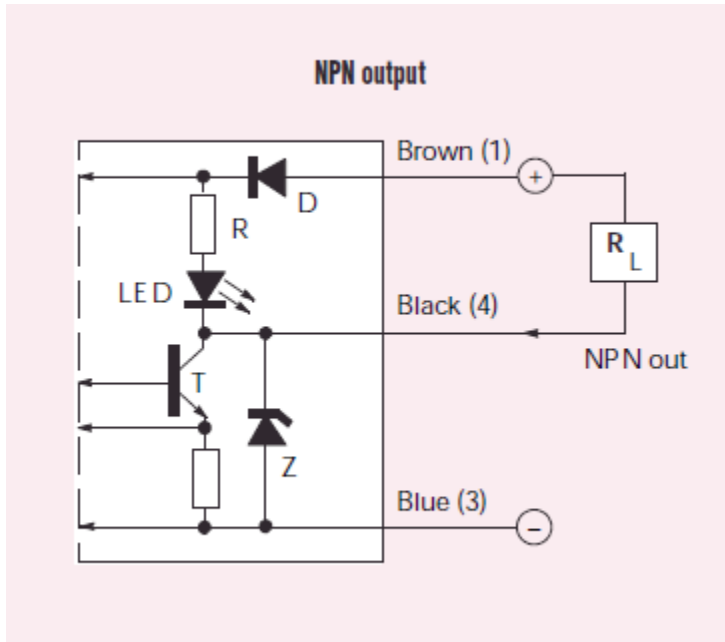


Figure 1

## Sensor wiring color code



## Soigenetis connector

If you purchased the TTS-3 with the sensor connector pre-installed the pin-out is as shown in the table below.

2 Sensor Connector	
Pins 1:	+V, 12VDC~28VDC
Pins 2:	Signal
Pins 3:	Common