Programmer for KMA220 TPS Sensors - PC Application

This programmer is designed to program the dual analog outputs of this magnetic sensor to emulate any throttle body that has output ranges between 0.25V and 4.75V.

Programming

1. Install the TRP TPS Programmer application on your PC.

2. Connect the programmer to the PC with the USB cable.

3. Connect the throttle body to the programmer.

4. Open the PC app and select one of the preset throttle body types to emulate,

 <u>or</u>

select "Custom" and enter the desired minimum and maximum values for each of the dual sensors. Also select "rising" or "falling" for each sensor output to set the direction the output moves as the throttle opens.

5. Click the "Program" button to program the new settings to the throttle body. A green check mark on the screen indicates that programming was successful.

*Throttle bodies with no serial number will be assigned a unique ID number during programming. Record this number if you wish to be able to track throttle bodies which you have programmed.

* If using custom settings, the programmer will calculate the correct values for all of the settings based on the values you enter, but note that all GM sensors that we have seen use identical range widths for TPS1 and TPS2. Although the maximum and minimum values for TPS1 and TPS2 can differ, the value of (TPS1 max - TPS1min) always equals (TPS2 max – TPS2 min). Range1 = Range2. Keep this in mind when selecting your custom values for GM applications.

*Values less than 250mV or greater than 4750 mV are considered faults by the internal logic of this sensor.

Angle Finder

Zero angle is the difference between the mechanical zero position of the throttle body/magnet and the zero position of the sensor. Angular range is the number of degrees of rotation between the full closed and full open stops of the throttle body. **If a sensor or magnet has been replaced, or**

throttle body modified, it is necessary to determine the correct zero angle and angular range of the throttle body for programming. Clicking on the 'Angle Finder' button, then following onscreen instructions, will determine these values. You may then program the throttle body with these values together with the desired TPS range settings. Once done, these values can be retained during future programming by leaving the 'Keep Existing' box checked.
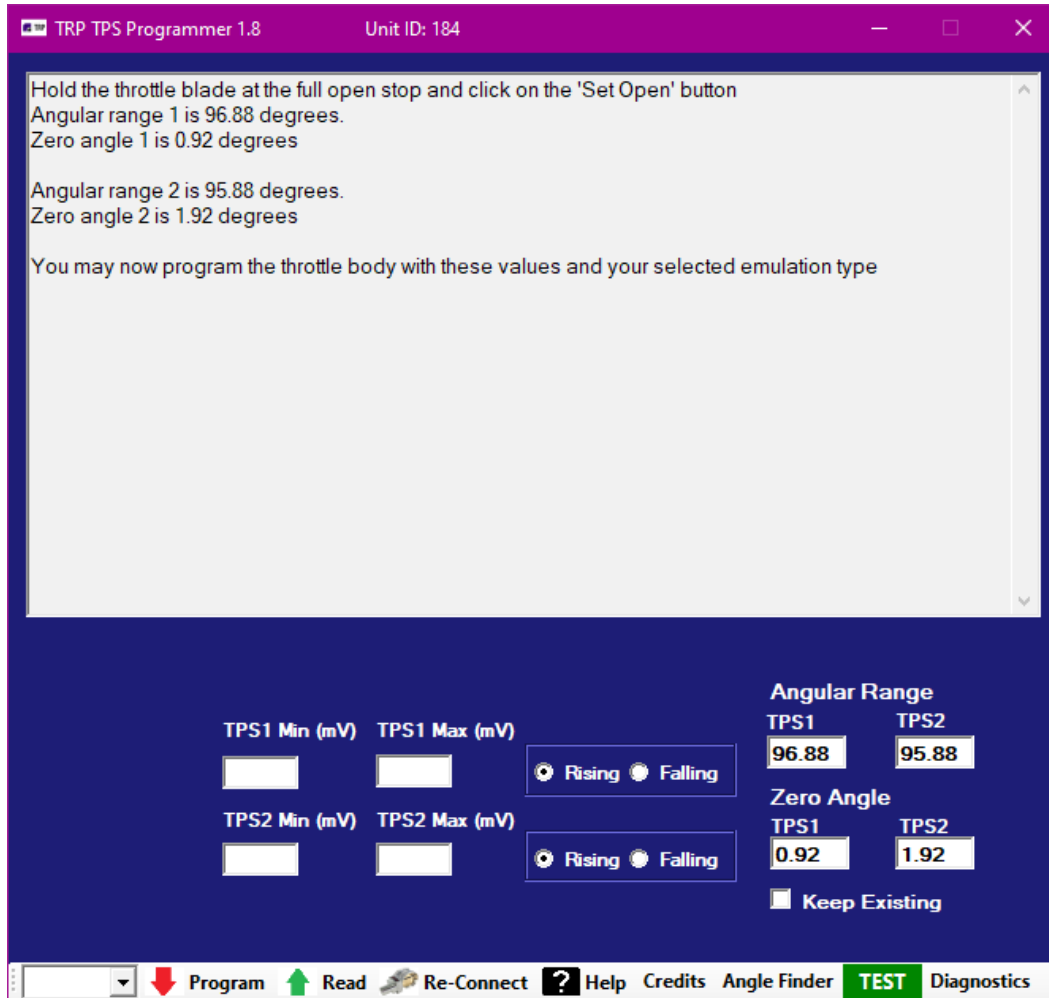
Testing

Clicking on the "TEST" button will display the live output values from the sensor. You can move the throttle blade by hand to full open and full closed to verify the output ranges and end points. Click "STOP" to discontinue the streaming of live data. Move the cursor on the chart to view the TPS1/TPS2 correlation ant any recorded point in the movement of the blade.
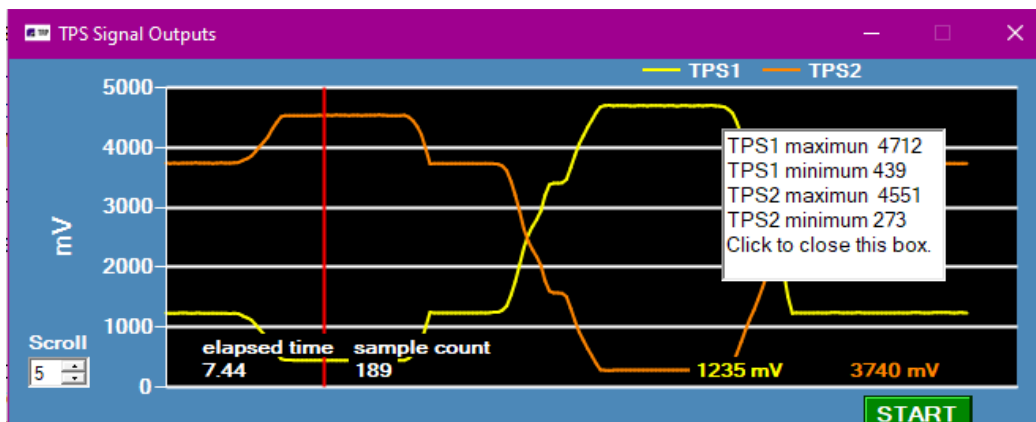
Read

Click the "Read" button to retrieve the current throttle body settings.

Programming Credits

Each unique throttle body programmed consumes 1 programming credit. You can program the same throttle body multiple times without consuming additional credits.

Purchase additional credits by clicking the "Credits" button, then the "Buy" button, or go to http://torquerush.com/tps_programmer or contact us at info@torquerush.com . To load new credits, click on the "Credits" button and enter your provided download code and email address. Then click on 'Load". You must have an active internet connection on the PC used to load the credits onto the programmer.

Re-Connect

The "Re-Connect"/Reset button renews the PC connection by searching for connected TRP programmers. Click on this button should the throttle body or programmer fail to respond to commands.