SS-10 ELECTRONIC INTERFACE INSTALLATION INSTRUCTIONS

STEP 1: Disconnect the positive battery terminal.

STEP 2: Two cable assemblies are required to connect the sensor. One is called a split cable and consists of two separate cables. The split cable contains one 15 ft. cable and one 10 ft. cable. The 10 ft. cable has a black and red wire. Connect the red wire to the positive battery terminal. Connect the black wire to the negative battery terminal. Refer to Figure 1 for more information.

STEP 3: The 15 ft. cable mentioned in STEP 2 above will be connected to a wire from your transmission, engine control module or differential depending on the vehicle model & year. Note: The connection should be made using wire-to-wire solder.

STEP 4: Route the remaining cable assembly to the DMI. Connect the modular phone jack to the DMI receptacle labeled “POWER”. Connect the positive battery terminal. Turn on the DMI to verify the battery connections. If the DMI will not power on, check your connections at the battery, speed sensor and DMI.

STEP 5: The SS-10 speed sensor has adjustable sensitivity. The device is shipped with a setting that is appropriate for most vehicles. Start the engine, power on the DMI and press the “RUN/HOLD” button to enter run mode. The DMI should NOT count while the vehicle is stationary. If you notice counting you will have to reduce the sensitivity. Refer to Figure 3 and Troubleshooting Guide 2 for more information.

STEP 6: Start driving, the DMI should start counting. If the DMI does not count or only counts at higher speeds, you will need to increase the sensitivity. When the sensitivity is set properly, the DMI will count at very low speeds (less than 1MPH) and never count erroneously. Some vehicles do not produce a signal at extremely low speeds. This is inherent to the vehicle model and connection (Engine Control Module).

STEP 7: Transmission connections generally produce a signal at very low speeds. Refer to Figure 3 and Troubleshooting Guide 1 for more information.

STEP 8: A small percentage of vehicles may register false counting after driving and coming to a stop. Decrease sensitivity if you notice this symptom. Refer to Figure 3 and Troubleshooting Guide 2 for more information.

STEP 9: Once the calibration is complete, you may want to seal the SS-10 enclosure with silicon sealant to prevent corrosion or water damage to the components inside.

! IMPORTANT ! Sensitivity adjustments do not take effect until the SS-10 is in Run Mode (2 seconds after the LEDS are off).

TROUBLESHOOTING GUIDES

Follow these simple steps to resolve a problem with your equipment or your installation. There are basically three types of problems that are encountered by customers during installations and are addressed in the following steps. Please refer to your specific problem by answering the following questions:

1. Does your DMI power up and seem to work, but will not count at all? (If YES, Refer to GUIDE 1)
2. Does your DMI not turn off all the time or at any time you feel it should not be counting? (If YES, Refer to GUIDE 2)
3. Does your DMI display AECs (Automatic Error Correction)? (If YES, refer to GUIDE 2)
4. Does your DMI seem to be counting just fine but it is not accurate enough? (If YES, Refer to GUIDE 3)
5. Does your DMI have a problem involving the MPH displayed? (If YES, Refer to GUIDE 3)

TROUBLESHOOTING GUIDE 1

If your DMI seems to be working correctly, but will not count at all, this could be a very easy problem to correct. Follow these simple steps to determine what is stopping your DMI from working:

STEP 1: If a splice clip or quick connector clip was used in the installation, splice the wire or solder the wire in.

STEP 2: Recheck all the wiring (FIGURE 1 on page 4).

STEP 3: Check the calibration number in the DMI so that it is not set to zero. To check the calibration number, simply turn the DMI on and press the 1CAL key. The display should read “CAR1” followed by a number. If that number is zero, type 1000 and press MARKENTER.

STEP 4: To increase sensitivity, follow these steps:
   a) Put the SS-10 in Adjust Mode (to enter Adjust Mode, press and release any push button SW1- SW6). When the LEDs are on, press and release SW1- SW6. The LED value for sensitivity will increase.
   b) 2 seconds after the LEDs are off the SS-10 will enter Run Mode.
   c) When in Run Mode, start driving to see if the DMI will count. If not, repeat these steps until the DMI starts counting.
   d) If you increased sensitivity to the maximum setting of “9” and the DMI is still not counting, you should decrease sensitivity setting back to the factory default of “3”. Leaving the sensitivity setting at maximum may result in erroneous counting once the problem is resolved.

STEP 5: At this point you will need to do a “tap test” on the DMI. To do this, power on the DMI and make sure the DMI is in “RUN” mode. To perform a “TAP” test, the SS-10 must be in Adjust Mode (to enter Adjust Mode, press and release any push button SW1- SW6). When the LEDs are on, press and hold SW6 until the LEDs rotate clockwise. The DMI should count for 10 seconds. This test verifies that the connection from the SS-10 to the DMI is correct. Next, you’ll need to perform a sensor test. To do this, the SS-10 must be in Adjust Mode. Press and hold SW3 until the LEDs rotate counterclockwise. The DMI should count for 10 seconds. This test verifies that the SS-10 electronics are operating properly.

STEP 6: If none of the above steps have fixed the problem, the possibility exists that your vehicle’s speed sensor wires have been swapped, you have not interfaced to the sensor properly or the sensor is not receiving a signal from the vehicle speed sensor. Call the service department for additional help at (724) 438-8750. Monday - Friday; 8 am to 5pm EST.

TROUBLESHOOTING GUIDE 2

If your DMI is counting at an undesired time or all the time, engine noise or electrical interference may be causing the problem. Depending on vehicle model and connection, adjusting the SS-10 sensitivity may be necessary. Ideally, the sensitivity adjustment is such that the DMI counts at very low speeds and never counts erroneously. Counting at idle, after stopping or erratic counting while driving (which the DMI would display as AEC) are examples of the sensitivity being too high. Rerouting cables and/or lowering sensitivity should resolve the problem.

! IMPORTANT ! If you did not hook up the positive & negative leads directly to the battery it may lead to this problem. Check that the power cable and sensor cable are not touching or coiled together. This can result in interference.

To correct this problem perform the following steps:

STEP 1: Ensure that all wiring is as far away from the vehicle’s electrical components as possible. This could include the coil, plug wires, alternator, etc. Ensure there is separation between the power cable and the sensor cable. Do not coil excess cables together.

STEP 2: To decrease sensitivity, follow these steps:
   a) Put the SS-10 in Adjust Mode (to enter Adjust Mode, press and release any push button SW1- SW6).
   b) Once the current settings are displayed, press and release SW2. The LED value for sensitivity will decrease.
   c) 2 seconds after the LEDs are off, the SS-10 will enter Run Mode.

STEP 3: If you reach the minimum sensitivity setting of “0”, Contact the Nu-Metrics service department at (724) 438-8750 Monday-Friday, 8:00-5:00 EST.

TROUBLESHOOTING GUIDE 3

If your DMI is having these types of problems it may be due to an improper calibration of the DMI. Please refer to the calibration instructions in the Nitesen manual.

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