

## TMT7839 Universal Translator (Translating J1587/J1708 to J1939)

### INSTALLATION INSTRUCTIONS:

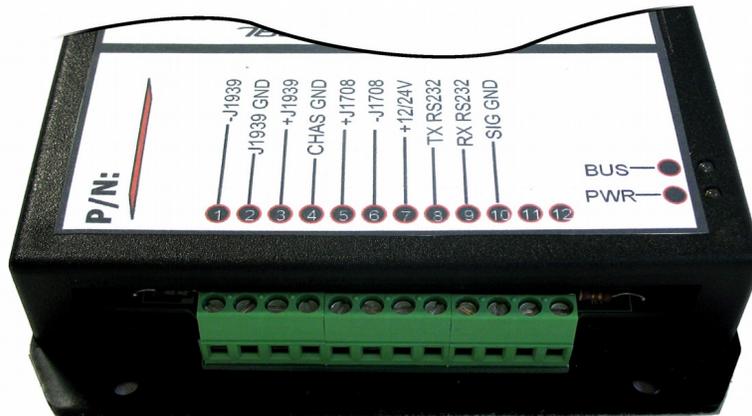


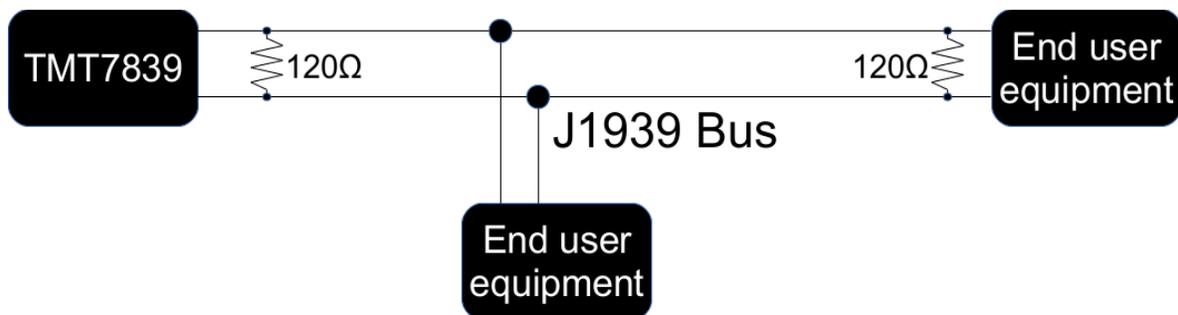
Figure 1: TMT7839 Terminal Strip

1. The terminal strip connections are numbered from 1 to 12, from the leftmost terminal to the rightmost terminal (see Figure 1).
2. Connect +12/24 volt power to terminal 7 and ground to terminal 4. The red LED, labeled “PWR,” should illuminate to indicate proper power and ground connections.
3. Connect your J1708/J1587+ wire to terminal 5, and your J1708/J1587- wire to terminal 6. The green LED, labeled “BUS,” will illuminate when data on the J1708/J1587 bus is detected. If the green LED is not on, try reversing the wires. The wire voltages can also be measured to confirm the presence of data on the bus. With data present, the voltage on the J1708+ wire should read between 3.5V and 4.5V relative to ground, and the voltage on the J1708- wire should read between 0.5V and 1.5V relative to ground.
4. Connect your J1939+ to terminal 3 and your J1939- wire to terminal 1. If applicable, connect the cable shield to terminal 2.

5. The TMT7839 requires that the J1939 bus has proper terminating resistors installed.
  - a) Two 120 ohm resistors must be connected between J1939+ and J1939-, each one located at opposite physical ends of the bus. A properly terminated J1939 bus should see a total of 60 ohms between J1939+ and J1939-.
  - b) If the TMT7839 device is being added to an existing J1939 bus, these resistors may already be in place.

The J1939 wire voltages can be measured to confirm bus operation. With J1939 data present, (green J587/J1708 LED lit, green J1939 error LED unlit) the voltage on the J1939+ wire should read between 2.5V and 3.5V relative to ground, and the J1939- wire should read between 1.3V and 2.3V relative to ground.

6. Two green LEDs are located inside the TMT7839 on either side of the terminal strip.
  - a) The LED on the left is a running indicator which blinks slowly under normal operation. Under a fault condition, this LED will remain either lit or unlit.
  - b) The LED on the right is a J1939 error indicator. If this LED is lit, it indicates a physical problem with the bus (missing/disconnected/broken wires, missing terminating resistors, malfunctioning devices, etc.)



*Figure 2: J1939 Terminating Resistors*