

# MEGATRONIX

## UPSS Add-On Shock Sensor Interface Module

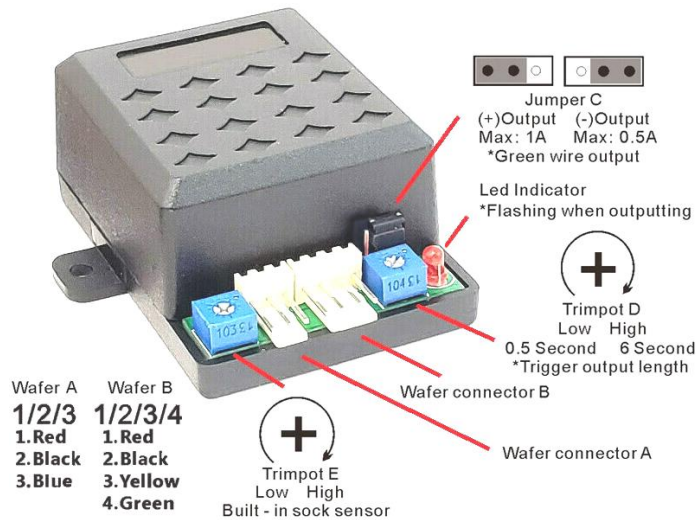
### Overview

The unit provides the ability to add a shock sensor to a vehicle factory OEM alarm system. Most factory OEM alarm systems are not equipped with any type of detection sensor. The unit receives the trigger information from the internal shock sensor and then supplies a selectable negative or positive output to the vehicle hood, trunk, or door circuit thereby triggering the alarm. In addition to the internal shock sensor, an optional secondary external sensor can be wired for added security.

### Operation

The unit operates only while the vehicle is off and is disabled while vehicle is running to prevent false triggering of vehicle alarm system. When ignition key is switched off, sensor is automatically turned on and functioning. When ignition key is switched on, sensor is automatically turned off and disabled. The on-board LED can be used for testing sensitivity after installing and confirming proper operation.

### Wiring Diagram



### Specifications

1	Operating Voltage	+9V to +15V DC
2	Standby Current	$\leq 9\text{mA}$
3	Working Current	$< 35\text{mA}$ (No-load current)
4	Operating Temperature	$-20^{\circ}\text{C}$ to $+80^{\circ}\text{C}$
5	Trigger Output Length	0.5 seconds to 6 seconds
6	Wafer Connector A	Red Wire: Power 12V Output (+) Black Wire: Ground Output (-) Blue Wire: Trigger Input (-)
7	Wafer Connector B	Red Wire: Power 12V Input (+) Black Wire: Ground Input (-) Yellow Wire: Switched Input (+) Green Wire: Trigger Output (-/+)

### **Interface Wiring (Wafer Connector B; 4-Pin Plug)**

1. Red Wire (+): Connect to fused constant 12 volt power source (Do not wire directly to car battery).
2. Black Wire (-): Connect to a clean solid section of vehicle frame directly (Not to existing grounds).
  - a. **OPTIONAL:** Use SPST on/off toggle switch to disable unit (Rated: 3A 250VAC / 6A 125V AC).
    - i. Connect one side of switch to this black wire; connect other side of switch to ground.
    - ii. Flip switch to OFF position to turn off unit; flip switch to ON position to turn on unit.
3. Yellow Wire (+): Connect to a switched ignition 12 volt source (Such as the ignition key switch).
  - a. When the vehicle's ignition is switched to the on position, sensor functions are turned off.
  - b. If the ignition is in ON/RUN or START/CRANK position, this wire should receive "12 volts".
  - c. If the ignition is in OFF or ACCESSORY position, this wire should receive "0 volts".
4. Green Wire (-/+): Connect to a trigger wire of vehicle alarm (Such as hood, trunk, or door circuit).
  - a. Recommend to use existing hood or trunk open detection circuit (Most OEM alarms have it).
  - b. If neither can be used or are not available, door open detection circuit may be used instead.

### **Secondary Sensor Wiring (Wafer Connector A; 3-Pin Plug)**

1. The 3-pin connector can be used to add a secondary sensor such as glass, motion, shock, or tilt.
  - a. Red Wire (+): Connect to the secondary sensor's 12 volt power input wire.
  - b. Black Wire (-): Connect to the secondary sensor's chassis ground input wire.
  - c. Blue Wire (-): Connect to the secondary sensor trigger output wire (Must be negative polarity).
  - d. Sensitivity adjustment must be made at the sensor itself (Test accordingly once installed).

### **Interface Adjustments**

1. Jumper C: Adjusts output polarity of the unit to trigger the vehicle alarm (Default: Negative).
  - a. Depending on vehicle, the trigger input may be grounding type (-) or positive type (+).
  - b. Make sure the sensor interface unit provides the correct type of trigger output to the vehicle.
  - c. Most vehicles use negative trigger for the hood, trunk, or door open detection circuits.
  - d. Some vehicles (Such as Ford, Mercury, and Lincoln) use positive trigger for the door circuit.
  - e. After determining the polarity of the trigger wire, adjust the jumper on the unit PCB if needed.
    - i. If it is attached to center pin and right pin (-); if it is attached to center pin and left pin (+).
2. Trimpot D: Adjusts trigger output pulse length timing (Set to requirement of vehicle OEM alarm).
  - a. Timing can be adjusted from 0.5 second to 6 seconds (Usually should be 0.8 to 1 second).
  - b. Turning clockwise extends trigger output; turning counterclockwise shortens trigger output.
3. Trimpot E: Adjusts sensitivity of unit internal shock sensor (Not for external sensor adjustment).
  - a. Tap vehicles body panels with palm of your hand or a rubber mallet to try and trigger sensor.
  - b. Turning clockwise increases sensitivity; turning counterclockwise decreases sensitivity.

### **Installation Notes**

1. Test the desired trigger input wire of the vehicle to verify it is not a canbus/databus wire.
2. Test the switched ignition input to ensure unit does not interfere with any vehicle diagnostics.

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