

VEI Systems Installation Instructions

OGDI-*aaa-bbb-c* – Dual Gauge Module for Custom Installations

Wiring Instructions

Please read these instructions completely before beginning installation to ensure that you have the tools and skills necessary for installation and operation of this instrument. If you are not sure that you can perform the installation safely, then consult a qualified installer. Further instructions available at www.VEISystems.com/technical.html.

FEATURES

This open-frame dual-function instrument module measures and displays two functions simultaneously, or for some combinations, interactive/dynamic data calculated from both measured parameters. In the model number OGDI-*aaa-bbb-c*, *aaa* represents the first function and units, *bbb* represents the second function and units, and *c* is the display color.

This document explains the installation and wiring only for the module. For usage instructions, see the Operation section of the DI-*aaa-bbb-M* instructions.

MOUNTING

Handle the module carefully to prevent damage and ESD (electrostatic discharge, which can damage the unit). Even ESD that cannot be felt is high enough to cause damage. Use a grounding strap and purposely discharge yourself prior to touching the module.

This module is intended for custom installations, so each situation will be different. In general though, a suitable location would be one with enough space, and away from any metal that would contact the electronics. If installed in an air-conditioning vent, tape the back of the unit so that condensation does not form on the electronics due to thermal cycling.

The gauge module can be physically secured using #4 or 4-40 screws through the holes at the corners, or with double-sided tape.

A piece of filter material is provided as the face of the unit. You can cut the material to the ideal size and shape by scoring with a utility knife and snapping against a straight edge, with a jigsaw (securing properly so the unit does not flap and crack), with a laser cutter, or by sanding. The filter shape should be engineered so that it can be mechanically secured, but adhesives are allowed. Be careful with cyanoacrylates, as those can release fumes during curing which would form an unremovable foggy coating over the filter. If cyanoacrylates must be used, place a fan against the unit for several hours to ensure all fumes are moved away from the unit until the adhesive has fully cured. Double-sided tape around the edges would work great.

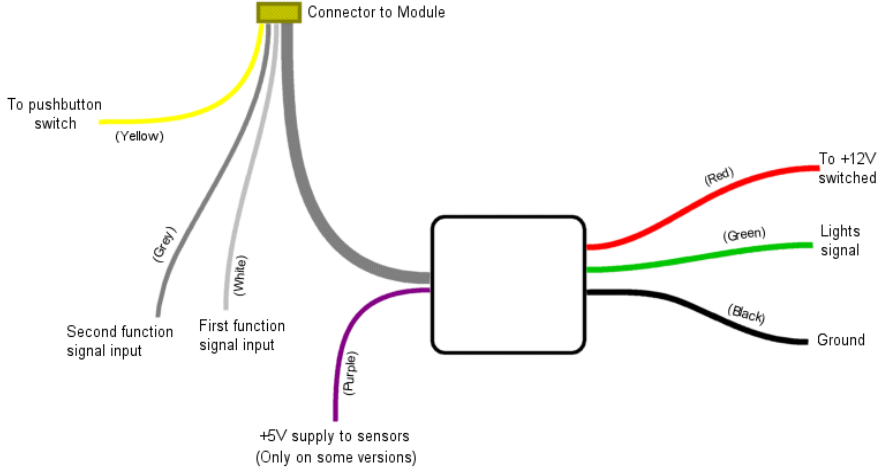
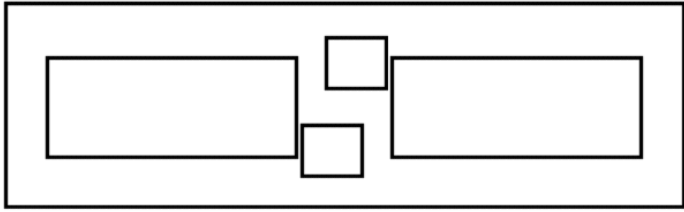
The module will come with one or two small boxes (power-supply and/or sensor module) with wires and a connector attached. Mount the boxes with screws or double-sided tape near the gauge module, ensuring the wires can reach the gauge module. If you need to run vacuum/boost hose to one of the boxes, ensure that your mounting location allows access/clearance for the hose to be routed to the engine bay.

VACUUM-BOOST HOSE CONNECTION

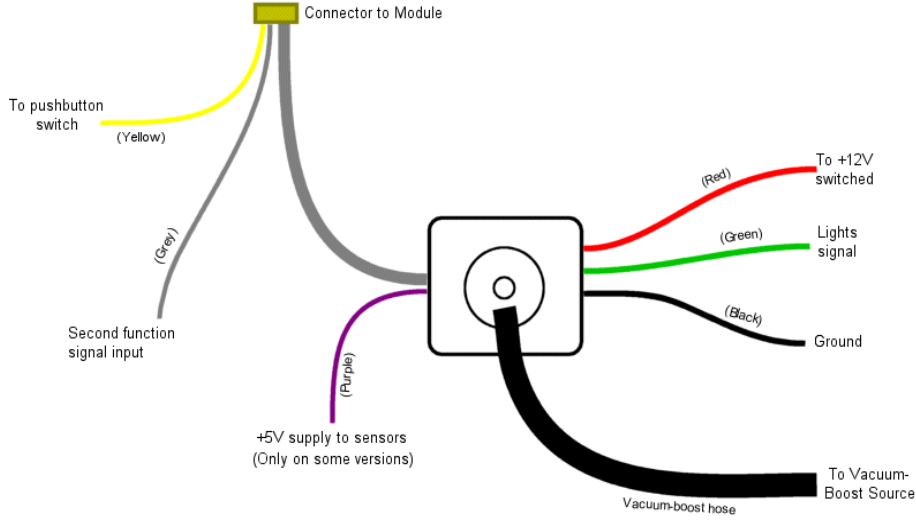
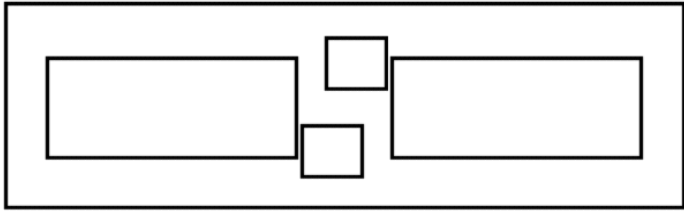
If your gauge has a vacuum-boost function, there will be a small 1/8" barbed port on one of the boxes with the wires. Use 7/64" O.D., 1/8" O.D., or 3mm O.D. vacuum-boost hose to connect to the vacuum-boost source. For boost above around 20 PSI, we recommend high-durometer hose, rather than generic rubber hose.

WIRING

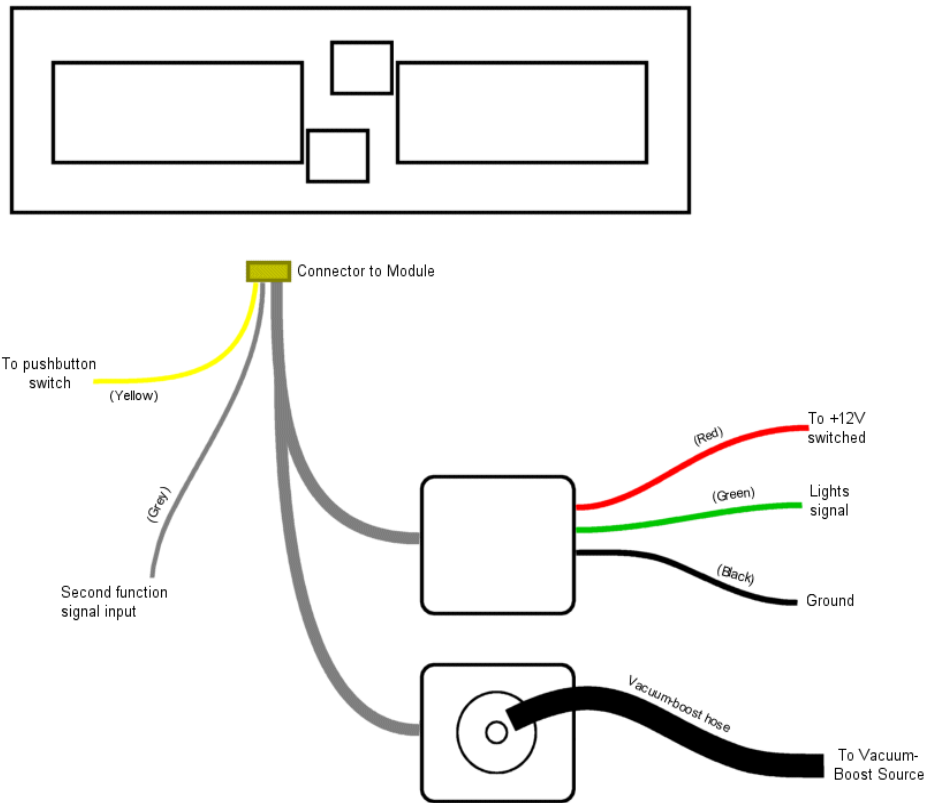
Your module will come with one or two small boxes with connectors/wires attached, as per one of the diagrams below. Select which version you have and connect the wires as shown. Wires should be connected as below using crimp-on butt-splice connectors, or soldered and sealed with heat-shrink tubing. Before connecting any wires, you should either disconnect the battery power, or carefully connect the wires in the order shown. If not, you may damage the instrument. Use an existing fuse in the fuse panel, or an external fuse to supply power to the instrument. The modules use approx. 60mA of current average and approx. 110mA maximum, so ensure the fuse is sized appropriately (0.5 Amp or 1 Amp fuse is good).



Wiring diagram A



Wiring diagram B



Wiring diagram C

- BLACK -- connect to a solid chassis ground under the dash or directly to the battery. You may need to expose the metal connection point under the dash by scraping or lightly sanding it. A ring terminal and a screw should work well in most cases.
- RED -- connect this to a source of **switched** +12V power. This will usually be found at or near the ignition switch, and will usually have a relay wired through the ignition switch. An alternate source of this is a switched power line from a nearby light or accessory (radio, etc). If you are unsure that the wire can support the power required for the instrument, then use an external relay.
- GREEN (optional) – connect this wire to the positive line (+12V) from the headlight switch. When this line receives a positive voltage, the gauge will use the “park-lights” brightness setting. Alternatively, if setting up a racing-mode display, this can be connected to a separate mode switch (12V or 0V signal). If unused, connect to ground.
- WHITE (if present) – This is the first (Channel-1) sensor signal input. Connect this wire to the appropriate sensor wire, or output from a wideband controller.
- GREY (if present) – This is the second (Channel-2) sensor signal input. Connect this wire to the appropriate sensor wire, or output from a wideband controller.
- PURPLE (if present) – This is the +5V output to any 5V-powered sensors. Connect this wire to the purple (or red) wire on the sensor. CAUTION, this wire supplies a positive voltage to the vacuum-boost sender – it must NOT be accidentally allowed to touch any other wire.
- YELLOW – this is the switch signal to control the gauge module. You can connect this to a N.O. (normally open) momentary pushbutton switch that best fits your application. The other side of the switch should be connected to ground.

OPERATION

Follow the usage instructions in the “OPERATION” section of the matching D1-*aaa-bbb*-M gauge instructions. The pushbutton on the yellow wire.

WARRANTY & LIABILITY

Neither VEI Systems, nor its dealers or agents shall be liable in any way, for any damage, loss, injury or other claims, resulting from the installation or use of this product. By purchasing or installing this product, you assume all liability of any kind connected with the use and/or application of this product. If you are unsure that you can safely install and use this product, consult a qualified installer or mechanic. The warranty on this product covers only the product itself for a period of 1 year from the date of purchase, and it will be at our discretion to repair or replace the affected parts. No user serviceable parts inside. Warranty void if product enclosure opened.