VEI Systems Installation Instructions
D1-WTC-WTC-Mx – Dual Gauge - Water Temperature (deg-C)

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 dual-function instrument monitors water-temperature and displays it simultaneously on two independent displays on the same gauge. Each of the two functions have upper- and lower-threshold alarms that are user configurable for the specific application vehicle.
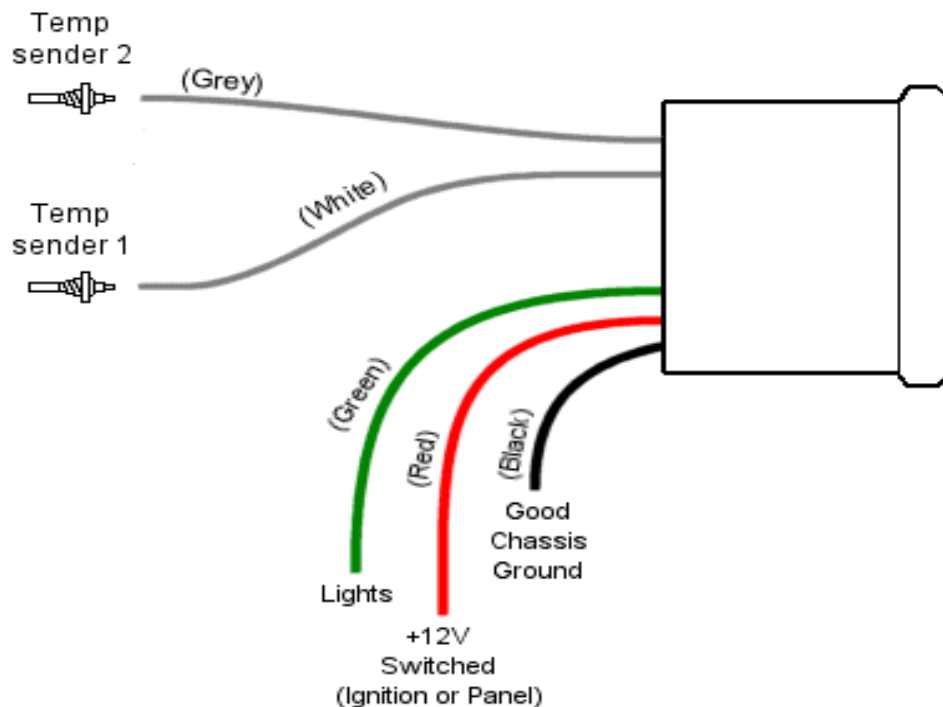
MOUNTING
Install the unit through the front of the mounting hole in the dash pod or panel. If you are making a custom dash panel, you will need to drill a 2-1/16" hole. Slide the clamp onto the 2 studs on the back of the instrument. Secure with the 2 thumb-nuts. Use a small drop of threadlocker or nail polish on the thumb-nuts to prevent them from loosening under vibration.

For water/coolant temperature, use sender SEN-T320D. Mount the sender on the engine block in an appropriate location (generally be where there was an existing water-temperature switch or sender). You can tee off the existing sender or switch if you need to keep both. CAUTION: teflon tape or compound may eventually break off and get into the water stream, causing blockage in the water passages and thus cause overheating. If you experience leaks, try tape only on the back half of the threads on the sender. The engine must be well grounded to the chassis & battery. If using teflon tape, measure the resistance between the outer body of the temperature sender and the engine block to ensure good electrical contact.

WIRING
The 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 D1 series instruments use approx. 130mA of current average and approx. 210mA maximum, so ensure the fuse is sized appropriately. For a typical 6- or 7-gauge setup, a single 5 Amp fuse is good.

- o BLACK (Thick) -- 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.

- o 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.

- o GREEN – 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).

- o WHITE -- connect this wire to top stud on the WATER-temperature sender.

- o GREY -- connect this wire to top stud on the WATER-temperature sender.

OPERATION

Press and hold the button for a few seconds to change the mode. Press and release quickly (tap the button) to change the setting in any mode. Modes are as follows:

MODE	DISPLAY	SETTINGS
Normal	(temp)	Shows water temperature displays in upper and lower display.
Channel swap	Ch1 / Ch2	Allows you to swap the position of the upper & lower displays if required.
Set low water-temp alarm	L2 . 60	Sets the low water-temp alarm threshold from 60 to 87 deg-C.
Set high water-temp alarm	H2 . 91	Sets the high water-temp alarm threshold from 93 to 138 deg-C.
Brightness Regular	Br . 9	Last digit shows regular brightness level from 1 to 9.
Brightness park-lights on	BP . 1	Last digit shows brightness level with lights on from 1 to 9.

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.