BHM-001 Bottle Heater Module

Installation and Operating Instructions

PN: L460009900

Lingenfelter Performance Engineering
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CAUTION
IT IS THE PURCHASER'S RESPONSIBILITY TO FOLLOW ALL INSTALLATION INSTRUCTION GUIDELINES AND SAFETY PROCEDURES SUPPLIED WITH THE PRODUCT AS IT IS RECEIVED BY THE PURCHASER TO DETERMINE THE COMPATIBILITY OF THE PRODUCT WITH THE VEHICLE OR THE DEVICE THE PURCHASER INTENDS TO INSTALL THIS PRODUCT ON.
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BHM-001

Bottle Heater Module

Parts List

#	Part Number	Description
1	L460009900 (BHM-001)	Bottle heater module.
1	L480490020	1500psi pressure sensor with 1-meter length harness.
1		Mounting hardware.
1		Hook and loop tape.
1	12162102	4-position 150 series male connector.
1	12047948	4-position TPA secondary lock clip.
5	15324973	Wire seal, orange for 4-position connector.
5	12045773	Male terminals for 150 series connector.
1	15300002	2-position 280 series male connector.
1	15300014	2-position TPA secondary lock clip.
3	15324982	Wire seal, green for 2-position connector.
3	12048159	Male terminals for 280 series connector.

Description

- **Precise Control of Nitrous Bottle Pressure**
- **Compact LCD Display is Readable in Direct Sun & Low Light**
- **Oversampling Controlled 32-Bit Processor**
- **Fault Triggered Self-Test Pressure Sensor & Diagnostic Feedback**
- **Accurately Maintains 800-1050 PSI**

The **Lingenfelter BHM-001 Nitrous Bottle Heater Control Module** is an adjustable pressure controller that moderates nitrous bottle heaters with the latest in advanced technology for precise pressure control.

The performance-driven 32-bit microprocessor is controlled with oversampling. For added reliability, if fault is detected, the self-test pressure sensor and diagnostic feedback is automatically triggered. The compact LCD display has a white LED background, so it is easily readable in direct sunlight as well as low light conditions. It displays the real-time pressure, current draw and status message, while optimum control of the nitrous bottle pressure is maintained within a range of 800-1050 PSI.

Caution – the pressure sensor must be placed into a gauge port on the bottle itself. If there is only one gauge port a proper t-fitting may be used so the gauge and the sensor see bottle pressure with the valve closed. If the sensor is placed past the bottle valve, the bottle valve MUST be open for proper operation!

Never remove and/or disable the blow off valve on the nitrous bottle!

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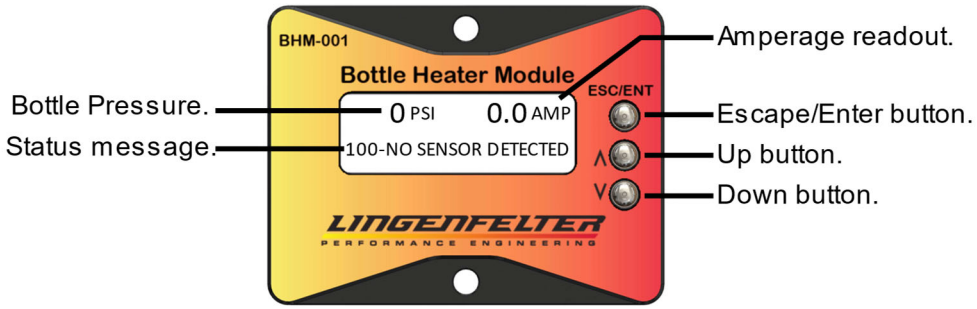

Programming the bottle pressure set point.

1 – Press the Down button and release.
2 – Use the Up, Down buttons to adjust the desired pressure.
3 – Press and hold the ESC/ENT button until “Value Saved” is displayed.

Viewing the bottle pressure set point.

1 – Press the Down button and release.
2 – Press the ESC/ENT button momentarily and release to exit.

Operation with BHM-001 controlling bottle heater with no relay.

The BHM-001 can provide up to 20 amps maximum when driving the heater directly. The most common bottle heaters are rated at 240 watts, or 20 amps current draw when driven by a 12-volt system. If the current draw exceeds 20 amps the BHM-001 will regulate the current draw by switching the output on and off. If the heater requires more amperage than 20 amps you will need to use a relay to buffer the current draw. See the wiring diagram for use with a relay if needed.

Operation with the BHM-001 controlling bottle heater with a relay.

The BHM-001 can be used as a relay driver for high amperage applications. When used in this configuration the display will not show a live reading of the amp draw. When first turned on the BHM-001 will pulse the relay, this is a check to see if a relay is connected and will adjust the output control strategy accordingly. The pulsing of the relay at power on is a design feature and indicates normal operation.

Status messages.

001 – the BHM-001 output is off.
002 – the BHM-001 output is on.
100 – no pressure sensor detected; the output will remain off until a valid signal is detected.
101 – sensor error; the reading from the sensor is over range and/or invalid. The output will remain off until a valid signal is detected.

Limited Warranty

LPE warrants the BHM-001 Bottle Heater Module to be free from defects in material and workmanship under normal use and if properly installed for a period of one year from date of purchase. If the module is found to be defective as mentioned above, it will be replaced or repaired if returned prepaid along with proof of date of purchase. This shall constitute the sole remedy of the purchaser and the sole liability of LPE. To the extent permitted by law, the foregoing is exclusive and in lieu of all other warranties or representations whether expressed or implied, including any implied warranty of merchantability or fitness. In no event shall LPE be liable for special or consequential damages.

Heater wiring with current monitoring.

⚠CAUTION

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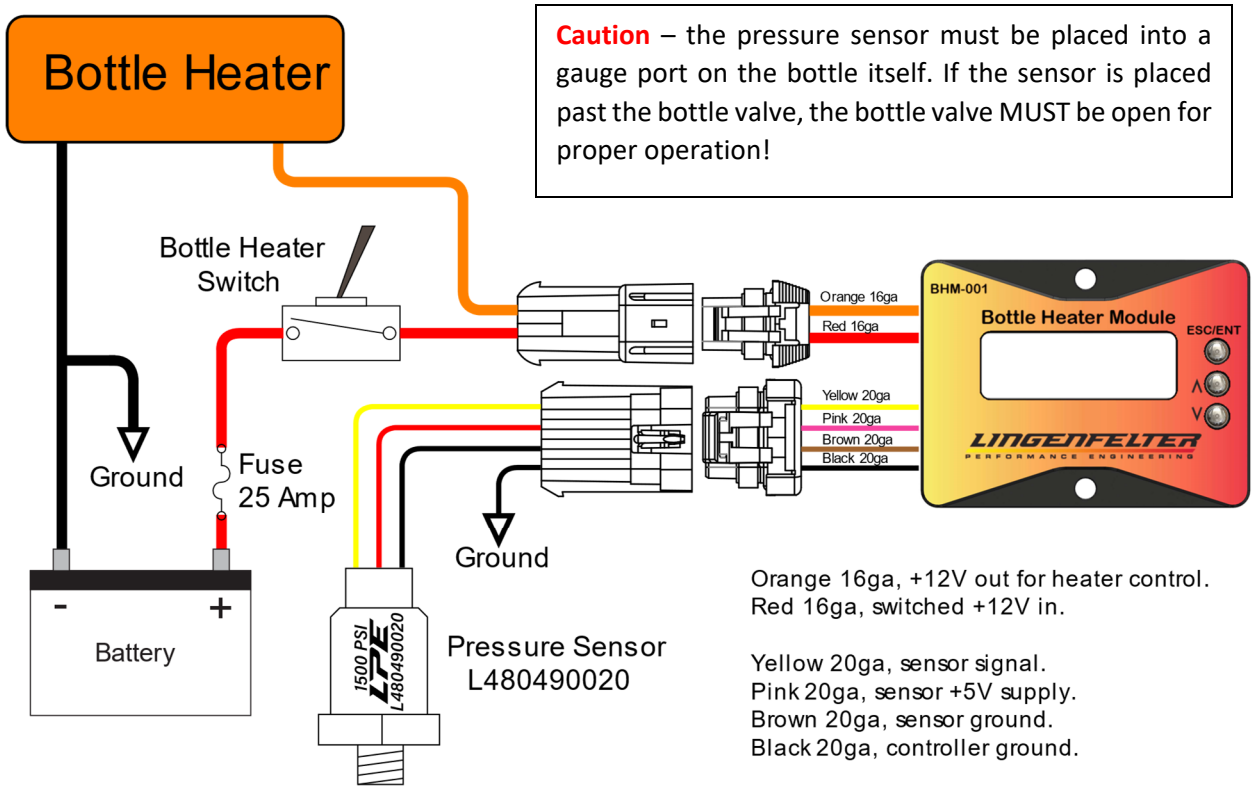

Orange 16ga, +12V out for heater control.
Red 16ga, switched +12V in.

Yellow 20ga, sensor signal.
Pink 20ga, sensor +5V supply.
Brown 20ga, sensor ground.
Black 20ga, controller ground.

Heater wiring with relay and no current monitoring.

⚠CAUTION

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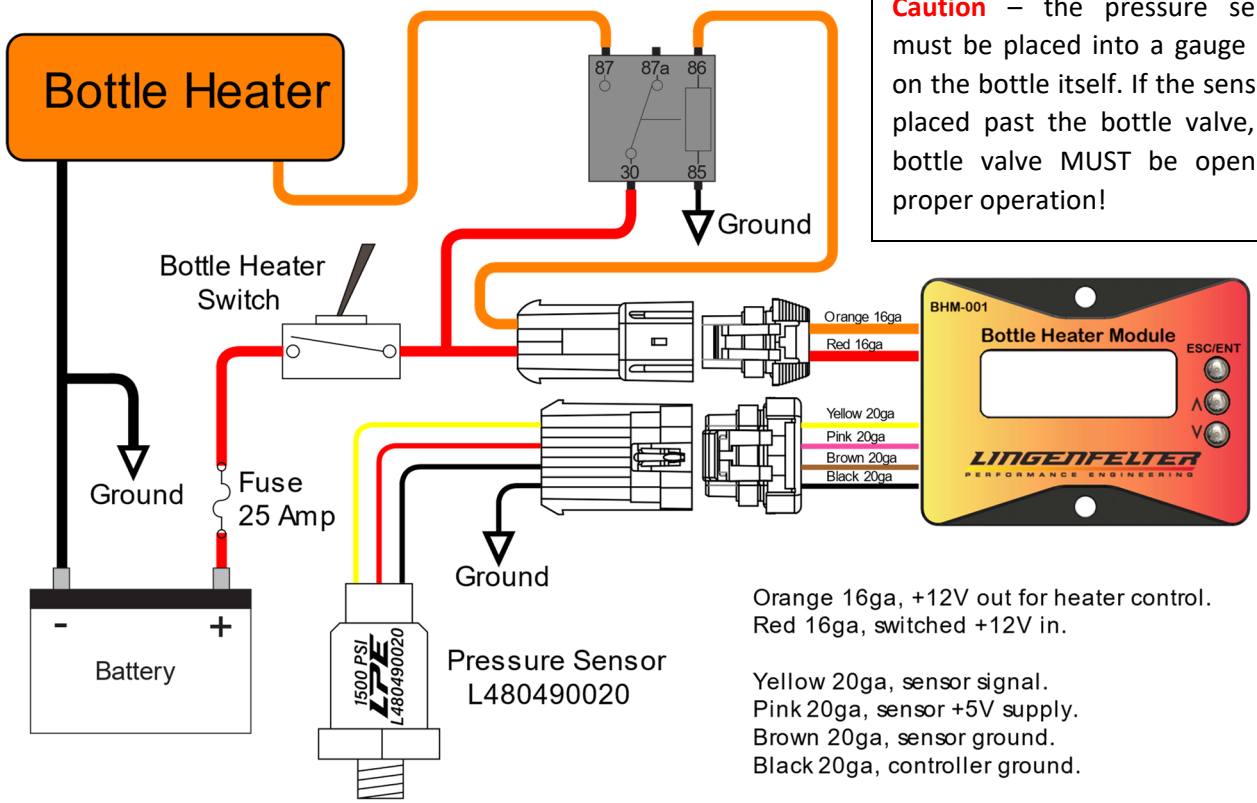

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