



# PERFORMANCE Electronics 50070102-01 PE Wideband O2 Kit User Guide

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**PERFORMANCE Electronics 50070102-01 PE Wideband O2 Kit**



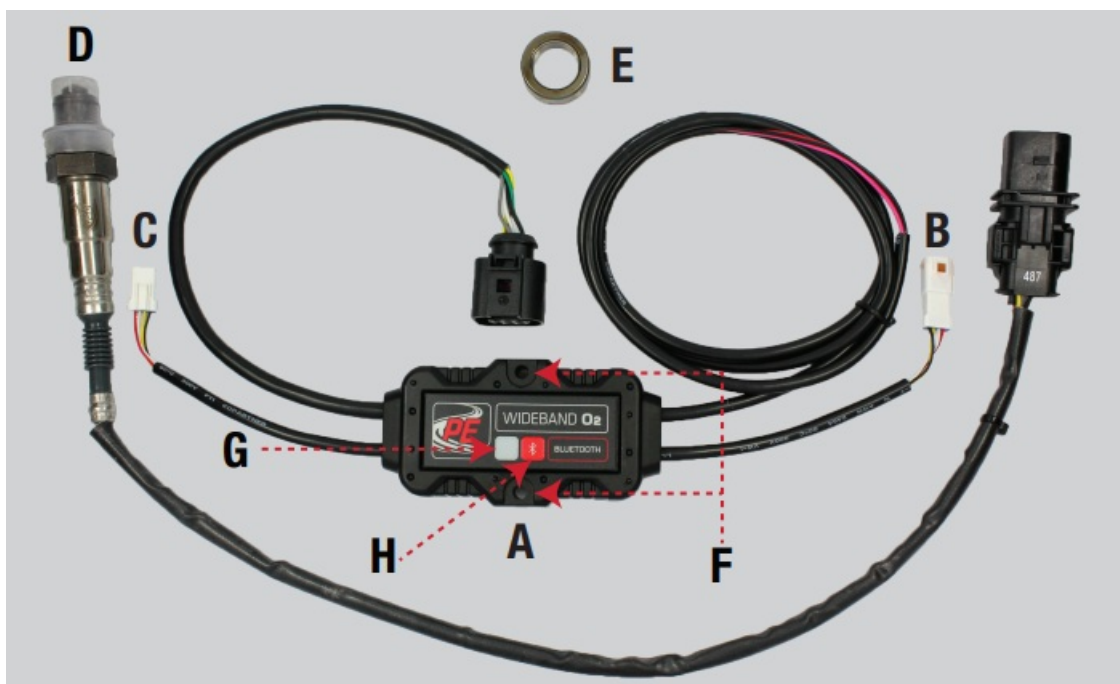
## WARNING

The PE Wideband O<sub>2</sub> is intended for off-road use only. This device is NOT waterproof. The sensor will get hot when powered and MUST be connected to the powered O<sub>2</sub> module when installed in a running engine. Failure to do so will damage the sensor. Fuels containing lead or 2-stroke oil will degrade the sensor.

The PE-Wideband controller must be installed a minimum of 3 feet away from any ignition system components. Performance Electronics, LTD assumes no responsibility for any damage that results from incorrect installation or misuse of this product. It is up to the end user to verify the correct setup and determine the suitability for his or her specific application.

**WARNING:** Cancer And Reproductive Harm [www.P65warnings.ca.gov](http://www.P65warnings.ca.gov)

## Part Identification



- A. O<sub>2</sub> Conditioning Module
- B. CAN Input Pigtail




- **C.** CAN Output Pigtail
- **D.** Bosch LSU 4.9 Sensor
- **E.** Mild Steel Weld In Bung
- **F.** Mounting Holes
- **G.** LED Status Indicator
- **H.** Bluetooth Pairing Button

## Calibration Points

$$\text{Lambda} = 0.14 \times V_{\text{out}} + 0.58$$

- **Lambda at 0.0 (V):** 0.58  $\lambda$
- **Lambda at 0.5 (V):** 0.65  $\lambda$
- **Lambda at 4.5 (V):** 1.21  $\lambda$
- **Lambda at 5.0 (V):** 1.28  $\lambda$

## Wiring the Conditioning Module

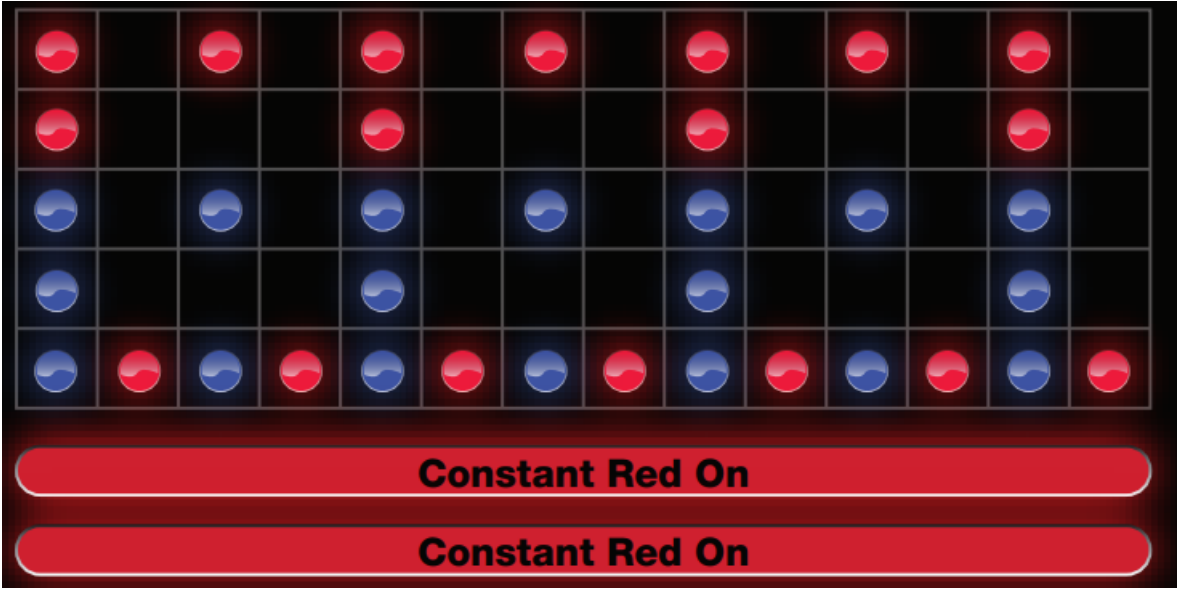
Wire Color		Wired Connection
	Red (20ga)	Switched +12V
	Black (20ga)	Ground
	Pink (20ga)	0-5V Output (optional)

## Pairing the O2 Module to a Smart Device

- Download the PE Wideband O2 app from the iOS App Store or Google Play Store. Search for 'PE Wideband' or scan QR code below.
- Power the conditioning module by applying switched +12V to the red wire.
- Look for the indicator light to blink red rapidly, indicating the module has power and the sensor is heating.
- Once the LED status indicator slows to a once-per-second blink pattern, open the app and select NEXT. You should see the available sensor module Lambda in the list.
- Press and hold the Bluetooth pairing button on the module until the indicator light turns blue, then release it.
- While the indicator light is flashing blue, select Lambda in the list.
- Once communication is established, the LED indicator will blink blue once per second indicating the module is paired with the mobile device. The app will now redirect to the main display screen.

## MODULE STATUS AND ERRORS

LED Blink Pattern



Module StatusApp Message/Description

Sensor Heating	'Heating'	During the first 20 seconds of operation, the sensor must heat up to function.
Normal Operation	—None—	Normal operation with no errors. No active Bluetooth communication.
Bluetooth Pairing	—None—	Module is ready to pair to a mobile device. This is initiated by holding the pair button.
Bluetooth Active	—None—	Normal operation with no errors and active Bluetooth communication.
Device Identify	—None—	Rapid color sequence to identify the connected device. Initiated from the app.

Error	'Error'	No sensor or bad sensor. Check the connection between the sensor and module.
Error	'Over Temp'	The module itself is too hot. If hotter than 176°F (80°C), Bluetooth may stop functioning.

**Scan QR code for owner's manual**



- [pe-ltd.com](http://pe-ltd.com)
- email: [support@pe-ltd.com](mailto:support@pe-ltd.com)



- Document Number: 60000707-03

## Documents / Resources



[PERFORMANCE Electronics 50070102-01 PE Wideband O2 Kit](#) [pdf] User Guide  
50070102-01 PE Wideband O2 Kit, 50070102-01, PE Wideband O2 Kit, Wideband O2 Kit, O2 Kit

## References

- [SaaS](#) | | ; ,APP ,SCRM , !
- [Performance Electronics | Where Fire Meets Fuel](#)
- [P65warnings.ca.gov](https://p65warnings.ca.gov)