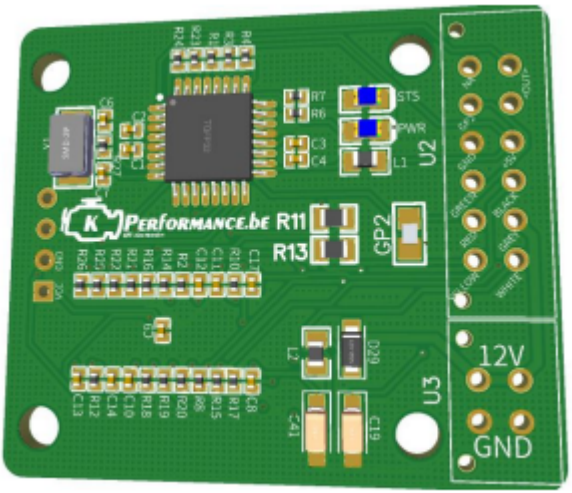
Tiny O2 Controller

Software,drivers and latest info can be downloaded at

www.Kperformance.be



Warning

- Do not connect or disconnect the Lambda Sensor while powered, only do so when unpowered.
- The Lambda Sensor gets very hot during normal operation, be careful when handling it.
- It takes roughly 30 seconds to 2 minutes to warm up the sensor. Once the sensor is warmed up an engine start could create condensation in the sensor, this may cause thermal shock and damage the sensor. It is best to power off a power source that is “live” when the engine starts.

Package Contents

Tiny Wideband should include the following Items:

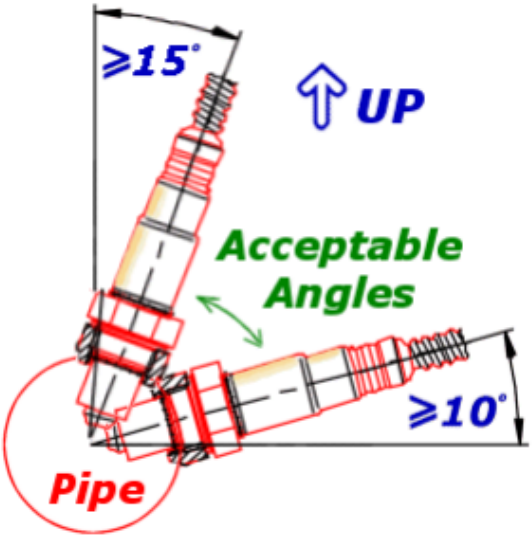
- 1x circuit board with soldered surface mount components
- 2x MicroMolex connectors
- 16x MicroMolex receptacles
- 1x 3d printed case and cap (optional)
- 1x OLED screen(optional)

Electrical connections

U2		Function
1	CANL	CANBUS LOW (NA on NON-CANbus)
2	OUT	Analog Output 0-5V
3	+5V	Extra 5V Output
4	Black	LSU BLACK
5	GREY	LSU GREY
6	WHITE	LSU WHITE
7	CANH	CANBUS HIGH (NA on NON-CANbus)
8	GP2	EXTERNAL GROUND PIN TO START
9	GND	GND
10	GREEN	LSU GREEN
11	RED	LSU RED
12	YELLOW	LSU YELLOW
U3		**Function**
12V	2X	INPUT VOLTAGE 8-18V
GND	2X	GROUND

Sensor Exhaust Installation

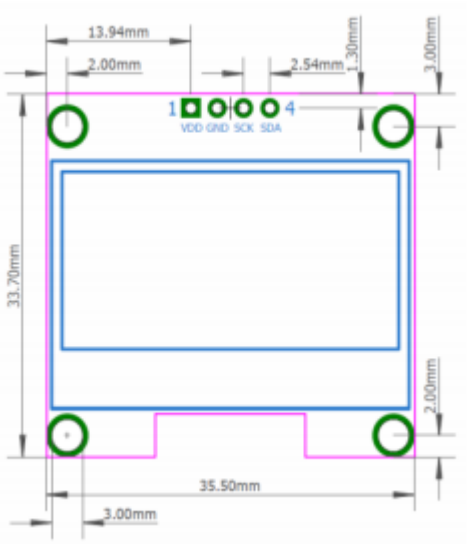
- The Lambda Sensor should be installed between the 10 o'clock and the 2 o'clock position, less than 60 degrees from vertical, this will allow gravity to remove water condensation from the sensor.
- For all Oxygen sensor installations the sensor must be installed before the catalytic converter.
- Avoid running the sensor to hot!
- Never leave an un-powered sensor in the exhaust system



O-LED Display(Optional)

1.3 and 0.96 I2C are supported without software changes.

Double check VCC&GND pins on aftermarket OLED-screens! Low budget/quality screens can cause freeze and hang up of Tiny Wideband Controller!



Initial stand-by screen will show:

- Icon Sensor connection
- Icon GP2 ground status (GP2 not grounded= NO START)
- Icon Battery voltage

After succesfull start, the screen will show:

- Temperature value
- Lambda value

Starting and operating

Linear output settings:

0V = Lambda 10.20 = AFR 22

4V = Lambda 0.650 = AFR 9

Starting of the controller can be done by grounding "**GP2**" (solder bridge on PCB) or external start grounding on molex connector, with customer requirements setting.

Ie:start lambda controller only after engine starts. (programmable output function within stand-alone ECU)

Not grounding of pin "**GP2**" will result in a standby lambda controller! Blinking LED.

Operational led Status

LED	Status	Function
STS	Fading in	Heating sensor status
PWR	Solid	
STS	Blinking Slow	Operational measuring status
PWR	Solid	
STS	Blinking FlipFlop	Sensor disconnected/Error
PWR	Blinking FlipFlop	
STS	OFF	Power low
PWR	Blinking	

PCB Layout

For easy integration we'll share the layout so the controllers can be integrated in to own projects.

User Remarques and info