

Installation Manual for power supply unit “FlowSupply” (part.-no. 87000e) designed for Pierburg airflowmeter 7.22684.00



The device FlowSupply was designed to be used together with the airflowmeter PB-LMS (part.-no. 50000). It enables the use of the air mass meter without any connection to an engine control unit (ECU). Thus, it can be used in ventilation ducts, air systems, heating systems, stationary engines, combined heat and power plants, fuel cells, etc. The 0-5V output signal can be used in a PLC (programmable logic controller) or with a voltmeter.

Content:

1. Installation
2. Connection of the power supply to a 230 V AC domestic electric net
3. Connection of the airflowmeter
4. Signal output
5. Interpretation of voltage signal

All statements without liability

Status July 2015

General Safety Advice

ATTENTION! Basic safety measures for usage of electronic devices to avoid electric shock, injury and fire. Read and follow all of these instructions before using this product. Keep these instructions for future reference.

Working safely

Keep you work space tidy! An untidy workplace can lead to accidents.

Consider environmental influences!

1. Prevent electronics from rain.
2. Do not use electronic devices in damp or wet conditions.
3. Do not use electronics near flammable liquids or gases.

Protect yourself against electric shock

Avoid body contact with parts (e.g. connected battery cable)

Keep away other persons during the time of assembly!

Prevent other persons – mainly small children - from touching tools or cables. Keep them away from your work area.

Do not use a cable for purposes it was not designed for.

Protect wiring harnesses from heat, oil and sharp edges.

Working area has to be voltage free.

Disconnect the battery or pull the fuse of the related circuit.

Stay alert!

Make sure what you are doing. Use common sense for your work. Discontinue the installation when you are distracted.

Electric devices have to be repaired by qualified professionals!

This device complies with relevant safety regulations. Repairs may only be performed by qualified electricians, otherwise persons could be endangered.

1. Installation

The power supply unit is to be mounted in a sheltered, dry place. Mounting options are provided on the black plastic case.

2. Connection of the power supply to a 230V AC domestic electric net

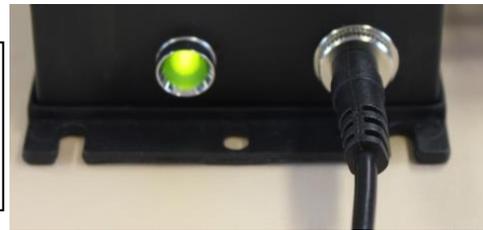
The supplied power transformer is plugged into the socket next to the LED and is connected to a household power outlet. If connected correctly the LED lights green.



Power Transformer



Plugged transformer line in jack: The LED is green



3. Connection of the airflowmeter

The plugs of connector kit (part-no. 50020) are mounted to the four colored sockets. Pay attention to color coding. (Red plug in red socket, etc.)

The connector set is plugged to the mass air flow sensor. The four color-coded connectors are plugging into the four corresponding jacks.



4. Signal output

The signal lines are inserted into the black and green sockets. The black connector is connected to the ground; the green socket provides the 0-5 V output signal. As long as no airflow is detected, a signal of



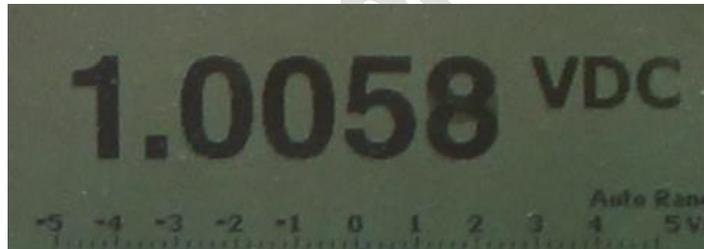
around 1 volt is given. This is also the control of operational readiness.

Connection of a voltmeter to determine the signal output 0-5V DC

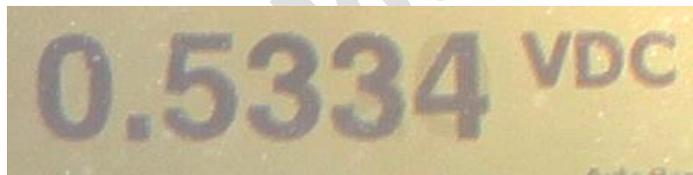
This signal can be processed by each PLC. Alternatively, a panel meter (0-10 V DC), a voltmeter or multimeter can be connected.

5. Interpretation of voltage signal

No flow detected: output is one volt.



Backflow causes voltage values below one volt. (Flow direction opposite to the imposed direction of the arrow on the mass air flow sensor)



Normal operation with airflow. A signal 1- 4.5 volts depending on the flow intensity is given out.



Always good success!

EngineSens Motorsensor GmbH

Mannheimer Str. 44 b
phone +49(0)6204/98 60 823
www.motorsensor.de

D-68519 Viernheim
fax +49(0)6204/98 60 825