

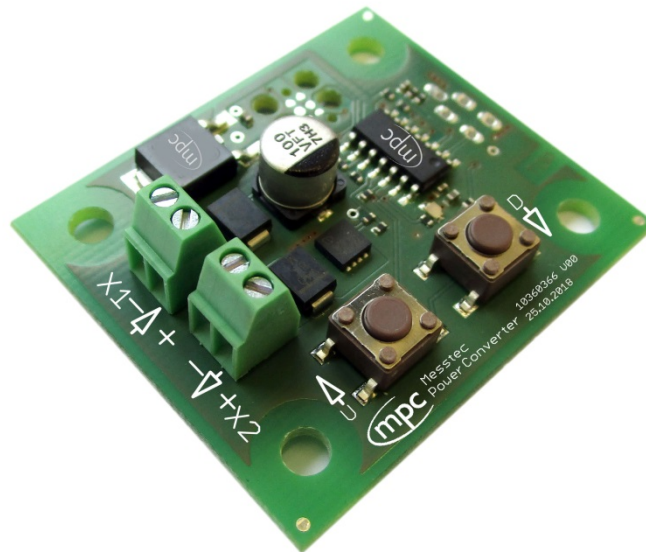
**Operating Manual  
Fan Control FC 4-25**

Document: 10100940

Revision: 0

Date: 28.05.2019

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**Fan Control FC 4-25**

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## General Description

This fan controller is designed to control the fan speed depending on temperature. The fan speed is controlled via PWM according to a characteristic curve. For easy adaptation of the fan speed, there are two buttons (up, down) with which the fan speed respectively temperature can be adjusted.

For better usability a LED shows different states.

At the bottom side of the device there are two soldered jumpers J1 and J2.

Jumper J1 is not used in this version.

Jumper J2 is for selecting different PWM frequencies for different fan models.

### **Important:**

**The temperature sensor must have a good thermal contact to the cooling plate.**

**Use adhesives or thermal grease with high thermal conductivity for bonding the sensor.**

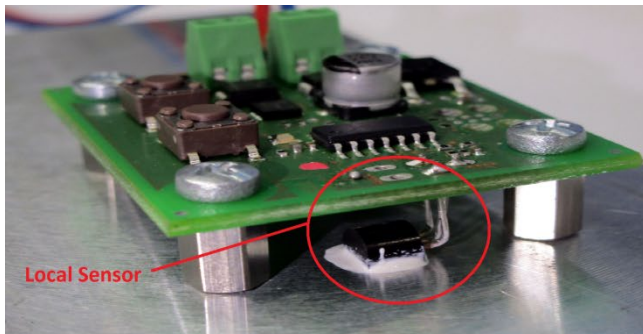


Fig.1

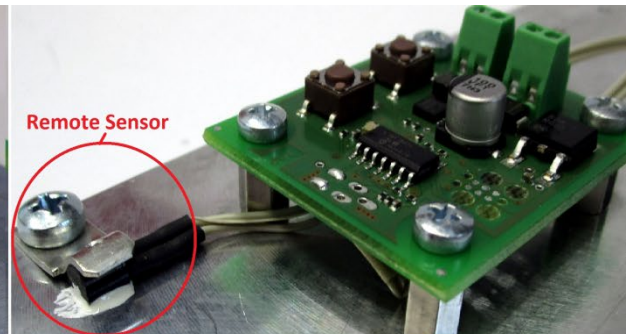


Fig.2

## Connections:

The controller board has two connectors:

X1	2-pole single row screw terminal	supply voltage input	6V ... 25 V
X2	2-pole single row screw terminal	fan output	max. 24V / 4A

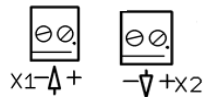


Fig.3

## Indicator elements:

LED (green):

- blinking uniformly: status ready – normal operation – supply voltage is present
- flashing: see below: Adjustments

## Mode of operation:

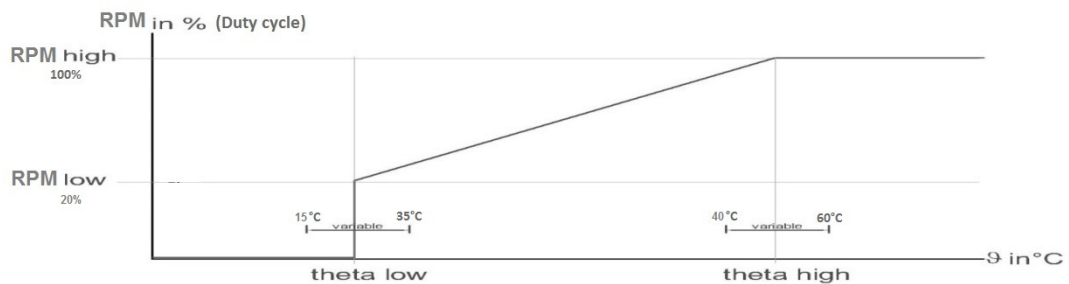


Fig.4

Rotations per minute (RPM) high:	fixed at 100%
Rotations per minute (RPM) low:	fixed at 20 %
Theta low:	15°C ... 35°C adjustable
Theta high:	40°C ... 60°C

## Adjustments

By pressing the UP/DOWN buttons S1 and S2 the theta curve can be set.  
Temperature curve can be modified according to Fig. 6.

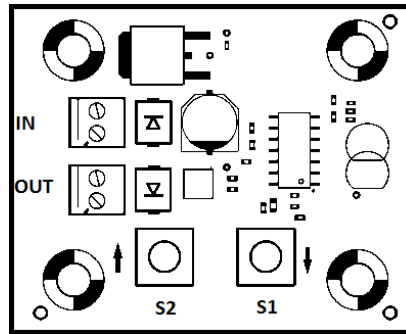


Fig. 5

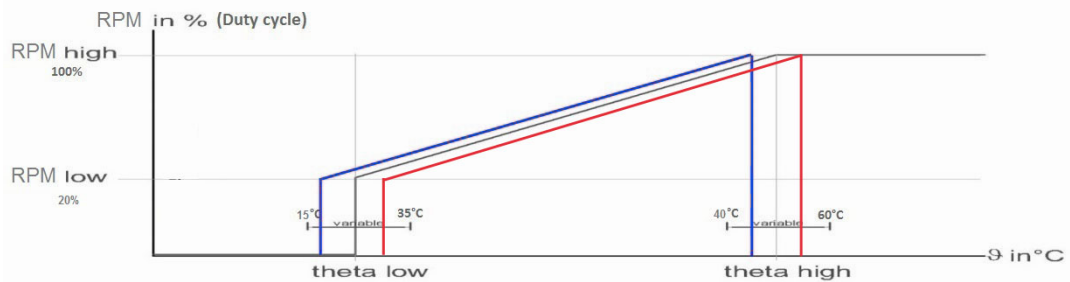


Fig. 6

By pressing button S1 (Down) once the temperature curve decreases in steps of 1°C.  
As a result the fan runs faster (Blue curve).


By pressing button S2 (Up) once the temperature curve increases in steps of 1°C.  
As a result the fan runs slower (Red Curve).

These changes are stored in the controller - After restarting the controller continues with the last adjusted values.

These values can be set to factory default by pressing both buttons at the same time for more than 2 seconds  
(= Reset).

Default values are:

Rotations per minute (RPM) high:	fixed at 100%
Rotations per minute (RPM) low:	fixed at 20%
Theta low:	30°C
Theta high:	55°C

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## Indications:

In operation mode the Up- and Down-buttons give response via the LED:

The LED flashes:

- One time for temperature is set lower than default value
- Two times for temperature is set to default value
- Three times for temperature is set higher than value

## Jumper Settings:

Jumper J1 and J2 settings via soldered jumper.

Jumper J1:

- not used

Jumper J2:

- Open: PWM frequency 10kHz for electronically controlled fans
- Closed: PWM frequency 62,5Hz for electrical fans

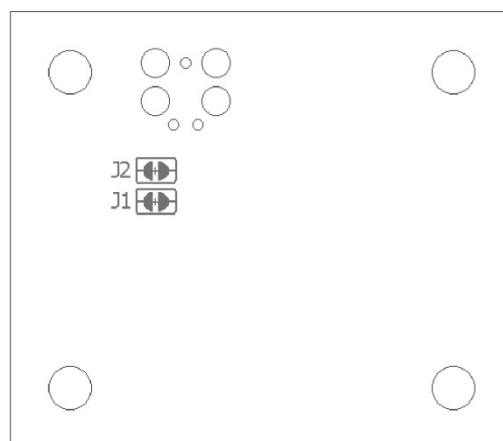



Fig. 10 (Bottom side)

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**Section Drawings**

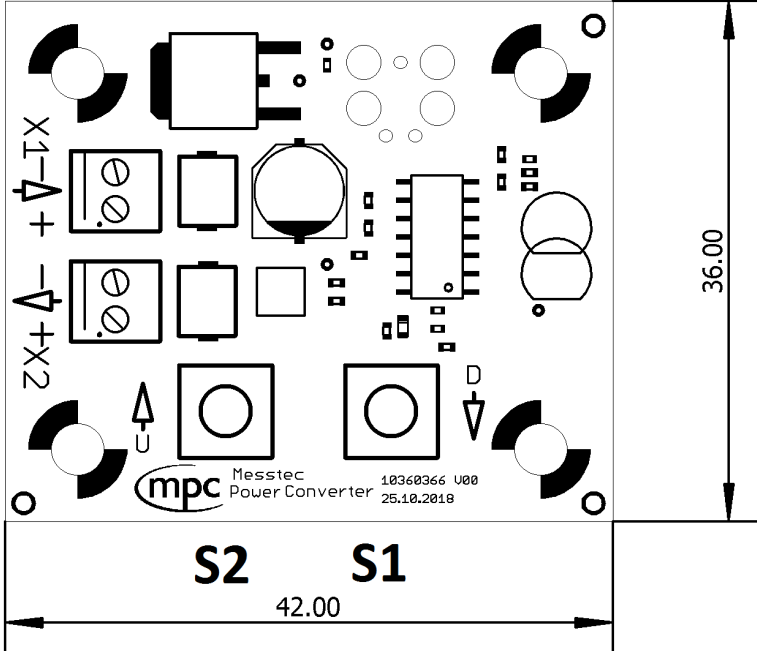


Fig. 11 PCB dimensions (in mm)

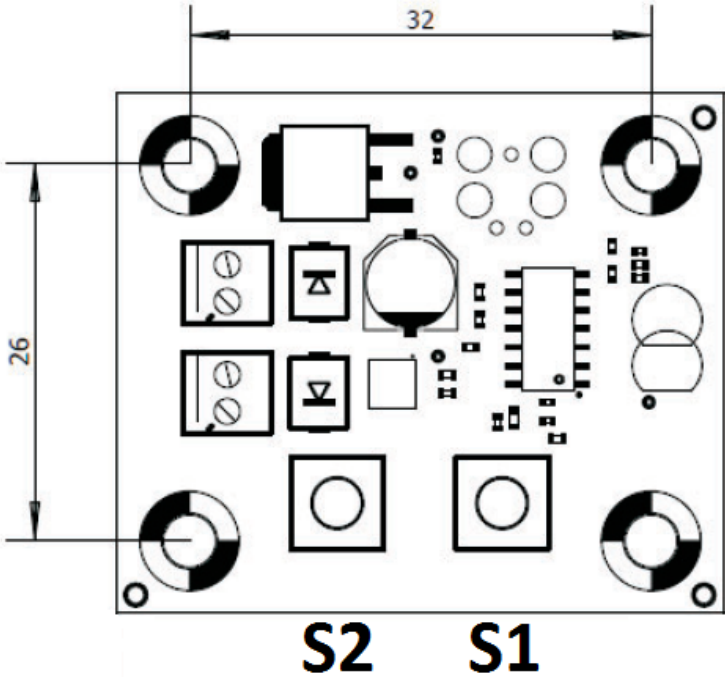



Fig 12 Mounting holes

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### **Ordering Information:**

Fan Control Unit with local sensor	10100940
Fan Control Unit with remote sensor	10100941

### **Contact Data**

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Technical subjects to change without notice.