



KAmoDTEM



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Źródło: <https://wiki.kamamilabs.com/index.php?title=KAmoDTEM>

Table of contents

Basic features	1
Standard equipment	2
Schematics	3
Board Layout	4
Connectors	5
Address Lines	6
Alert output	7
Module usage	8

Description

[KAmoTEM](#) makes it easy to use thermal sensor with any device equipped with I2C interface, it can also be used as thermostat.



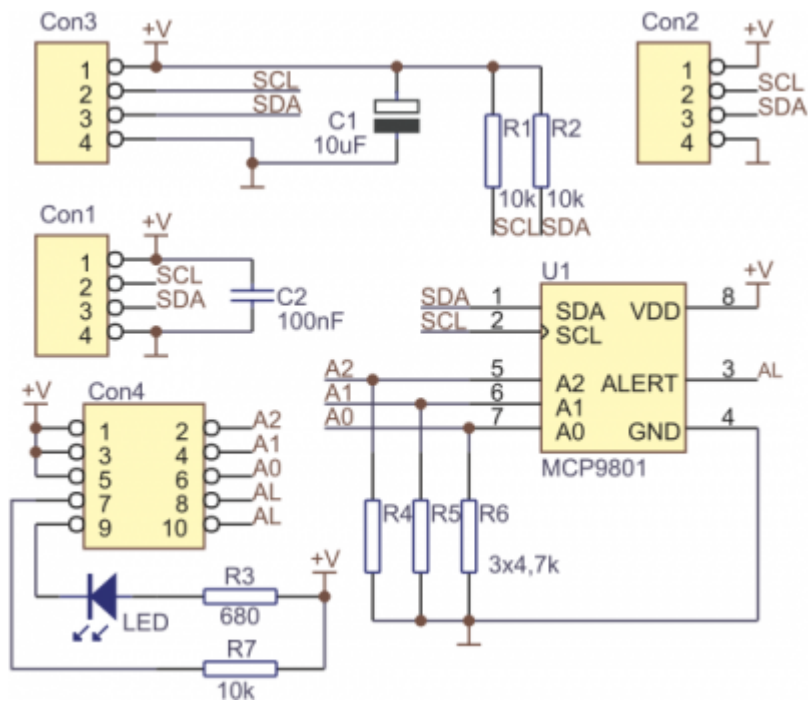
Basic features

- MCP9801 thermal sensor by Microchip
- Programmable sensor resolution: 9 to 12 bits
- Sampling frequency 4...33Hz
- Capable of reading temperatures from -55 to +125°C
- SMBus and I2C/400kHz interfaces
- 3 configurable address lines (up to 8 modules on one I2C bus)
- Address 1001xxx (xxx - A2/A1/A0 configurable by jumpers, default 000)
- Alert output (thermostat, open-drain)
- Supply voltage 2.7...5.5VDC
- Built-in pull-up resistors for I2C
- Built-in LED (for example can be used as alert indicator)
- I2C Kamami standard connector (compatible with most of Kamami evaluation boards)

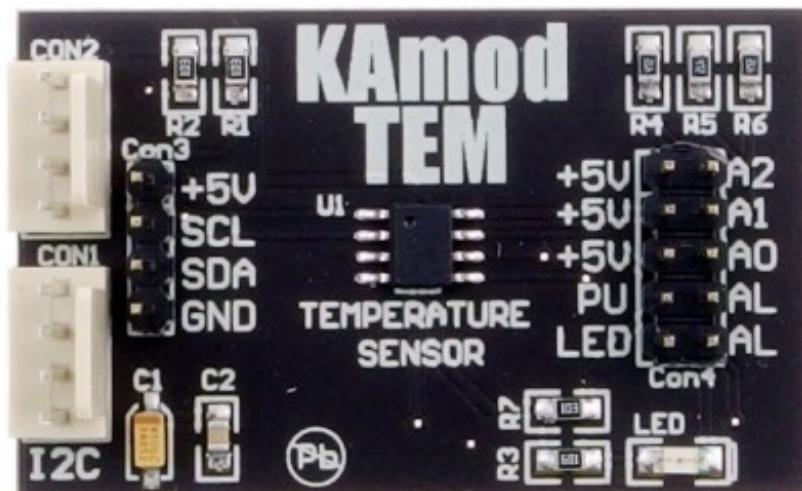
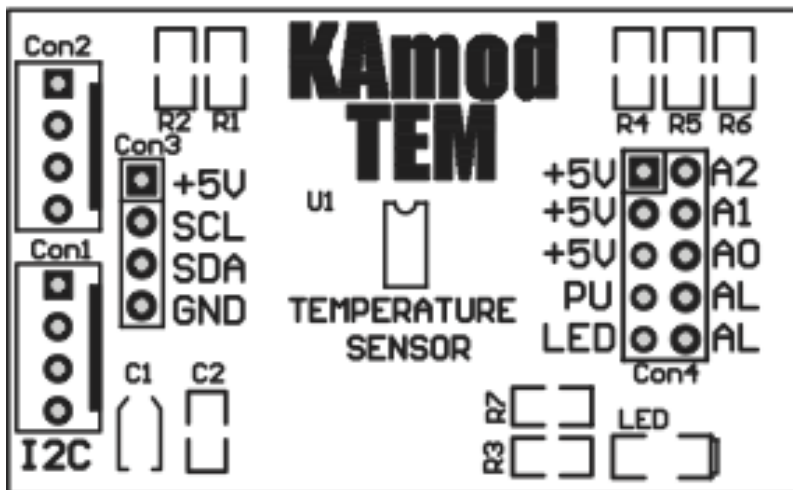
Standard equipment

Code	Description
KAmo d TEM	• Assembled module

Schematics

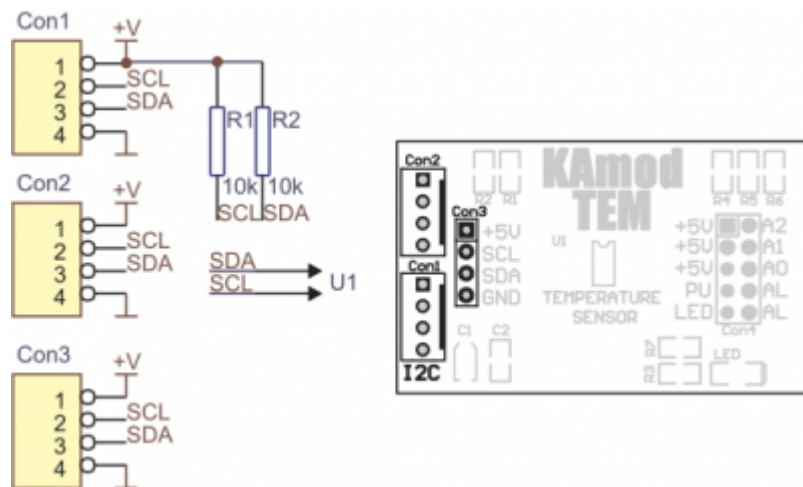


Board Layout



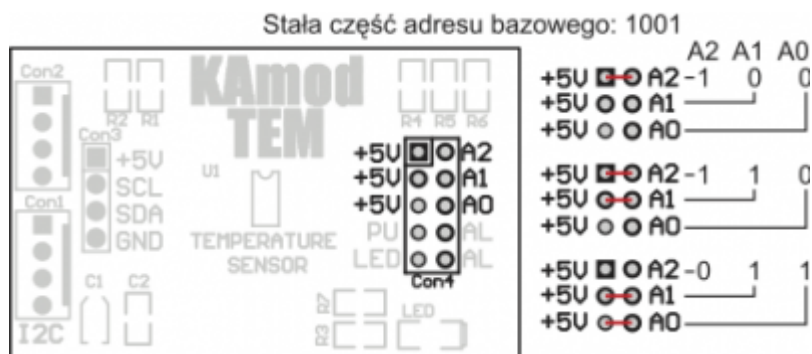
Connectors

I2C bus (both lines with pull-up resistors) is available on Con1, Con2 and Con3 connectors. Pinout is shown on figure below.



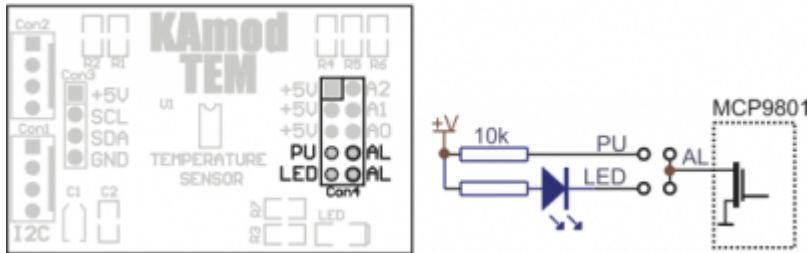
Address Lines

Address lines (A2, A1, A0) are connected to Con4 pin header. Lines are pulled-down, so default module address is 1001000. You can change it by putting jumpers on Con4.



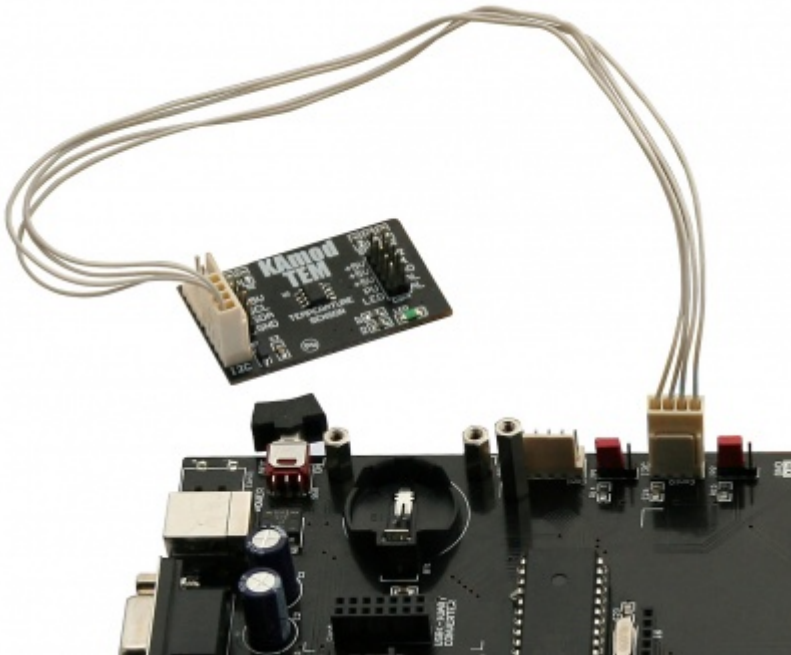
Alert output

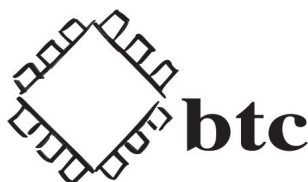
Thermostat output of MCP9801 is connected to Con4 connector. It is open-drain output, so module is equipped with pull-up resistor, which can be connected to AL line by PU jumper, AL output can be also used to control LED.



Module usage

KAmoDTEM is equipped with Con1 i Con2 connectors, that can be used to connect module to KAMAMI evaluation boards with I2C connector (STM32Butterfly, ZL30ARM, ZL15AVR, ZL16AVR, ZL5PIC etc.).





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