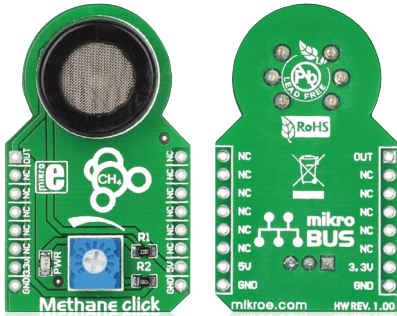


Methane click™

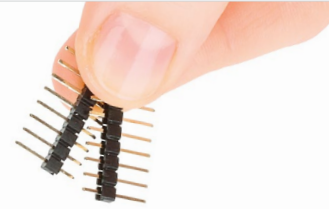
1. Introduction



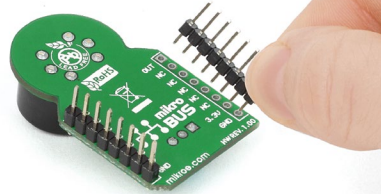
Methane click™ is a simple solution for adding a high sensitivity methane (CH₄) sensor to your design. It's suitable for designing gas leakage equipment. The board features an MQ-4 sensor, a calibration potentiometer, a mikroBUS™ host socket, two jumpers and a power indicator LED. Methane click™ communicates with the target board through mikroBUS™ AN (OUT) line. Methane click™ is designed to use a 5V power supply only.

2. Soldering the headers

Before using your click™ board, make sure to solder 1x8 male headers to both left and right side of the board. Two 1x8 male headers are included with the board in the package.

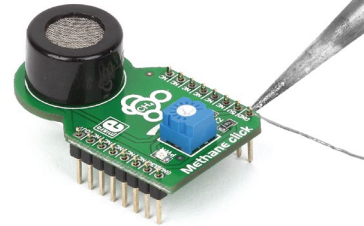


2



Turn the board upside down so that the bottom side is facing you upwards. Place shorter pins of the header into the appropriate soldering pads.

3



Turn the board upward again. Make sure to align the headers so that they are perpendicular to the board, then solder the pins carefully.

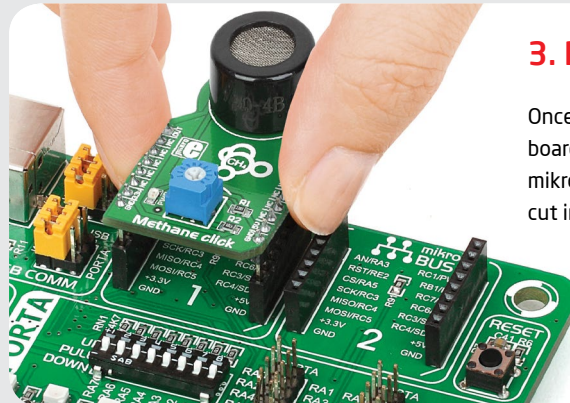


4. Essential features

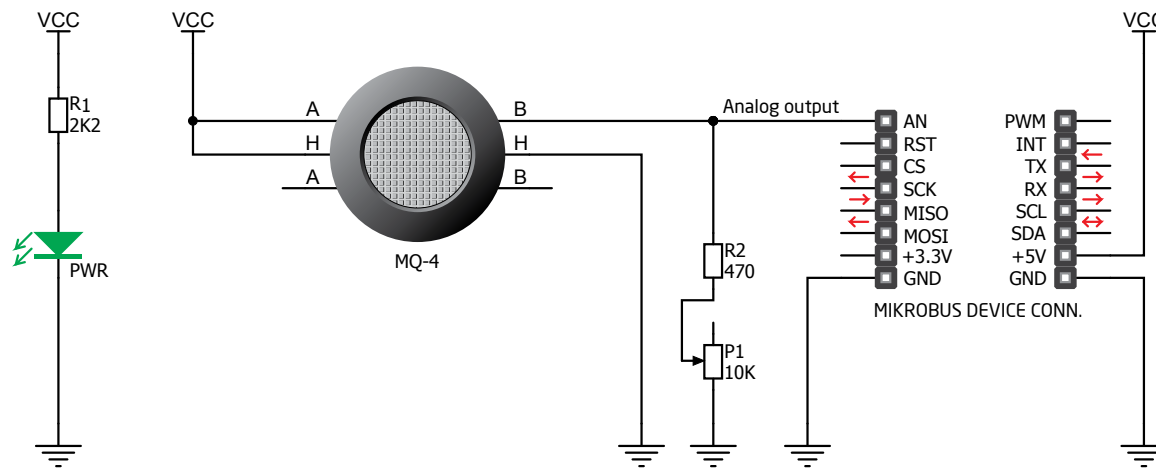
Methane click™ can detect methane levels in concentrations from 200 to 10000ppm. The MQ-4 methane sensor has a sensor layer made of Tin dioxide (SnO₂), an inorganic compound which has lower conductivity in clean air. The conductivity increases as the levels of methane rise. Methane click™ also contains a potentiometer that lets you adjust the sensor for the environment you'll be using it in. For precise calibration the sensor needs to preheat (once powered up, it takes 24h to reach the right temperature.)

3. Plugging the board in

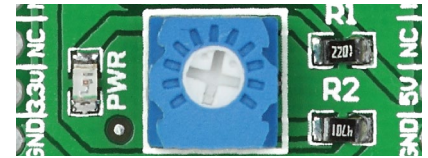
Once you have soldered the headers your board is ready to be placed into the desired mikroBUS™ socket. Make sure to align the cut in the lower-right part of the board with the markings on the silkscreen at the mikroBUS™ socket. If all the pins are aligned correctly, push the board all the way into the socket.



5. Methane click™ board schematic



6. Calibration potentiometer



To calibrate Methane click™ for optimum performance, use the on-board potentiometer to adjust the load resistance of the sensor circuit.

7. Code examples

Once you have done all the necessary preparations, it's time to get your click™ board and running. We have provided examples for mikroC™, mikroBasic™ and mikroPascal™ compilers on our **Libstock** website. Just download them and you are ready to start.



8. Support

MikroElektronika offers **free tech support** (www.mikroe.com/support) until the end of the product's lifetime, so if something goes wrong, we're ready and willing to help!