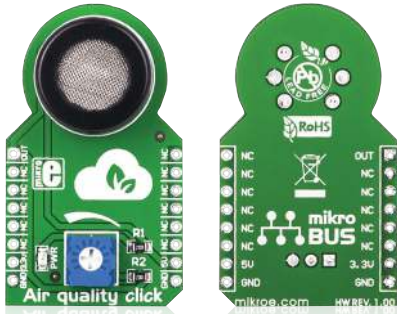# Air quality click™

1. Introduction

Air quality click™ is a simple solution for adding a high sensitivity sensor for detecting a variety of gases that impact air quality in homes and offices. The board features an MQ-135 sensor, a calibration potentiometer, a mikroBUS™ host socket, two jumpers and a power indicator LED. Air quality click™ communicates with the target board through mikroBUS™ AN (OUT) line. Air quality click™ is designed to use a 5V power supply only.
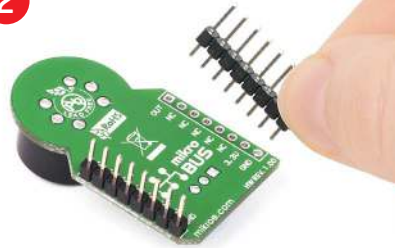
2. Soldering the headers

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.

1

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.

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.

4. Essential features

Air quality click™ is suitable for detecting ammonia (NH_3), nitrogen oxides (NOx) benzene, smoke, CO_2 and other harmful or poisonous gases that impact air quality. The MQ-135 sensor unit has a sensor layer made of tin dioxide (SnO_2), an inorganic compound which has lower conductivity in clean air than when polluting gases are present. Air quality click™ also contains a potentiometer that lets you adjust the sensor for the environment you'll be using it in.

click™
BOARD
www.mikroe.com

Air quality click Manual
ver. 1.00

0 100000 026588

5. Air quality click™ board schematic

VCC

R1
2K2

PWR

VCC

A   B
H   H
A   B

MQ-135

Analog output

R2
10K

P1
10K

MIKROBUS DEVICE CONN.

AN	PWM	
RST	INT	←
CS ←	TX	→
SCK →	RX	→
MISO ←	SCL	↔
MOSI ←	SDA	↔
+3.3V	+5V	
GND	GND	

VCC

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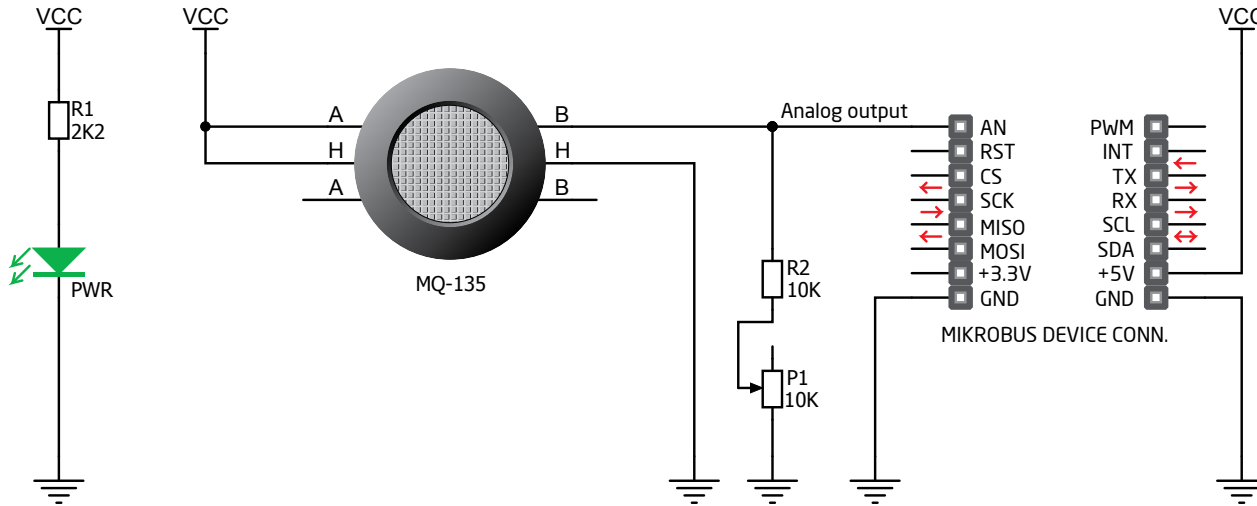
6. Calibration potentiometer
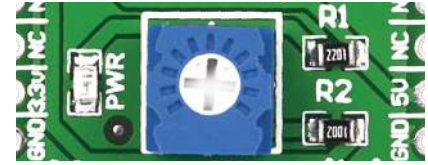
To calibrate Air quality click™ for optimum performance, use the on-board potentiometer to adjust the load resistance on the sensor circuit.

7. Code examples

Once you have done all the necessary preparations, it's time to get your click™ board up 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.

LIBSTOCK.com

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!

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