Manometer 2 click

PID: MIKROE-2550

Manometer 2 click carries the MS5525DSO-SB001GS digital pressure sensor, based on leading MEMS technology. The click is designed to run on a 3.3V power supply. It communicates with the target microcontroller over I2C or SPI interface.

MS5525DSO-SB001GS features

The MS5525DSO-SB001GS is a new generation of Digital Small Outline pressure sensors with SPI and I2C bus interface designed for high volume OEM users.

The sensor module includes a pressure sensor and an ultra-low power 24-bit ΔΣ ADC with internal factory calibrated coefficients. It provides a 24-bit digital pressure and temperature value and different operation modes that allow the user to optimize for conversion speed and current consumption.

The MS5525DSO-SB001GS consists of a piezo-resistive sensor and a sensor interface IC. The main function of the MS5525DSO-SB001GS is to convert the uncompensated analog output voltage from the piezo-resistive pressure sensor to a 24-bit digital value, as well as providing a 24-bit digital value for the temperature of the sensor.

How it works

Manometer 2 click measures absolute pressure of 1PSI max, trough the barbed port.

This barbed port is the input to the sensor. A small rubber hose can be used.
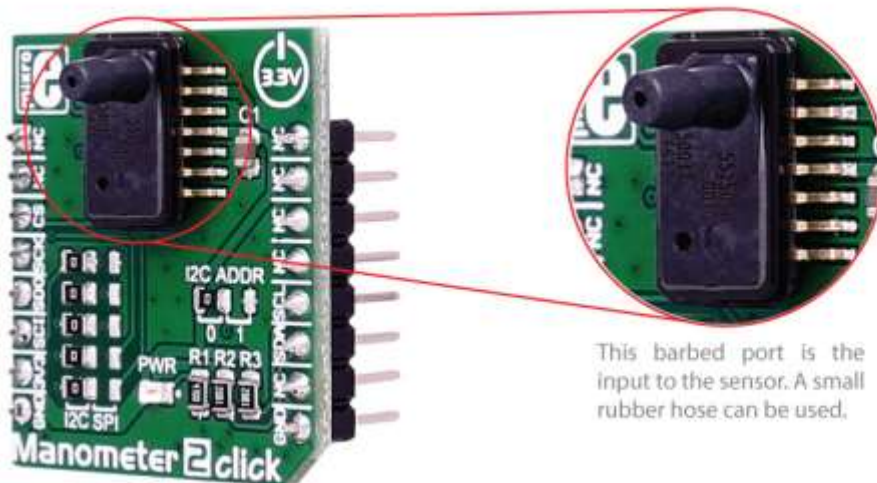
You can choose between SPI and I2C communication.

Specifications

| Type	Altitude,Pressure
Applications	Factory automation, altitude and airspeed measurements, medical instruments, leak detection, etc.
On-board modules	MS5525DSO digital pressure sensor
Key Benefits	24-bit digital pressure and temperature value
Interface	I2C,SPI
Input Voltage	3.3V
Click board size	S (28.6 x 25.4 mm)

Pinout diagram

This table shows how the pinout on **Manometer 2 click** corresponds to the pinout on the mikroBUS™ socket (the latter shown in the two middle columns).

Notes	Pin	mikroBUS				Pin	Notes
	NC	1	AN	PWM	16	NC	
	NC	2	RST	INT	15	NC	
Chip Select	**CS**	3	CS	TX	14	NC	
SPI Clock	**SCK**	4	SCK	RX	13	NC	
SPI Master Input Slave Output	**MISO**	5	MISO	SCL	12	**SCL**	I2C Clock
SPI Master Output Slave Input	**MOSI**	6	MOSI	SDA	11	**SDA**	I2C Data
Power supply	**+3.3V**	7	3.3V	5V	10	NC	
Ground	**GND**	8	GND	GND	9	**GND**	Ground

Jumpers and settings

I2C position soldered by default

SPI position soldered
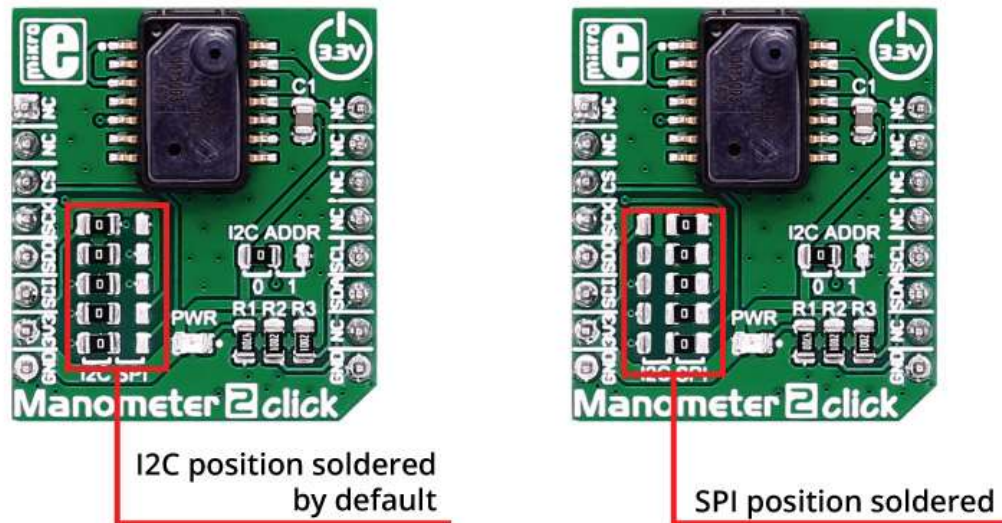
In order to set the SPI interface, you need to move all the 5 jumpers (JP1-JP5).
These jumpers are soldered in I2C interface position by default.

There is an option to select the alternate address with jumper J6 in the case of I2C interface (default position is logic 0).