

PRODUCT DATASHEET

Soldered Pressure & Temperature Sensor BMP585 breakout

333189

A BMP585 barometric pressure and temperature sensor on a 22 × 22 mm board, with ±6 Pa relative accuracy and two Qwiic connectors.

Full product documentation, files and tutorials: **solde.red/333189**

CORE ATTRIBUTES

SKU	**333189**
DIMENSIONS	**22.0 × 22.0 × — mm**
ORIGIN	**HR**
BARCODE	**732388628209**

DESCRIPTION

The Pressure & Temperature Sensor BMP585 Breakout carries Bosch Sensortec's BMP585, an absolute barometric pressure sensor that also measures temperature. Its relative accuracy is fine enough to tell which floor of a building you are on.

The BMP585 measures pressure from **30 to 125 kPa** with **±6 Pa** relative accuracy (700 to 1100 hPa, 15 to 55 °C) and **±30 Pa** absolute accuracy (300 to 1100 hPa, -5 to 65 °C), and runs from **-40 to 85 °C**. In NORMAL mode it outputs data at 0.125 to 240 Hz, and it has an IIR filter, a 32-sample FIFO and an interrupt pin. It draws **1.3 µA** at 1 Hz and 0.55 µA in deep standby.

You connect over **I2C**, either through the two Qwiic connectors or the 2.54 mm headers, which also break out INT, CSB and the address pin. The default address is **0x47**; move the ADDRESS jumper to get **0x46**. 10 kΩ pull-ups on SDA and SCL are enabled by default and can be cut off with a jumper. Soldered Arduino and MicroPython libraries are available.

TECHNICAL DETAILS

- **Sensor:** Bosch Sensortec BMP585
- **Pressure range:** 30 to 125 kPa
- **Relative accuracy:** ±6 Pa (700 to 1100 hPa, 15 to 55 °C)
- **Absolute accuracy:** ±30 Pa (300 to 1100 hPa, -5 to 65 °C)
- **Operating temperature:** -40 to 85 °C
- **Output data rate:** 0.125 to 240 Hz (NORMAL mode)
- **Current:** 1.3 µA at 1 Hz, 0.55 µA deep standby
- **Interface:** I2C, address 0x47 (default) or 0x46

- **Connectors:** 2x Qwiic, 2× 4-pin 2.54 mm header (GND, 3V3, SDA, SCL / GND, ADDRESS, INT, CSB)
- **Supply:** 1.71 to 3.6 V on 3V3, no regulator
- **Pull-ups:** 10 kΩ on SDA and SCL, enabled by jumper
- **Dimensions:** 22 × 22 mm, 2× 3.2 mm mounting holes

Note:

- 3.3 V only. There is no regulator or level shifter, and the BMP585 is rated to 3.6 V. Do not connect 5 V to 3V3 or to the signal pins.
- The headers ship unsoldered.

SPECIFICATIONS

INTERFACE	I2C, Digital Gpio
QWIIC COMPATIBLE	Yes
I2C ADDRESS DEFAULT	0x47
I2C ADDRESS CHANGEABLE	Yes
BREADBOARD COMPATIBLE	Yes
MEASUREMENT TYPES	Temperature, Pressure
MEASUREMENT RANGE	Pressure 30 to 125 kPa; temperature -40 to 85 °C
MEASUREMENT ACCURACY	Relative ±6 Pa (700 to 1100 hPa, 15 to 55 °C); absolute ±30 Pa (300 to 1100 hPa, -5 to 65 °C)
IC PART NUMBER	BMP585
SUPPLY VOLTAGE MIN V	1.71
SUPPLY VOLTAGE MAX V	3.6
LOGIC LEVEL	3V3 Only
OPERATING CURRENT (MA)	0.08 mA
SLEEP CURRENT UA	0.55

DOCUMENTS

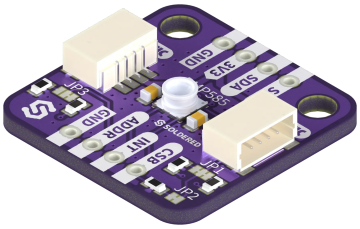
Main IC Datasheet · EN	https://cms.soldered.com/products/333189/documents/ic-datasheet/333189_ic-datasheet_275d19.pdf

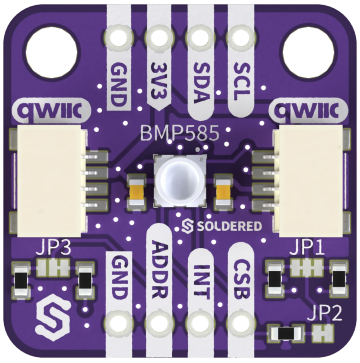
LINKS

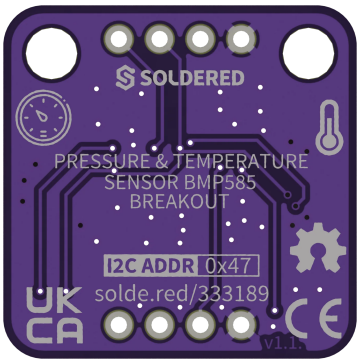
MicroPython Module	https://github.com/SolderedElectronics/Soldered-BMP585-MicroPython-Library
mim_package	https://checkmim.com/packages/solderedelectronics+Soldered-BMP585-MicroPython-Library

Arduino Library	https://github.com/SolderedElectronics/Soldered-BMP585-Arduino-Library
Full Documentation	https://docs2.soldered.com/soldered-pressure-temperature-sensor-bmp585-breakout/
Pinout	https://cms.soldered.com/products/333189/media/333189_pinout-png_fd1a62.png

GALLERY




GND
3V3
SDA
SCL
qwiic
qwiic
BMP585
SOLDERED
JP3
JP1
JP2
GND
ADDR
INT
CSB


SOLDERED
PRESSURE & TEMPERATURE
SENSOR BMP585
BREAKOUT
I2C ADDR 0x47
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v1.1