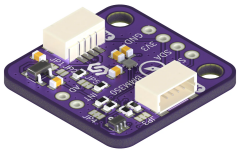
PRODUCT DATASHEET



Soldered 3-axis Magnetometer BMM350 Breakout

333359

A 3-axis magnetometer breakout with the Bosch BMM350, reading fields to ±2000 µT over I2C through Qwiic or a 2.54 mm header.

Full product documentation, files and tutorials: **solde.red/333359**

CORE ATTRIBUTES

SKU	333359
DIMENSIONS	22.0 × 22.0 × — mm
ORIGIN	HR
BARCODE	0732388628506

DESCRIPTION

The Soldered 3-axis Magnetometer BMM350 Breakout carries the Bosch BMM350 geomagnetic sensor on a **22 × 22 mm** board. It measures the magnetic field on three axes, so you can read heading like a compass, detect a nearby magnet or map the field around your project. The sensor also reports its die temperature, which the compensation uses.

The BMM350 covers **±2000 µT** on every axis with a resolution of about **0.1 µT**. Its zero-field offset stays within ±25 µT before calibration and within ±2 µT after Bosch's eCompass calibration, and it samples at output data rates up to **400 Hz**. In normal mode the sensor draws 200 µA at 100 Hz, and suspend mode drops it to **1.8 µA**, with a forced mode for single readings in between.

You connect it over **two Qwiic connectors** or a 4-pin 2.54 mm header (GND, 3V3, SDA, SCL). The header feeds an onboard 1.8 V regulator and an I2C level shifter, so the header side works from **2 V to 5 V**. The Qwiic connectors sit on the same supply net, so 5 V on the header reaches them as well. A second 2-pin header exposes INT and ADDRESS straight from the sensor at 1.8 V logic. The default I2C address is **0x14**; cut the ADDR jumper and bridge its other side for 0x15. The I2C pull-ups sit on jumpers. Libraries are available for Arduino and MicroPython, plus ESP-IDF and ESPHome components.

TECHNICAL DETAILS

- **Sensor:** Bosch BMM350, 3-axis geomagnetic
- **Measurement range:** ±2000 µT on all axes
- **Resolution:** about 0.1 µT
- **Zero-field offset:** ±25 µT max before calibration, ±2 µT typical after eCompass calibration
- **Output data rate:** up to 400 Hz in normal mode

- **Interface:** I2C, address 0x14 (0x15 with the ADDR jumper moved)
- **Connectors:** 2x Qwiic, 1× 4-pin 2.54 mm header (GND, 3V3, SDA, SCL), 1× 2-pin header (INT, ADDRESS at 1.8 V logic)
- **Supply (header):** 2 V to 5 V through the onboard 1.8 V regulator and I2C level shifter; Qwiic side 3.3 V
- **Sensor current:** 200 µA at 100 Hz in normal mode, 1.8 µA in suspend (sensor only)
- **Operating temperature:** -40 to 85 °C
- **Dimensions:** 22 × 22 mm, two 3.2 mm mounting holes

SPECIFICATIONS

INTERFACE	I2C, Digital Gpio
QWIIC COMPATIBLE	Yes
I2C ADDRESS DEFAULT	0x14
I2C ADDRESS CHANGEABLE	Yes
BREADBOARD COMPATIBLE	Yes
MEASUREMENT TYPES	Magnetic Field
MEASUREMENT RANGE	±2000 µT on all axes (typical); output data rate up to 400 Hz
MEASUREMENT ACCURACY	Zero-field offset ±25 µT max before calibration, ±2 µT typical after eCompass calibration; sensitivity error ±1 % typical; resolution about 0.1 µT
IC PART NUMBER	BMM350
SUPPLY VOLTAGE MIN V	2
LOGIC LEVEL	3V3 Only
OPERATING CURRENT (MA)	200 mA
SLEEP CURRENT UA	200
MAX OUTPUT CURRENT A	3.5

DOCUMENTS

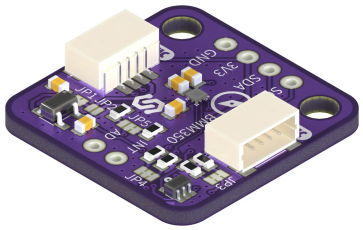
Main IC Datasheet · EN	https://cms.soldered.com/products/333359/documents/ic-datasheet/333359_ic-datasheet_6ce1b7.pdf

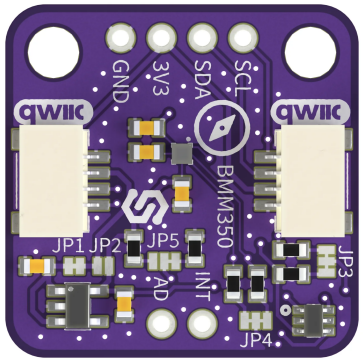
LINKS

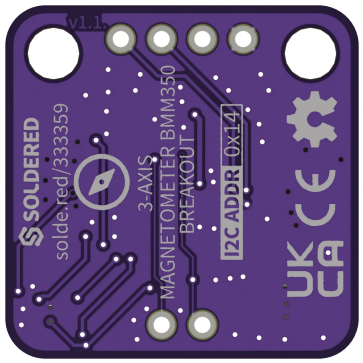
Link	https://github.com/SolderedElectronics/Soldered-BMM350-ESPHome-Component
Arduino Library	https://github.com/SolderedElectronics/Soldered-BMM350-Arduino-Library
MicroPython Module	https://github.com/SolderedElectronics/Soldered-BMM350-MicroPython-Library
mim_package	https://checkmim.com/packages/solderedelectronics+Soldered-BMM350-MicroPython-Library

Pinout	https://cms.soldered.com/products/333359/media/333359_pinout-png_f58cb9.png

GALLERY




GND
3V3
SDA
SCL
qwiic
qwiic
BMM350
JP1
JP2
JP5
JP3
JP4
AD
INT


V1.1
SOLDERED
soldered.com/33359
3-AXIS
MAGNETOMETER BMM350
BREAKOUT
I2C ADDR 0x14