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**MDS-12-0010****COMPASS ALTIMETER MODULE**

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- Pressure range: 300 – 1100 mbar.
- 2D Electronic compass
- Integrated pressure sensor.
- Integrated 16 bits ADC.
- Integrated low power 8 bits MCU.
- 3-wire synchronous serial interface.
- Integrated software for pressure calculation and compass.
- Internal EEPROM for calibration data storage
- Low power, low voltage.
- Two Magnetoresistive sensors MF1\_B included

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**Description**

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The MDS-12-0010 is a SMD module including a piezoresistive pressure sensor, an 8 bits MCU with integrated 16 bits ADC with 2 high sensitivity compass magnetoresistive sensors. With its integrated firmware and calibrated pressure sensor, this device supplies to designer all processed information like temperature, atmospheric pressure, altitude, electronic compass heading and battery level. This high integration level allows an easy access to sensor technology without any background in it.

MDS-12-0010 is a low power, low voltage device that could be interfaced through its 3 wires synchronous interface to a low cost 4 bits MCU. Two MR sensors and its flipping circuit are also implemented.

Asynchronous interface is available on request.

The small size of this module eases its integration in all watch applications.

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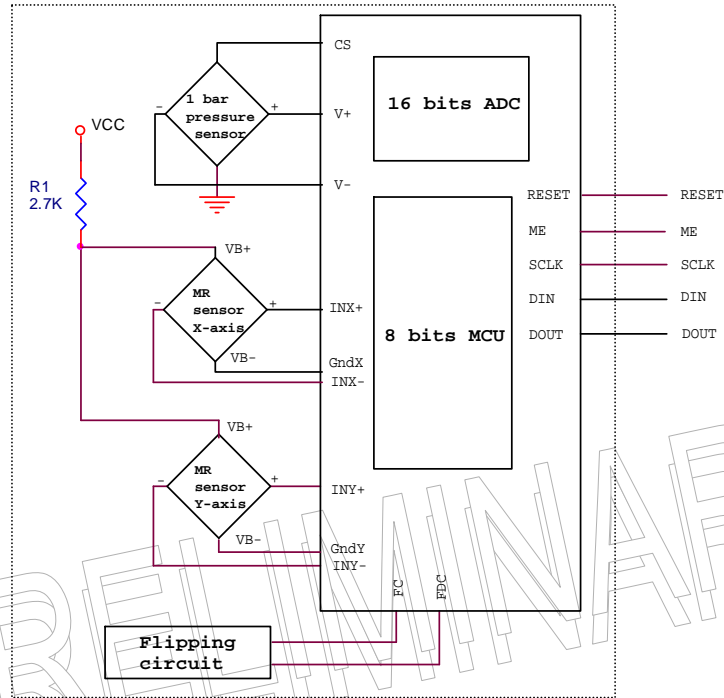
**Application**

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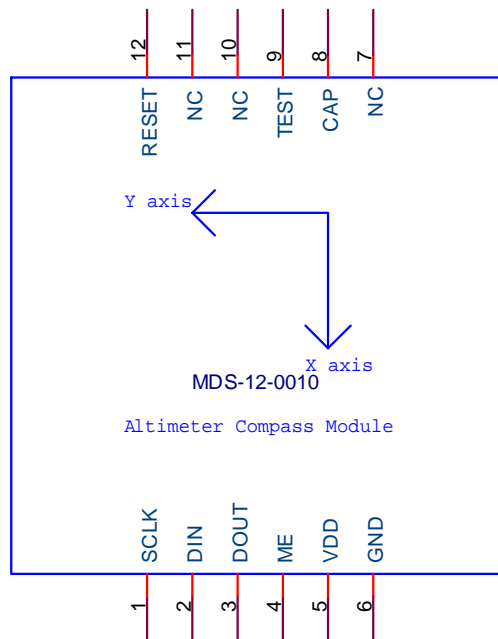
- Handheld high resolution 1 bar manometer. Res. up to 0.05 mbar.
- Mobile high resolution altimeter or barometer. Res. up to 0.5 m or 1.6 ft.
- High end weather station.
- Electronic compass with 1° resolution.
- High added-value sensor watches.
- GPS.



Block diagram



Pins description (top view)



Pinout of MDS-12-0010

Note:

1/ Pins 7, 10, 11 are for factory use. Must be left open.

































