

Capacitive 8-channel proximity switch with auto-calibration and very low power consumption

General description

The integrated circuit MS8885B is a capacitive 8-channel proximity switch that uses a digital algorithm to detect a change in capacitance on remote sensing plates.

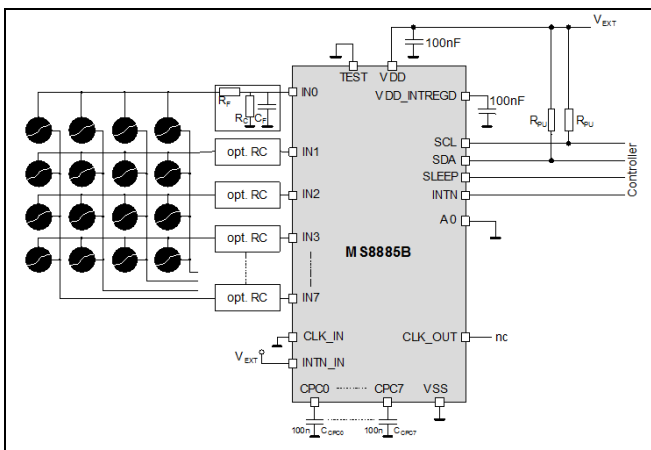
Changes in the static capacitance (as opposed to dynamic capacitance changes) are automatically compensated using continuous auto-calibration. Remote sensing plates (e.g. conductive foil) can be connected to the IC using coaxial cable.

The eight input channels operate independently of each other. A built in option supports matrix arrangements of the sensors.

Applications

- Medical
- Automotive
- Buildings & Sanitary
- Mobile application
- Wearables
- Hermetical or vandal proof switches
- Intrinsic safety
- White goods

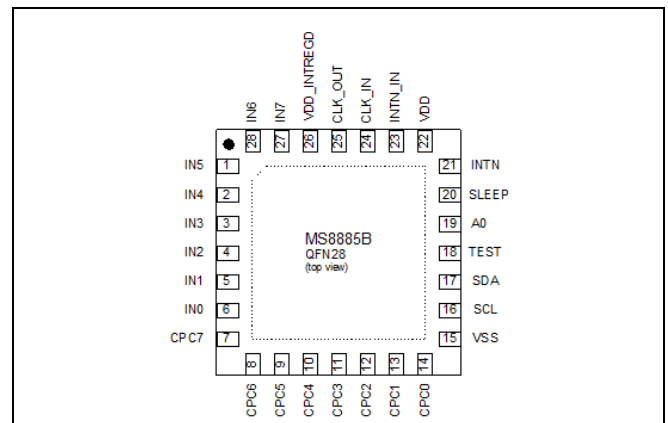
Typical application



Features

- Dynamic proximity switch with 8 sensor channels
- Support for matrix arrangement of the sensors
- Digital processing method
- Continuous auto-calibration
- Sensing plates can be connected remotely
- I²C Fast-mode Plus (Fm+) compatible interface
- Interrupt output
- Clock and interrupt cascading for two IC's possible
- Adjustable response time
- Adjustable sensitivity
- Configurable switching dynamics
- Very low operating current: typ. 10µA (all channels active)
- Sleep mode current: typ. 100nA
- Large voltage operating range: 2.5V to 5.5V
- Temperature operating range: -40 to 85°C
- Available in 5x5mm QFN28

Pinout



Ordering information

Type	Package	Shipping	Article No.
MS8885B	QFN28 5x5mm	Tape&Reel	9160151

Note: Other packages available for larger quantities

MS8885B

- Unrivalled current consumption! Very low active and superb sleep mode current make the MS8885B ideal for use in battery-powered applications in the Wearables and mobile market.
- Reliable operation! The implemented digital processing method prevents from false triggering.
- Easy to manufacture! The auto-calibration feature automatically compensates mechanical tolerances of the fabrication process, variations in material properties and tolerances in electrical properties of external components.
- Versatile! Keypad, matrix and slider applications up to 8x8 matrix (two IC's cascaded)

Request the datasheet at info@microdul.com or call +41 44 455 35 11 for more information.