MOVESENSE SENSOR HR2

Versatile, light and small but extremely durable sensor capable of measuring any movement and much more. Customizable functionality through open APIs that enable development of unique in-device apps. The functionality can be tailored to fit the exact needs of the target use case.
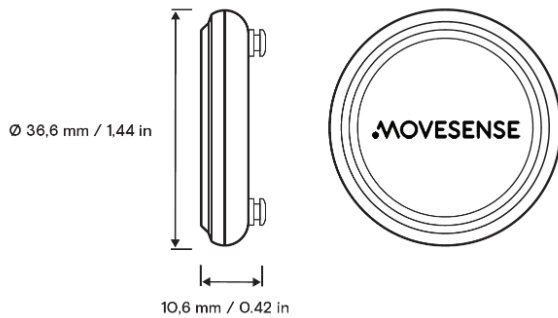
- Swim and shock proof construction, suitable for any sports and other activities
- Low profile snap connection for smooth and subtle attachment to apparel or gear
- User replaceable coin cell battery
- State of the art ultra-low power components
- Small size, light weight and waterproof
- Based on Suunto design and development
- Developed, designed and manufactured in Finland
- Available with custom branding

TECHNICAL HIGHLIGHTS

- 9-axis motion sensor: acceleration, gyroscope, magnetometer
- Heart rate, R-R- intervals, BLE heart rate service, optional: single channel ECG
- Data logging memory
- Bluetooth® 4.0/5.0 radio depending on firmware version
- Tools for developing customized applications that run on the sensor
- Software libraries for developing compatible mobile applications
- Wireless firmware update capability

TECHNICAL BRIEF

Ø 36,6 mm / 1,44 in

10,6 mm / 0.42 in

DIMENSIONS

- 36.6mm/1.44" dia. x 10.6mm/0.42" thick
- Weight 9.4g / 0.34oz with battery
- Water resistant to 30m/100ft

I/O

- Red led on the front, SW controllable
- Wake-up, heart rate and movement
- Interface via Movesense studs, stud center-to-center distance: 27.0mm/1.06"

SENSORS

- Acceleration & Gyroscope
  - ±2/±4/±8/±16g full scale ±125/±245/±500/±1000/±2000°/s full scale, sampling frequency: 12.5/26/52/104/208/416/833Hz
- Magnetometer ±49 gauss full scale
- Heart rate
  - Beats/minute, RR intervals, BLE HR service
  - 1-Channel ECG (non-medical)

LOGGER MEMORY

- 3Mbit EEPROM

SOFTWARE

- SDK for developing apps for the sensor
- Sensors and peripherals controllable via API • incl. BT advertising, power schemes
- Easy to use C++ Movesense Device API
- iOS and Android mobile libraries with wireless sensor firmware update capability
- GNU toolchain for embedded ARM

MCU

- Nordic Semiconductor nRF52832
- 32 –bit ARM® Cortex®-M4
- 64kB on-chip RAM*
- 512kB on-chip FLASH*

  (*) Memory is shared between the Movesense Os and the user application
- Bluetooth Low Energy radio

BATTERY

- CR 2025 Lithium coin cell battery
- Operating time up to months, depending on the user application

APPROVALS AND COMPLIANCES

- CE, FCC, IC, C-Tick, CMIIT
- Conforms REACH, RoHS
- Bluetooth 4.0 / 5.0

PATENTS

US 13/071,624, US 13/832,049, US 13/832,598, US 13/917,668, US 13/397,872, USD 667,127, US 8,386,009, US 8,750,959, US 8,814,574, US 8,886,281, others pending.