



Sensit Wearable

For Wearable Biosensors

The Sensit Wearable reduces the time-to-market for new elecrochemistry-based wearable sensors. Wearable, flexible electrochemical sensors, for instance integrated on the epidermis, can be used to measure non-invasively metabolites and electrolytes for various biomedical applications.

Applications include:

- Continuous Glucose Monitoring
- Sweat analysis for athletes
- Moleculair biomarkers



-1.7 V to +2 V

-2.0 V to +2.3 V

100 nA to 5 mA

Main specifications

- dc-potential range
- compliance voltage
- current ranges
- current resolution
- maximum current
- potentiostat interface
- EIS frequency range
- ac-amplitude range
- battery life
- communication
- charging

Supported techniques

Voltammetric techniques:

- Linear Sweep Voltammetry
- Cyclic Voltammetry
- Square Wave Voltammetry
- Differential Pulse Voltammetry
- Normal Pulse Voltammetry

The above techniques can also be used for stripping voltammetry

Techniques as a function of time:

- Chronoamperometry
- Pulsed Amperometric Detection
- Open Circuit Potentiometry
- MultiStep Amperometry

Electrochemical Impedance Spectroscopy:

• Scanning or fixed frequency mode



Wearable

The mounting bracket can be attached to an adhesive skin-sensor for measurements in sweat or on the epidermis.



For applications that use a different sensor type or form factor, a small Printed Circuit Board with the mounting bracket can be used to break-out the sensor electrode connections.

In this use-case scenario the Sensit Wearable can be worn by means of a strap with a small pouch.

0.006% of range (5.5 pA on 100 nA range) ±3 mA 2x WE, 1x CE, 1x RE 0.016 Hz to 200 kHz 1 mV to 0.25 V rms, or 0.708 V p-p

multiple days depending on script USB-C and Bluetooth 5.0 (LE) **USB-C** and wireless

The Sensit Wearable works with MethodSCRIPT™

The MethodSCRIPT communications protocol gives the user full control over all functionality the Sensit Wearable has to offer and requires no programming skills. The Sensit Wearable can be set in an ultra-low power mode in-between measurements where it consumes 13 uA. This allows the device to gather data over a time window of multiple days or even weeks.

> palmsens.com/methodscript



Example MethodSCRIPT for running a measurement

Exploded view Bluetooth 5.0 low energy EmStat Pico Core on-chip LED indicators for status, power and charge button for switching on/off accellerometer for detecting motion and taps

VARTA battery IEC 62133 certified for portable/wearable applications

RTC for accurate time stamping of data

USB-C for charging and communication

support for wireless charging

Software and kit contents

The Sensit Wearable is shipped with the following items:

- reader in closed and sealed plastic housing
- example skin patches, provided by selected partners
- evaluation board with mounting bracket
- accessories for various wearing options
- Ouick Start document
- PSTrace software for Windows and documentation





Evaluation board for breaking out sensor electrodes to a terminal block, cell cable, or common connector for use with Screen-Printed Electrodes.

The information in this document is preliminary and subject to change. Contact us at info@palmsens.com for more information.

> palmsens.com/pstrace