



The Yocto-milliVolt-Rx device is a high accuracy USB voltmeter. It lets you measure by USB very small voltages (down to a few dozen of microVolts, and up to 2V max), even when they are generated by extremely weak sources (very high impedance).

Typical applications include measurement of electro-chemical reactions (e.g. pH and redox probes), low-voltage sensors (e.g. gaz sensors, etc), or Wheatstone bridges (e.g. load cells, etc). It is also possible to use this device to accurately measure the voltage drop across a shunt to measure high currents.

The input circuit of this device uses a very low bias current amplifier (typ. 0.2 pA). The measure circuit is electrically insulated from the USB bus, which makes it possible to measure grounded voltages without risk of creating a ground loop.

For measuring the weakest signals (e.g. pH measurements), we recommend to use the BNC variant of this product, which features a BNC connector to use with coaxial cable, to avoid electromagnetic interference.

Specifications

Product ID	RXMVOLT1
USB connector	micro-B
Width	20 mm
Length	45 mm
Weight	6 g
Channels	1
Input bias current (typ.)	<-> 1 pA
Refresh rate	100 Hz
Input impedance	1000 GΩ
Measuring range	-1000 ... +2000 mV
Accuracy	0.1 %
Sensitivity	0.01 mV
IEC protection class	class III
USB insulation, dielectric strength (1 min.)	1 kV
Normal operating temperature	5...40 °C
Extended operating temperature [†]	-30...85 °C
RoHS compliance	RoHS III (2011/65/UE+2015/863)
USB Vendor ID	0x24E0
USB Device ID	0x0040
Suggested enclosure	YoctoBox-Short-Thick-Black
Harmonized tariff code	8542.3190
Made in	Switzerland

[†] The extended temperature range is defined based on components specifications and has been tested during a limited duration (1h). When using the device in harsh environments for a long period of time, we strongly advise to run extensive tests before going to production.



For more information: www.yoctopuce.com/EN/products/yocto-millivolt-rx