

CAT III

1000 V

CAT IV

600 V

IP67

BLUETOOTH

RECORDER



The automatic holding of the measurement result while working with both hands is now possible thanks to the **AutoHold** function.



Measurements of the current loop 4-20 mA in analogue circuits controlling temperature, pressure, humidity or flow sensors are possible thanks to the special function that displays the percentage results for the corresponding current values.



Visibility in all conditions and reading at a wide angle are possible thanks to the colour display with a resolution of 320 x 240 pixels and a diagonal of 3.5".



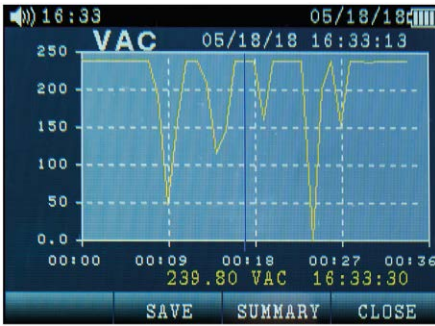
The meter allows the measurement of very small currents in the range of **500  $\mu$ A**, useful during service works, e.g. in tests of real-time clock support systems or in the maintenance of flame sensors in combustion chambers.



Thanks to the dedicated software **CMM-60 Multimeter Software**, it is possible to transfer results from the meter's memory to a computer program and analyse these results further.



Operating the meter in thick gloves during industrial measurements will not be a problem thanks to the specially designed rotary switch.



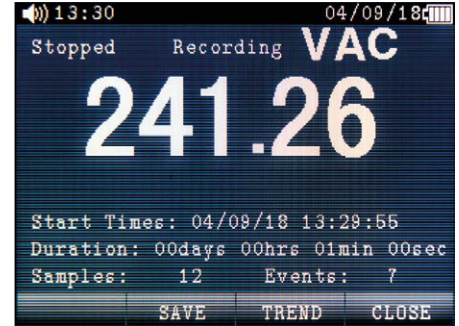
### Trends function

The possibility of presenting measurement results of the recorder in the graphical form of the trend - the Trend Capture function



### MAX / MIN / AVG functions

Recording of the minimum and maximum values and calculation of the current measurements' average



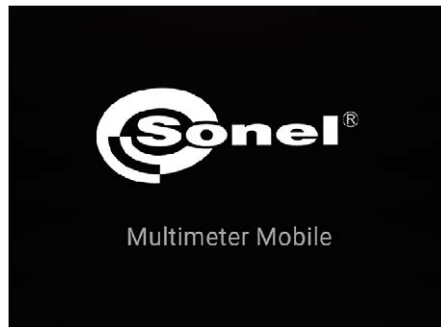
### Recording

Possibility of quick detection of irregularities by recording up to 10,000 measurement results



### AC + DC function

The possibility of measuring the DC and AC component as the function of voltage measurement



### Bluetooth communication

The possibility of sending measurement results in real time on mobile devices with Android system (**Sonel Multimeter Mobile** app) and to the computer application **CMM-60 Multimeter Software**



### Low-pass filter

Accurate voltage measurement while eliminating high-frequency interference generated by the operation of electronic machines and devices

## Furthermore

- **over 14 measurement functions**, including AC / DC voltage measurement, AC / DC current measurement, resistance, capacity, temperature, pulse width, fill factor, frequency
- **True RMS** for AC voltage and current allows to measure the effective value of distorted waveforms
- saving the results of fast 1 ms waveforms thanks to the **PEAK value measurement** function
- **the relative REL measurement** function allows, among others, elimination of resistance values of test leads
- **real-time clock** that allows adding date and time of a measurement to each sample
- **HELP function** to quickly explain the meaning of a given measuring function and buttons
- **protection against water flooding and penetration of dust** into the electronic system due to the extremely robust housing with IP67 protection level
- dedicated **lithium-polymer battery** allowing for long-term operation of the device
- a **dedicated charger and power supply** for charging the battery without removing it included in the set

# Technical specifications

Measurement functions	Range	Resolution	Accuracy ±(% m.v. + digits)
DC voltage	up to 1000 V	from 0.001 mV	from ±(0.025% m.v.+ 5 digits)
AC voltage (TRMS)	up to 1000 V	from 0.001 mV	from ±(0.3% m.v. + 25 digits)
DC current	up to 10 A	from 0.01 µA	from ±(0.1% m.v.+ 20 digits)
AC current (TRMS)	up to 10 A	from 0.01 µA	from ±(0.6% m.v. + 25 digits)
Resistance	up to 50 MΩ	from 0.001 Ω	from ±(0.05% m.v. + 10 digits)
Frequency	up to 10 MHz	from 0.001 Hz	±(0.01% m.v.+ 10 digits)
Capacity	up to 10 mF	from 0.001 nF	from ±(2% m.v. + 40 digits)
Duty cycle (%)	0.10...99.90%	0.01%	±(1.2% m.v.+ 2 digits)
4-20 mA% current measurement	-25.00...125.00%	0.01%	±50 digits
Temperature measurement	-50.0...+1000.0°C -58.0...+1832.0°F	0.1°C 0.1°F	±(1.0% m.v. + 2.5°C) ±(1.0% m.v. + 4.5°F)
Continuity / Diode test	✓ / ✓		
<b>Basic features</b>			
Counting		50.000 digits	
HOLD function		✓	
Manual / automatic range selection		✓ / ✓	
<b>Advanced features</b>			
MAX / MIN / AVG measurement		✓	
AC + DC measurement		✓	
Low-pass filter		✓	
dBV / dBm measurement		✓	
Peak HOLD function		✓	
Relative measurement REL		✓	
TRMS measurement		✓	
Frequency band for TRMS		10 000 Hz	
<b>Memory</b>			
internal		measurements: 2000 results recorder: 10 000 points, sampling frequency: from 1 Hz	
external		in mobile application	
Trend Capture function		✓	
Date and time of measurement		✓	
Bluetooth communication		✓	
<b>Other features</b>			
Automatic shutdown function		✓	
Battery indicator		✓	
Rechargeable battery		✓	
Beeper - continuity buzzer		✓	
<b>Display</b>			
Type		3.5" color TFT LCD 320 x 240 pixels	
<b>Safety and conditions of use</b>			
Measurement category (EN 61010)		CAT IV 600 V / CAT III 1000 V	
Ingress protection		IP67	
Dimensions		220 x 97 x 58 mm   8.7" x 3.8" x 2.3"	
Weight		605 g   1.3 lbs	
Operating temperature		+5...+40°C   41...104°F	
Storage temperature		-20...+60°C   -4...140°F	

## Standard accessories



**Test leads set for CMM (CAT IV, M)**

WAPRZCMM2



**Temperature measurement**

Probe (K-type, metal)  
WASONTEMK2  
Adapter  
WAADATEMK



**2x watertight socket protection plug**



**Factory calibration certificate**



**Battery charging**

Power supply  
WAZASZ21

Adapter for power supply  
WAADALAD1



**Li-Poly 7,4 V 2,4 Ah battery**

WAAKU25

## Optional accessories



**Set of test leads for CMM**

for CMM/CMP  
WAPRZCMP1

CAT IV, S  
WAPRZCMM1



**Temperature measurement**

Probe (K-type, bayonet)  
WASONTEMP

Probe (K-type)  
WASONTEMK



**Crocodile clip mini, 1 kV 10 A (set)**

WAKROKPL10MINI



**Calibration certificate with accreditation**



**Universal magnetic hanging strap**

WAPOZUCH6



**M1 hanging hook straps**

WAPOZUCH1



**M13 carrying case**

WAFUTM13

## Check other meters from the CMM family



**Sone! CMM-10**

- intuitive
- clear reading
- safe and economical
- the basic measuring device



**Sone! CMM-11**

- durable
- versatile
- pocket
- for every electrician



**Sone! CMM-30**

- accurate
- handy
- broadened functionality
- for the industry



**Sone! CMM-60**

- ultra-durable
- multi-purpose
- for special applications
- advanced troubleshooting