

## Measure wide range of electrical parameters with the CMP-40X series Clamp Meters

### Measurement functions

- AC current measurement up to 400 A
- DC current measurement up to 400 A (**CMP-401 only**)
- DC and AC voltage measurement up to 600 V
- resistance measurement
- continuity test with acoustic signalling (beeper) for resistance below 50 Ω
- temperature measurement (Fahrenheit or Celsius)
- frequency measurement
- capacitance measurement (**CMP-401 only**)
- diode test

### Overview

Sonel CMP-401 and CMP-400 Clamp Meters are designed to hard work in arduous measuring conditions. A special housing, covered with an elastomer coating, provides protection against drops and mechanical damages. CMP-401 and CMP-400 are the first choice for those who expect the device to be reliable at work in industrial and residential environments.

### Designed for specialists

- industrial and commercial electricians
- plant maintenance
- facility maintenance
- electrical contractors
- utility technicians
- HVACR specialists



**CAT III**

**600 V**

**CAT IV**

**300 V**

**IP40**





## Special features

- non-contact neon lamp
- safe, insulated measurement clamp
- reinforced, impact resistant enclosure
- automatic selection of ranges with the capability of switching over to the manual selection mode
- HOLD function, allowing for freezing the result on the display
- large and easy to read LCD display with backlit
- relative measurement function
- indication of range overflow

### DC current measurement (CMP-401 only)

Range	Resolution	Accuracy
4.00 A	0.01 A	±(2.5% m.v. + 5 digits)
400.0 A	0.1 A	±(2.8% m.v. + 5 digits)

### AC current measurement

Range	Resolution	Accuracy	
		CMP-400	CMP-401
4.000 A	0.001 A	±(2.5% m.v. + 12 digits)	-
40.00 A	0.01 A	±(2.8% m.v. + 8 digits)	±(2.5% m.v. + 8 digits)
400.0 A	0.1 A	±(2.8% m.v. + 8 digits)	±(2.8% m.v. + 5 digits)

- frequency range: 50...60 Hz

### DC voltage measurement

Range	Resolution	Accuracy
400.00 mV	0.01 mV	±(0.8% m.v. + 2 digits)
4.000 V	0.001 V	±(1.5% m.v. + 2 digits)
40.00 V	0.01 V	
400.0 V	0.1 V	
600 V	1 V	±(2% m.v. + 2 digits)

### AC voltage measurement

Range	Resolution	Accuracy	
		CMP-400	CMP-401
400.00 mV	0.01 mV	±(1.5% m.v. + 30 digits)	±(1.5% m.v. + 30 digits)
4.000 V	0.001 V	±(1.8% m.v. + 8 digits)	±(1.5% m.v. + 2 digits)
40.00 V	0.01 V		
400.0 V	0.1 V		
600 V	1 V	±(2.5% m.v. + 8 digits)	±(2% m.v. + 2 digits)

- frequency range: 50...60 Hz

### Resistance measurement

Range	Resolution	Accuracy
100.0 Ω	0.1 Ω	±(1.0% m.v. + 4 digits)
4.000 kΩ	0.001 kΩ	±(1.5% m.v. + 2 digits)
40.00 kΩ	0.01 kΩ	
400.0 kΩ	0.1 kΩ	
4.000 MΩ	0.001 MΩ	±(2.5% m.v. + 3 digits)
40.00 MΩ	0.01 MΩ	±(3.5% m.v. + 5 digits)

### Frequency measurement

Range	Accuracy
10 Hz...10 kHz	±(1.5% m.v. + 2 digits)

### Temperature

Range	Resolution	Accuracy *
-20...+760°C	1°C	±(3% m.v. + 5°C)
-4...+1400°F	1°F	±(3% m.v. + 9°F)

- \* probe accuracy not included

### Capacitance measurement (CMP-401 only)

Range	Resolution	Accuracy
40.00 nF	0.01 nF	±(4% m.v. + 20 digits)
400.0 nF	0.1 nF	±(3% m.v. + 5 digits)
4.000 μF	0.001 μF	
40.00 μF	0.01 μF	
100.0 μF	0.1 μF	±(4% m.v. + 10 digits)

## Technical specification

power supply of the meter	9 V battery, type 6LR61
display	reading 4000, backlit LCD, 3¾ digits
continuity test	threshold 50 Ω, measurement current <0.5 mA
diode test	typical measurement current 0.3 mA typical voltage of open circuit 1.5 V DC
indication of low battery charge	'BAT' symbol is displayed
indication of range overflow	'OL' symbol is displayed
frequency of measurements	2 readings per second, nominal
temperature sensor	K-type temperature probe
interior clamp diameter	opening 1.2" (30 mm)
input impedance	10 MΩ (V DC and V AC)
AC bandwidth	50...400 Hz (A AC and V AC)
auto-off timeout	approx. 30 minutes
dimensions	7.8 x 2.8 x 1.6" 197 x 70 x 40 mm
weight	0.40 lb 183 g
compliance with standards	EN 61010-1, EN 61010-2-032

## Nominal operating conditions

operating temperature range	41...104°F (5...40°C)
operating humidity	max. 80% up to 88°F (31°C) decreasing linearly to 50% at 104°F (40°C)
storage temperature	-4...+140°F (-20...+60°C) at humidity <80%
operating altitude	max. 6,562 ft (2,000 m)

## Standard accessories



test lead with probe  
for CMM/CMP (set)

WAPRZCMP1



Temperature  
measurement

type K probe  
WASONTEMK



adapter  
WAADATEMK



Standard carrying  
case



6LR61 9 V battery

## Optional accessories



S1 carrying case

WAFUTS1



Temperature  
measurement

probe (K-type, bayonet)  
WASONTEMP

probe (K-type, metal)  
WASONTEMK2



Set of test leads

CAT IV, S  
WAPRZCMM1

CAT IV, M  
WAPRZCMM2



Crocodile clip mini,  
1 kV 10 A (set)

WAKROKPL10MINI