



## pH AND mV SIMULATOR HD9609

### GENERAL CHARACTERISTICS

The simulator **HD 9609** is a portable instrument for checking and calibrating pH and mV measuring instruments. The characteristics of this instrument satisfy any checking and calibrating requirements for both portable and panel-mounted instruments; it may be used in laboratories, in industry or for checks in the field. Despite its many functions, the instrument is simple to use: a large display, with dual indication, and a series of symbols allow it to be used even by unskilled personnel.

The HD9609 sends to output in channel A the simulation of signals of an electrode for measuring pH, ORP, ISFET, in the range:

- 0 to 14 pH, with resolution 0.10 pH;
- $\pm 1999$  mV, with resolution 1 mV.

The user may choose between two output impedance values:

- 100 K $\Omega$ , low impedance;
- 1 G $\Omega$ , high impedance.

The simulation of the electrode compensation temperature is manually programmed in the range from -20°C to +150°C, while the temperature is measured in degrees Celsius or Fahrenheit.

The pH simulation values may be manually set as desired, in steps of 0.1 or 1 pH. The mV simulation values may be manually set as desired, in steps of 1 or 10 mV.

The HD9609 is fed with an ordinary 9Vdc alkaline battery.

The electronics are housed in a sturdy ABS case with ergonomic lines.

In designing and making the instrument, each detail has been assessed and selected in order to provide an instrument with high performance and excellent long-term measurement stability.

On request, the instrument may be certified by a SIT centre or by another centre recognized by the WECC.

### TECHNICAL CHARACTERISTICS

pH simulation:	0÷14 pH
pH resolution:	0.1 pH
pH accuracy 20±25°C:	0.002 pH
Thermal drift:	$\pm 0.0005$ pH/°C from -5°C to 20°C and from 25°C to 50°C
mV simulation:	$\pm 1999$ mV
mV resolution:	1 mV
mV accuracy:	$\pm 100$ $\mu$ V
Thermal drift mV scale:	-199.9 ... +199.9: $\pm 0.01$ mV/°C from -5 to 20°C and from 25 to 50°C
mV thermal drift:	-1999 ... +1999: $\pm 0.05$ mV/°C from -5 to 20°C and from 25 to 50°C
Noise 0÷10 Hz:	1 $\mu$ V peak/peak
Simulation of compensation temperature:	-20 to 150°C (-4 to 302°F)
Output impedance:	100 K $\Omega$ 1%, 1G $\Omega$ 5% (no leading load capacity)
Display:	LCD 2 lines, 3 ½ digits. Figure height approx. 12.5 mm.
Symbols:	pH, mV, °C, °F, HI imp., LO imp., 0.1 pH, 1 pH, 1 mV, 10 mV
Signals:	LOU, ER1, CAL
Work temperature:	-5 to 50°C (23 to 122°F)
Power supply:	9 Vdc alkaline battery. Low battery indication.
Consumption (instrument only):	5 mA lit, 20 $\mu$ A off
Autonomy:	about 200 hours
Dimensions:	187 x 72 x 38 mm.
Weight:	300 gr

### ORDER CODES

**HD 9609 K:** Kit composed of the instrument HD 9609, adapter cables CP 9509BNC, CP 9509 T, carrying case

**CP 9509BNC:** Adapter cable L = 1 mt, male BNC connector on both ends

**CP 9509 T:** Adapter cable L = 1 mt, BNC connector on only one end

**CP9509S7:** Adapter cable L = 1 mt, BNC wall connector one end, S7 male connector on the other end.

