



Hand-held pH, Redox and Temperature Measuring Units



measuring
•
monitoring
•
analysing

HND-R



- Measuring range
pH: 0.00...14.00
Redox (ORP): -1999 mV...+2000 mV
Temperature: -100.0°C...+250.0°C
rH: 0.0 rH... 70.0 rH
- Measuring accuracy:
 ± 0.01 pH/ ± 0.1 % of f.s. (mV)/ ± 0.2 °C/ ± 0.1 rH
- Serial interface,
minimum/maximum memory, hold function,
auto-off, automatic temperature compensation
- Robust housing, IP 65, front



Analysis

KOBOLD companies worldwide:

ALGERIA, ARGENTINA, AUSTRALIA, AUSTRIA, BELGIUM, BULGARIA, CANADA, CHILE, CHINA, COLUMBIA, CZECHIA, DOMINICAN REPUBLIC, EGYPT, FRANCE, GERMANY, GREAT BRITAIN, HUNGARY, INDIA, INDONESIA, ITALY, MALAYSIA, MEXICO, MOROCCO, NETHERLANDS, PERU, PHILIPPINES, POLAND, ROMANIA, SINGAPORE, SLOVAKIA, SOUTH KOREA, SPAIN, SWITZERLAND, TAIWAN, THAILAND, TUNISIA, USA, VENEZUELA, VIETNAM

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Description

The KOBOLD hand-held pH, Redox and temperature measuring units of the HND-R105 model are compact and universally applicable measuring units for electrodes with BNC plug connection. An extensive selection of electrodes makes it possible to use the HND-R105 in almost all application areas. The KOBOLD HND-R105 measuring unit offers functions like minimum/maximum value memory, hold function, auto-off function and automatic temperature compensation.

In addition to pH, Redox and temperature measurement, the device can display the relative humidity value. This is calculated from the measured Redox-value and the previously measured or manually entered pH-value.

Areas of Application

- Chemistry, pharmacy
- Wastewater treatment
- Laboratory application

Technical Details

(The data listed refers to the measuring unit without consideration for the respective electrodes)

Measurement input: for pH and Redox electrodes with BNC plug connection

for Pt 100/4-wire with 4-pin Mini-DIN plug

Measuring range: (measuring unit)

- pH: 0,00...14,00 pH
- Redox (ORP): -1999...+2000 mV
- Temperature: -100,0...+250,0 °C or -148,0...+482,0 °F

● rH: 0,0...70,0 rH

Accuracy: (measuring unit) (±1 digit, at nominal temp. 25 °C)

- pH: ±0,01 pH
- Redox (ORP): ±0,1 % of f.s. (mV)
- Temperature: ±0,2 °C (-20...+80 °C), otherwise ±0,4 °C
- rH: ±0,1 rH

Technical Details (continued)

- Display: two 4-digit LCD
- Operating temp.: 0 to +50 °C (housing)
- Storage temperature: -20 to +70 °C
- Storage humidity: 0 to +95 % rH (non-condensing)
- Electrode: see Technical Details
pH-, Redox probe for HND-R
- Output: serial interface
(via 3-pin jack, transformer on RS232 or USB optional)
- Power supply: 9 V-monobloc battery
(included in the scope of delivery), external 10,5-12 V_{DC} via jack
- Material: housing made of impact-resistant ABS plastic
- Protection: IP 65, front
- Dimensions: 142 x 71 x 26 mm (H x W x D)
- Weight: approx. 165 g

Scope of Functions:

- Minimum/maximum value memory
- Hold function: »freezing« of the current value
- Automatic-off function: 1...120 min (can be deactivated)
- Automatic temperature compensation with connected temperature probes (manually: without connected temperature probes)
- Replace battery display

Order Details

Order No.	Housing design
HND-R 105	pH and Redox with BNC-electrode connection, temperature with 4-pin Mini-DIN plug

Temperature measurement with measuring probe HND-TF01 to HND-TF06. For technical details please see data sheet HND-T.

pH- and Redox-Electrodes for HND-R

Order No.	Electrode type
HND-RF01	low-Cost pH-electrode, 2-12 pH, 0-60 °C, >200 µS/cm, cable 1 m, 3 mol/L KCL, refillable, without thread
HND-RF02	standard-pH-electrode, 0-14 pH, 0-80 °C, >200 µS/cm, 1 m cable, 3 mol/L KCL, refillable, without thread
HND-RF03	insertion pH-electrode, 2-11 pH, 0-60 °C, >200 µS/cm, 1 m cable, 3 mol/L KCL, refillable, without thread
HND-RF04	two-chamber pH-electrode, 0-14 pH, 0-80 °C, >200 µS/cm, incl. 1 mol/L KNO ₃ -electrolyte 100 ml wash bottle, 1 m cable, 3 mol/L KCL, 1 mol/L KNO ₃ , refillable, without thread
HND-RF05	demineralised-water-pH-electrode, 2-11 pH, 10-80 °C, >25 µS/cm, 1 m cable, 3 mol/L KCL, refillable, without thread
HND-RF06	standard-pH-electrode, pressure-resistant up to 6 bar, 0-14 pH, 0-80 °C, >200 µS/cm, 2 m cable, gel electrolyte, not refillable, thread Pg 13.5
HND-RF07	pH-electrode with integrated Pt100 sensor, pressure-resistant up to 6 bar, 0-14 pH, 0-80 °C, >200 µS/cm, 2 m cable, gel electrolyte, not refillable, without thread
HND-RF08	Redox-electrode, ±2000 mV, 0-80 °C, >25 µS/cm, incl. 100 ml Redox testing solution, 3 mol/L KCL, refillable
HND-RF09	supplementary set consisting of: HND-RF02, HND-TF06 (Pt100 4-wire), HND-Z023 and HND-Z076

Accessories for pH, Redox and Temperature Measuring Units HND-R and HND-RF Electrodes

Order No.	Description
HND-Z002	plug power supply unit (220/240 V _{AC} , 50/60 Hz), 10.5 V _{DC} /10 mA
HND-Z012	protective housing bag, nappa leather, 2 with cut-outs for round sensor connections
HND-Z021*	case with recess (275 x 229 x 83 mm)
HND-Z022*	universal case with egg crate foam (275 x 229 x 83 mm)
HND-Z023*	large case with recess (394 x 294 x 106 mm)
HND-Z031	interface converter on RS 232, galvanically isolated
HND-Z032	interface converter on USB, galvanically isolated
HND-Z033	adapter RS 232-converter on USB-interface
BUS-SW9M	software for recording measurement data on a computer, for instruments of the HND-series without logger function
HND-Z071	3 mol/L KCl-electrolyte for refilling or storing electrodes, 100 ml wash bottle
HND-Z072	1 mol/L KNO ₃ -electrolyte, 100 ml wash bottle
HND-Z073	100 ml Pepsin cleaning solution
HND-Z074	100 ml Redox testing solution (220 mV at 25 °C)
HND-Z075	100 ml plastic wide mouth bottle
HND-Z076	work and calibration set, consisting of 5 buffer capsules each pH 4, pH 7, pH 10, 3 x HND-Z075, 1 x HND-Z071, 1 x HND-Z073

* observe instrument dimensions

Additional accessories on request