BENCH-TOP PH AND CONDUCTIVITY METER

HIGHLIGHTS:

- Primary water treatment
- Chemicals laboratories general use
- Water purification, water softening
- Multi-channel laboratory instrument

HD-3456-2

Art. no. 700042

Bench-top pH and conductivity meter

General:

The HD-3456-2 is a bench top instrument for electrochemical measures: pH, conductivity and temperature. The displayed data can be stored (datalogger) and can be transferred to PC or serial printer. The storing and printing parameters can be set from menu. The HD-3456-2 measures pH, mV, redox potential (ORP), conductivity, resistivity in liquids, total dissolved solids (TDS), and salinity using combined 4-ring and 2-ring conductivity / temperature probes. Temperature is measured by Pt100 or Pt1000 immersion, penetration or contact probes.

Specifications:

Display ranges:	pH, mV, χ, Ω, TDS, Sal, °C/°F measurement
Device	
Dimensions:	55 x 120 x 220 mm (H x W x D)
Material:	ABS, rubber
Display:	2 x 4½ characters plus symbols, visible area: 52 x 42 mm
Operating conditions	
Working temperature:	-5 ... +50 °C
Storage temperature:	-25 ... +65 °C
Working relative humidity:	0 ... 90 % RH., without condensation
Protection degree:	IP66
Power	
Batteries:	3 batteries 1.5 V type AA
Autonomy (only batteries):	100 h with 1800 mAh alkaline batteries
Mains (cod. SWD-10):	Output mains adapter 100 ... 240 V AC / 12 V DC-1A
Storage of measured values	
Quantity:	20,000 terns of measures made up of [pH or mV], [χ or Ω or TDS or salinity] and temperature.
Connections	
Serial interface and USB:	8-pole MiniDin connector, 1.1 ... 2.0 electrically isolated
Mains adapter (cod. SWD-10):	2-pole connector (positive at centre) 12 V DC/1 A
Connections	
pH / mV input:	Female BNC connector
Conductivity input:	8-pole male DIN45326 connector
Input for temperature probes:	8-pole male DIN45326 connector
Measurement of pH by instrument	
Measuring range:	-2.000 ... +19.999 pH
Resolution:	0.01 or 0.001 pH selectable from menu
Accuracy:	±0.001 pH ±1 digit
Automatic / manual temperature compensation:	-50 ... +150 °C
Measurement of mV by instrument	
Measuring range:	-1.999.9 ... +1.999.9 mV
Resolution:	0.1 mV
Accuracy:	±0.1 mV ±1 digit
Standard solutions automatically detected (@25 °C):	1.679 pH – 2.000 pH – 4.000 pH – 4.008 pH – 4.010 pH – 6.860 pH – 6.865 pH – 7.000 pH – 7.413 pH – 7.648 pH – 9.180 pH – 9.210 pH – 10.010 pH
Measurement of conductivity by instrument	
Measurement range (SPT-01G) (Kcell=0.1):	0.00 ... 19.99 µS / cm, resolution 0.01 µS / cm
Measurement range (SP-T06-01G) (Kcell=1):	0.0 ... 199.9 µS / cm, resolution 0.1 µS / cm 200 ... 1999 µS / cm, resolution 1 µS / cm 2.00 ... 19.99 mS / cm, resolution 0.01 mS / cm 20.0 ... 199.9 mS / cm, resolution 0.1 mS / cm
Accuracy (conductivity):	±0,5 % ±1 digit
Measurement of resistivity by instrument, resolution	
Measurement range (Kcell=0.1):	Up to 100 MΩcm, resolution (*)
Measurement range (Kcell=1):	5.0 ... 199.9 Ω·cm, resolution 0.1 Ω·cm 200 ... 999 Ω·cm, resolution 1 Ω cm 1.00 k ... 19.99 kΩ·cm, resolution 0.01 kΩ·cm 20.0 k ... 99.9 kΩ·cm, resolution 0.1 kΩ·cm 100 k ... 999 kΩ·cm, resolution 1 kΩ·cm 1 ... 10 MΩ·cm, resolution 1 MΩ·cm
Accuracy (resistivity):	±0,5 % ±1 digit
Measurement of total dissolved solids (with coefficient χ / TDS=0.5)	
Measurement range (Kcell=0.1):	0.00 ... 19.99 mg / l 0.05 mg/l
Measurement range (Kcell=1):	0.0 ... 199.9 mg / l 0.5 mg/l 200 ... 1.999 mg / l 1 mg/l 2.00 ... 19.99 g / l 0.01 g / l 20.0 ... 99.9 g / l 0.1 g / l
Accuracy (total dissolved solids):	±0,5 % ±1 digit
Measurement of salinity	
Measuring range:	0.000 ... 1.999 g / l 1 mg/l 2.00 ... 19.99 g / l 10 mg/l 20.0 ... 199.9 g / l 0.1 g / l
Accuracy (salinity):	±0,5 % ±1 digit
Automatic / manual temperature compensation	0 ... 100 °C with αT that can be selected from 0.00 ... 4.00 %/°C
Reference temperature:	20 °C or 25 °C, selectable from menu
χ/TDS conversion factor:	0,4 ... 0,8
Cell constant K (cm^{-1}):	0.01 – 0.1 – 0.7 – 1.0 – 10.0
Standard solutions automatically detected (@25 °C):	1.413 µS / cm
Measurement of temperature by instrument	
Resolution:	0.1 °C
Accuracy:	±0.25 °C
Scope of supply:	Instrument HD-3456-2, 3 x 1.5 V alkaline batteries, manual and DeltaLog9 version 2.0.

pH/mV electrodes, conductivity probes, oxygen sensor, temperature probes, standard reference solutions for different measurement types, connection cables for pH electrodes with S7 connector, cables for data download to PC or printer have to be ordered separately.

(*) The resistivity measurement is obtained from the reciprocal of conductivity measurement.

Accessories:

SP-06-T
Art. no. 700043
Conductivity and temperature probe, measuring range: 5 µS / cm ... 200 mS / cm

SP-T01-G
Art. no. 700044
Conductivity and temperature probe, measuring range: 0.1 µS / cm ... 500 µS / cm

TP47-100
Art. no. 700045
PT100 without SICRAM module (DIN cl. AA), Ø 3 mm, length 230 mm, measuring range: -50 ... +250 °C

SWD-10
Art. no. 700039
Stabilized power supply at 100 ... 240 V AC/12 V DC/1 A mains voltage.

HD-22-3
Art. no. 700040
Freely positionable, flexible laboratory electrode holding arm. For probes with Ø 12 mm.

HD-2101-USB
Art. no. 700038
Connection cable USB 2.0 connector type A - 8-pole Mini Din for connection to PC with USB input.

HD-40-1
Art. no. 700056
Portable, serial input, 24 column thermal printer, 57 mm paper width, 4 NiMH 1.2 V rechargeable batteries, SWD-10 power supply, manual, 5 thermal paper rolls. Requires the cable HD-2110-CSNM (optional).

HD-2110-CSNM
Art. no. 700041
RS232C 8-pole MiniDin - 9-pole D Sub female null-modem cable for connecting the printer to instruments with MiniDIN connector (HD21xx.1 and HD21xx.2 series, HD34xx.2, HD98569, etc.).