



PC 8+ DHS

pH - mV - COND - TDS - Salinity - Temperature
GLP - USB Data Logger - RS232 printer

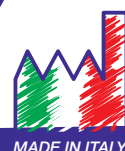
PC 80+ DHS

pH - mV - ION - COND - TDS - Salinity - Resistivity - Temperature
GLP - GMP - USB Data Logger - RS232 printer



DHS Digital **H**igh **S**ensor
Intelligent sensors management

XS makes pH and Conductivity easy



DHS Digital High Sensor

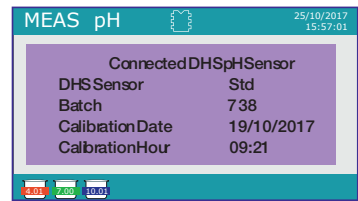
Intelligent sensors management

Digital High Sensors are the new pH sensors with internal chip that store parameters, date of last calibration, model and production batch of the electrode. In the instruments PC 8+ DHS and PC 80+ DHS, is inserted a special chip with the same technology. After connecting the pH DHS sensor to the instrument, all the data stored in the sensor chip are automatically transferred to the instrument. The display will show in a screen: DHS, sensor model, production batch, date and hour of the last calibration.

After a new calibration of the DHS electrode, the data is automatically stored in the electrode chip. If we move this electrode to another DHS-enabled instrument, we can start working immediately and with extreme security as the data from the last calibration will automatically be transferred and used for pH measurements.

New DHS pH sensors do not have an internal battery so they can be stored as a normal pH electrode and do not use special connectors but a normal BNC.

Many manufacturers using digital sensors have developed dedicated meters for these sensors. This imposes a full range of digital sensors for a variety of applications or lab requirements. Our research and development team has designed this new line of instruments to work with the new DHS digital sensors and the normal analog pH sensors both, all brands, which can be connected to the same pH meter. From now on, the pH measurement will be simpler.

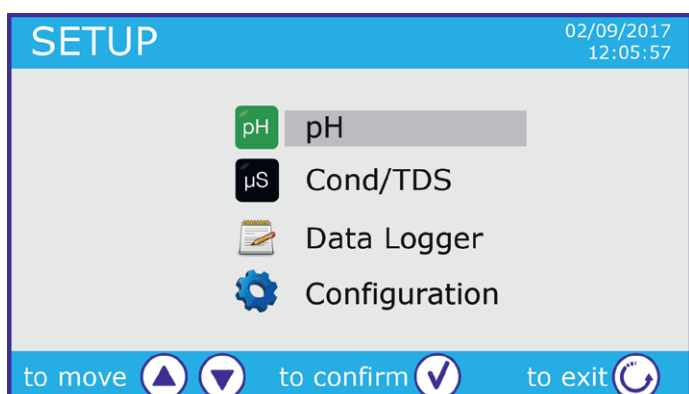


PC 8+ DHS

pH - mV - COND - TDS - Salinity - Temperature - GLP - Data Logger

Main features

- Simultaneous display of pH / mV and temperature, Cond / TDS / Salinity and temperature
- **Selectable resolution: 0,1/0,01 pH; Automatic scale on Cond**
- 3 points pH Automatic calibration and 2 points Manual calibration
- **4 points Cond Automatic calibration and 1 point Manual calibration**
- Selectable cell constant with saving and recall calibration for each cell constant
- Stability filter (Tit-Med-High)
- Large colored display with indication of Calibration standard used and measurement's stability
- Stirrer plate included
- **Numeric password for calibration management and data memory delete**
- Memory recall of last pH and Cond calibration, date and time and informations about the condition of the sensors
- Calibration Timer: set frequency of the calibration for high quality of measurements
- Non-volatile memory holds up to 1000 data points, with date and time, in automatic (Data logger) or manually, downloadable on PC with free software "DataLink" or printable
- Multilanguage menu setup
- 3 years warranty



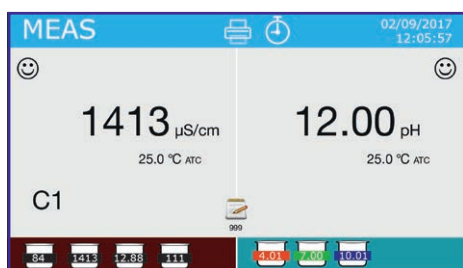
Setup menu



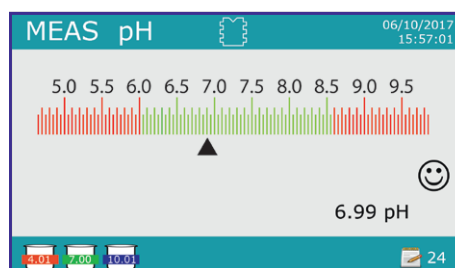
Back Panel PC 8+ DHS



PC 8+ DHS with stirrer



Simultaneous Cond/pH view



Analogic pH view

How to order PC 8+ DHS

Code	Description
50004132	PC 8+ DHS kit STIRRER with pH electrode XS STANDARD T-BNC DHS, conductivity cell 2301T in epoxy with ATC, cable S7/BNC, temperature probe NT 55, colored buffer solutions pH 7 and pH 4, conductivity standards 1413 µS and 12,88 mS, power supply and accessories. With stirrer.
50004142	PC 8+ DHS kit STIRRER with pH electrode XS Polymer, cable S7/BNC, temperature probe NT 55, conductivity cell 2301T in epoxy with ATC, colored buffer solutions pH 7 and pH 4, conductivity standards 1413 µS and 12,88 mS, power supply and accessories. With stirrer.
50004152	PC 8+ DHS kit STIRRER without pH electrode, includes conductivity cell 2301T with ATC, cable S7/BNC, temperature probe NT 55, colored buffer solutions pH 7 and pH 4, conductivity standards 1413 µS and 12,88 mS, power supply and accessories. With stirrer.
32200123	pH Electrode XS STANDARD T-BNC DHS glass body, cable fix 1m BNC, pH 0...14, Temp -10...100 °C, electrolyte KCl 3M with temperature sensor integrated, for general purposes.
32200223	XS Polymer laboratory pH electrode, glass body, maintenance free. S7 connection.
50004002	2301T conductivity cell with ATC, C=1, cable length 1m. Measuring range 10 µS...100 mS, 0...60°C
50004072	VPT 80/10 conductivity cell with ATC, C=10, cable length 1m. Measuring range 100 µS...200 mS,
50004012	VPT 51/01 conductivity cell with ATC C=0,1. PVC/steel, cable length 1m. Measuring range 0,1 µS...1 mS, 0...60°C
50002012	NT 55 temperature probe
50001502	RS232 Printer normal paper, for series 8+ - 80+
50001512	Power supply 12 V/220 Vac for series 8+ - 80+
50001472	IQ-OQ Manual

PC 80+ DHS

pH - mV - Ion - COND - TDS - Salinity - Resistivity
Temperature - GLP GMP - Data Logger

Main features

- Simultaneous display of pH / mV / ISE and temperature, COND / TDS / Salinity / Resistivity and temperature
- **Selectable pH resolution: 0,1/0,01/0,001; automatic scale for COND**
- 5 point Automatic and Manual pH calibration
- **5 points Automatic calibration with Ion (ISE) electrode**
- 4 points Cond Automatic calibration and 1 point Manual calibration
- **Compensation for Ultrapure water for low conductivity measurement**
- Selectable cell constant with saving and recall calibration for each cell constant
- Wide colored display with indication of calibration standards solution used and measurement's stability
- Memory recall of pH, ISE and Cond last calibration date and time and informations about the condition of the sensor
- Calibration Timer of pH, ISE and Cond
- Stability filter (Tit - Medium - High)
- Alphanumeric password for calibration management and data memory delete with soft keypad included
- Non-volatile memory holds up to 1000 data points, with date and time, in automatic (Data logger) or manually, downloadable on PC with free software "DataLink" or printable
- Stirrer plate included
- 2 USB ports to download PC data and for and external keyboard included
- RS232 port for printer connection
- Multilanguage menu setup
- Quick on-line manual
- GLP and IQ-OQ manual available
- 3 years warranty



RS232 printer for PC 8+ DHS and PC 80+ DHS



VPT 51/01
For measure in ultra pure water



Back panel PC 80+ DHS

Cond calibration procedure

CAL Cond 10/11/2017 14:47:32

Rinse electrode and press <enter>

CAL Cond 06/11/2017 15:54:41

Press <enter>

CAL C 09/11/2017 15:46:55

Last COND Calibration Data		25.0 °C	
Date	Time	Cell Constant	
09/11/2017	15:48	1.01	
Range		1.01	
0.10µ - 200µ		1.01	
200µ - 2.00m		1.01	
2.00m - 20.0		1.01	
20.0m - 1000m		1.01	

S/cm
°C atc

MEAS COND 09/11/2017 15:52:11

1413 µS/cm
23.3 °C atc

pH calibration procedure

CAL pH 06/10/2017 15:48:32

Rinse electrode and press <enter>

CAL pH 06/10/2017 15:48:54

Press <enter>

CAL pH 06/10/2017 15:49:05

7.000 pH
25.0 °C atc

CAL pH 06/10/2017 15:49:47

Press <enter>

CAL pH 06/10/2017 15:50:22

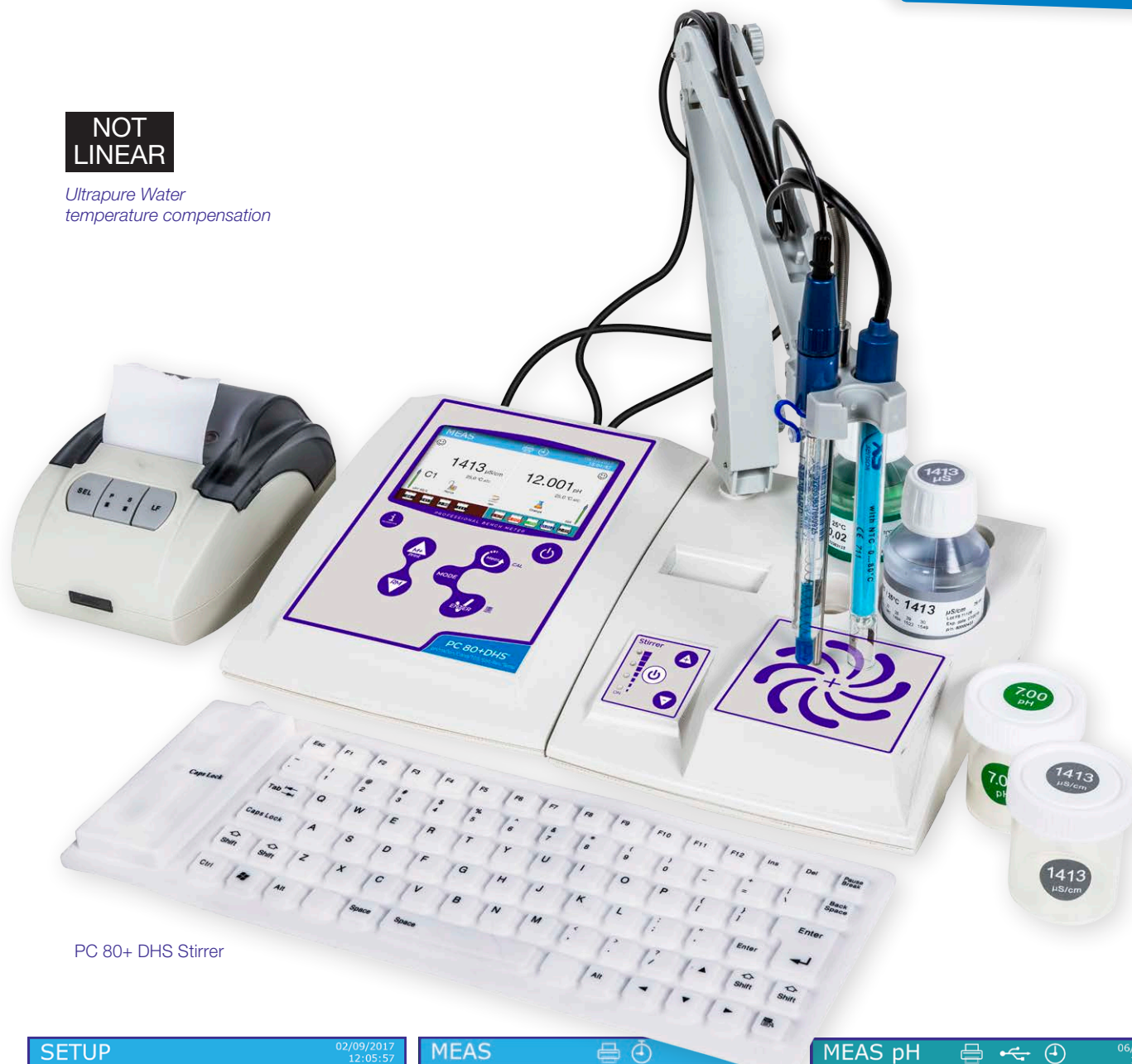
Last pH Calibration Data		25.0 °C	
Date	Time	Offset	Slope
06/10/2017	15:48	0.0 mV	100 %
Range			100 %
-2.000 - 4.005			100 %
4.005 - 7.000			100 %
7.000 - 10.012			100 %
10.012 - 20.000			100 %

Cal Graph Exit

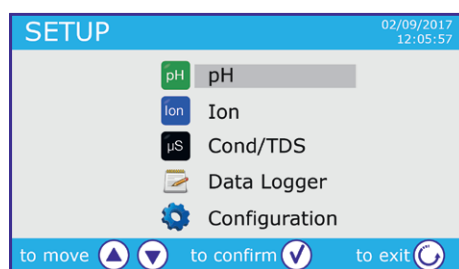
CAL pH 06/10/2017 15:50:30

0 mV Offset
100 % Slope

0 Hour Last cell time
0 sec. Stability time

**NOT
LINEAR**Ultrapure Water
temperature compensation

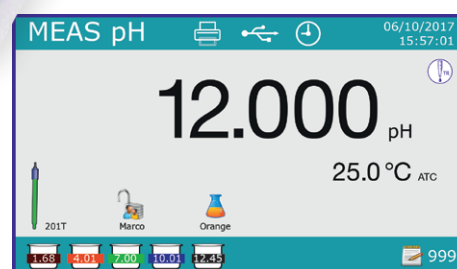
PC 80+ DHS Stirrer



Setup menu



Simultaneous Cond/pH view



Digital pH view

How to order PC 80+ DHS

Code	Description
50004232	PC 80+ DHS kit STIRRER with pH electrode XS STANDARD T-BNC DHS, glass body conductivity cell VPT80/1 with ATC, cable S7/BNC, temperature probe NT 55, colored buffer solutions pH 7 and pH 4, conductivity standards 1413 µS and 12,88 mS, power supply and accessories, with stirrer
50004242	PC 80+ DHS kit STIRRER with pH electrode XS STANDARD, cable S7/BNC, temperature probe NT 55 glass body conductivity cell VPT80/1 with ATC, colored buffer solutions pH 7 and pH 4, conductivity standards 1413 µS and 12,88 mS, power supply and accessories, with stirrer
50004252	PC 80+ DHS kit STIRRER without pH electrode, includes conductivity cell VPT 80/1, cable S7/BNC, temperature probe NT 55, colored buffer solutions pH 7 and pH 4, conductivity standards 1413 µS and 12,88 mS, power supply and accessories, with stirrer
32200123	pH Electrode STANDARD T - BNC DHS glass body, cable fix 1m BNC, pH 0...14, Temp -10...100 °C, electrolyte KCl 3M ,with integrated temperature sensor, for general purposes
32200363	XS STANDARD pH electrode, rechargeable for general purpose, S7 connector
50003352	VPT 80/1 conductivity cell with temperature sensor, C=1, glass body, platinum plate , cable length 1m Measuring range 10 µS...100 mS, 0...80°C
50004072	VPT 80/10 conductivity cell with temperature sensor, C=10, range 100 µS...200 mS, cable length 1m
50004012	VPT 51/01 conductivity cell with temperature sensor, C=0,1, PVC/ steel, cable length 1m . Range 0,1 µS...1 mS, 0...60°C
50002012	NT 55 temperature probe
50001462	External USB keyboard
50001502	RS232 printer, normal paper for series 8+ - 80+
50001472	IQ-OQ Manual

XS Sensor Electrodes

A famous Swiss producer has developed a complete range of pH electrodes, Redox electrodes and conductivity cells for laboratory, with glass and plastic body. The new XS Sensors are available with the head S7 or with a fixed cable, with BNC or DIN connectors. Many models for the food sector have the integrated temperature sensor, this facility the cleaning and make the temperature compensation faster. Some of those electrodes are studied to support the daily job as well, in accordance with the GLP norms, with the serial number printed inside, in indelible way, with the quality certificate.



serial number



blue internal liquid

A special polymer electrolyte, combined to an elevated performances reference system, breathe life into a complete range of electrodes studied for the food sector, that you will find in the devoted section on this catalogue. The blue liquid inside the membrane quickly points out possible presences of air bubbles, that make the measure unstable. XS electrodes can be connected and can work with all the meters, of any brand, available on the market. Our technical support is available to guide you in the choice of the proper electrode, for every type of application. XS Sensors are the perfect union for measuring pH, if combined with the XS meters and XS buffer solutions.

GENERAL LABORATORY APPLICATIONS

Shaft Material:	Glass
Temperature probe:	No
Diaphragm:	Open
Reference system:	Ag/AgCl cartridge
Electrolyte:	Polymer maintenance free
Length:	120 mm
Diameter:	12 mm



Model	Range pH	Temp. °C	Head	Note	Code
POLYMER	0...14	-10...+80 °C	S7 connector	1 diaphragm open pore	32200223

Shaft Material:	Glass
Temperature probe:	No – Yes (for model T)
Diaphragm:	Ceramic
Reference system:	Ag/AgCl cartridge
Electrolyte:	KCl 3M
Length:	120 mm
Diameter:	12 mm



Model	Range pH	Temp. °C	Head	Note	Code
STANDARD	0...14	-10...+100 °C	S7 connector	General use/ serial number/ certificate	32200363
STANDARD HA	0...14	-10...+100 °C	S7 connector	Minimal alkaline error serial number/ certificate	32200423
STANDARD HF	0...14	-10...+100 °C	S7 connector	For samples with HF (0,01M/200 mg/l)	32200433
STANDARD T - BNC DHS	0...14	-10...+100 °C	Fix cable / BNC	With temperature probe NTC 30KΩ RCA Cinch plug	32200123

Shaft Material:	Glass
Temperature probe:	No
Diaphragm:	Teflon sleeve
Reference system:	Ag/AgCl cartridge
Electrolyte:	KCl 3M
Length:	120 mm
Diameter:	12 mm



Model	Range pH	Temp. °C	Head	Note	Code
FLOW	0...14	-10...+80 °C	S7 connector	For suspended measure and low ion media serial number/ certificate	32200373

XS Conductivity cells

Shaft Material:	Glass
Temperature probe:	Yes
Plates:	Platinum
Length:	120 mm
Diameter:	12 mm

BNC Plug



RCA Cinch Plug



Model	Range COND	Temp. °C	Head	Note	Code
VPT 80/1	10 μ S...100 mS	0...+80 °C	Fix cable / BNC	Cell constant C=1. Temperature probe NTC 30K Ω plug RCA Cinch	50003352
VPT 80/10	100 μ S...200 mS	0...+80 °C	Fix cable / BNC	Cell constant C=10 , temp. probe NTC 30K Ω plug RCA Cinch for sea water	50004072

Shaft Material:	PVC / Steel
Temperature probe	Yes
Plates:	Steel
Length:	120 mm
Diameter:	12 mm



Model	Range COND	Temp. °C	Head	Note	Code
VPT 51/01	0,1 μ S...1mS	0...+60 °C	Fix cable / BNC	Cell constant C=0,1 , Temp. probe NTC 30K Ω plug RCA Cinch for ultra pure water	50004012

Shaft Material:	Epoxy
Temperature probe:	Yes
Plates:	Platinum
Length:	120 mm
Diameter:	12 mm



Model	Range COND	Temp. °C	Head	Note	Code
2301T	10 μ S...100 mS	0...+60 °C	Fix cable / BNC	Cell constant C=1 , Temp. probe NTC 30K Ω plug RCA Cinch	50004002

pH and Conductivity buffer solutions, N.I.S.T. traceability



Packaging
pH 4,01



Packaging
conductivity standards



Fill compartment with a
simple press



Calibrate the electrode



Empty the calibration
compartment

CONDUCTIVITY STANDARDS			
Code	Packaging	Value μ S/cm (20°C / 25°C)	Accuracy
51300303	300 ml	1,3	\pm 0.1 μ S/cm
51300313	300 ml	5,0	\pm 0.1 μ S/cm
51300323	500 ml	76 / 84	\pm 1%
51300333	500 ml	133 / 147	\pm 1%
51300343	500 ml	1278 / 1413	\pm 1%
51300353	500 ml	11670 / 12880	\pm 1%

REDOX STANDARDS			
Code	Packaging	mV Value	Accuracy
51100303	250 ml	Redox/ORP 200mV/25°C	\pm 5mV
51100313	250 ml	Redox/ORP 475mV/25°C	\pm 5mV
51100323	500 ml	Redox/ORP 475mV/25°C	\pm 5mV
51100333	5 l	Redox/ORP 650mV/25°C	\pm 5mV

pH BUFFER SOLUTIONS				
Code	Packaging	pH Value (25°C)	Accuracy	Color
51100033	250 ml	4,01	\pm 0,01	Red
51100043	250 ml	7,00	\pm 0,01	Green
51100053	250 ml	9,00	\pm 0,02	Blue
51100073	250 ml	9,21	\pm 0,02	Blue
51100063	250 ml	10,01	\pm 0,02	Colourless
51100133	500 ml	4,01	\pm 0,01	Red
51100143	500 ml	7,00	\pm 0,01	Green
51100153	500 ml	9,00	\pm 0,02	Blue
51100173	500 ml	9,21	\pm 0,02	Blue
51100163	500 ml	10,01	\pm 0,02	Colourless
51100233	5 l	4,01	\pm 0,01	Red
51100243	5 l	7,00	\pm 0,01	Green
51100253	5 l	9,00	\pm 0,02	Blue
51100273	5 l	9,21	\pm 0,02	Blue
51100263	5 l	10,01	\pm 0,02	Colourless

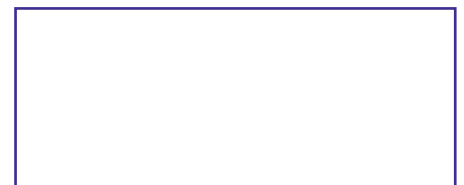
Datasheet

PC 80+ DHS

PC 8+ DHS

pH measuring range	-2...20	-2...16
Resolution/accuracy	0.1 / 0.01 / 0.001 / ±0,002	0.1 / 0.01 / ±0,02
Calibration points	1...5	1...3
Buffer auto recognition	USA, NIST, DIN, 5 defined by user	USA, NIST, 2 defined by user
Indication of calibration points	Yes	
GLP Calibration	Yes, with date and time	
Indication of conditions of the electrode	Yes, icon and graph	
Calibration timer with alarm	Yes	
Stability filter	Tit - Medium - High	
Alarm settings for the measurement	MIN-MAX	
mV measuring range (redox) / Resolution	± 2000 / 0.1 / 1	± 2000 / 1
Ion measuring range	0,001...19999 ppm	—
Units	mol/L - mg/L - g/L	—
Calibration points	2...5	—
COND measuring range	0,00...20,00 - 200,0 - 2000 µS 2,00 - 20,00 - 200,0 - 1000 mS	0,00...20,00 - 200,0 - 2000 µS 2,00 - 20,00 - 200,0 mS
Resolution	Automatic scale	
Accuracy	±1 % full scale	
COND Calibration points	1...4	
Buffer auto recognition	84, 1413 µS, 12.88, 111.8 mS, 1 defined by the user	
Indication of calibration points	Yes	
Temperature coefficient	Ultrapure Water and 0,00...10,00 %/°C	0,00...10,00 %/°C
Reference temperature	15...30°C	
GLP Calibration	Yes with date and time	
Indication of conditions of the cell	Yes , icon	
Calibration timer with alarm	Yes	
Cell type	2 poles	
Cell constant	0,1 - 1 - 10	
TDS measuring range	0,1 mg/l...500g/l	0,1 mg/l...100g/l
TDS Factor/ Accuracy	0.40 ... 1.00 / ±1 % full scale	
Salinity measuring range / Accuracy	0,01...100 ppt / ±1 % full scale	
Resistivity measuring range / Accuracy	1...10 MΩ / ±1 % full scale	—
Temperature °C measuring range / Accuracy	-20,0...120,0 / ± 0,5°C	-10...110,0 / ± 0,5°C
Temperature compensation	Automatic or Manual 0...100°C (NTC 30KΩ)	
Temperature calibration	Yes	
GLP system	Yes	
Password	Yes, alphanumeric	Yes, numeric
Memory	MAN/AUTO 1000 data, with date and time	
Display	Multicolor dot matrix, with icons, digital view or analogical view	
Input	2 BNC, 2 Cinch/RCA (ATC), RS 232 for printer, USB for PC and USB for external keyboard	2 BNC, 2 Cinch/RCA (ATC), RS 232 for printer, USB for PC connection
Selectable languages	8 languages	
On-line manual	Yes	—
Magnetic stirrer	Yes	
Speed control	0...3000 rpm	
IP protection	IP 54	
Power supply	AC/DC adaptor 12V / 1000mA	
Dimensions	165 x 195 x 68 mm	
Weight	1050 g (without stirrer)	

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