



Bench meters

## pH 8+ DHS

pH - mV - Temperature

GLP - USB Data Logger - RS232 printer

## pH 80+ DHS

pH - mV - ION - Temperature

GLP - GMP - USB Data Logger - RS232 printer



# DHS Digital High Sensor

Intelligent sensors management

**XS** makes pH 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 pH8+ DHS and pH 80+ DHS, are 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.

## pH 8+ DHS

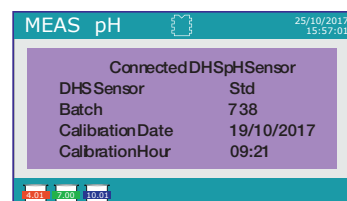
pH- mV - Temperature - GLP - Data Logger

### Main features

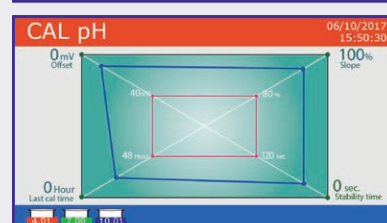
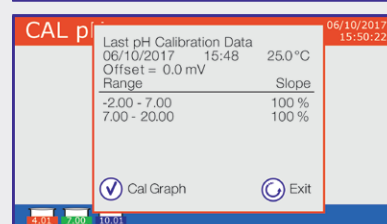
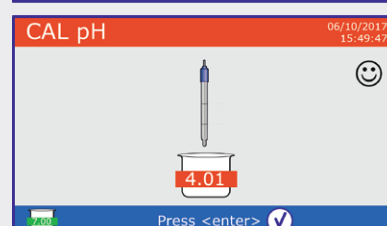
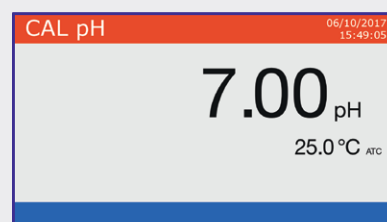
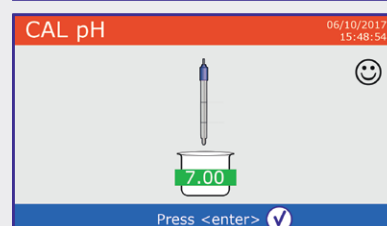
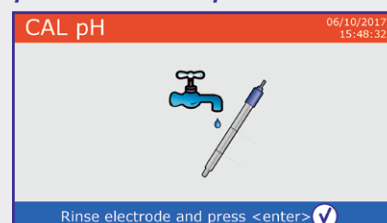
- **Selectable resolution: 0,1/0,01 pH**
- Simultaneous display of pH / mV and temperature
- Analogic view with alarm MIN/MAX
- 3 points Automatic calibration, auto recognition of USA/NIST buffer solutions
- 2 points Manual calibration (pH buffers defined by the user)
- **Large colored display with indication of Calibration standard used and measurement's stability**
- Stability measure filter (Tit-Med-High) for high accuracy of measurement
- Indication of stability with icon
- Stirrer plate included (in stirrer version)
- Numeric password for calibration management and data memory delete
- Memory recall of last calibration, date and time and informations about the conditions of the electrode
- Calibration Timer with alarm
- 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



pH 8+ DHS Basic



### pH calibration procedure

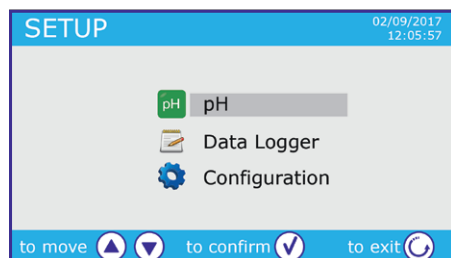




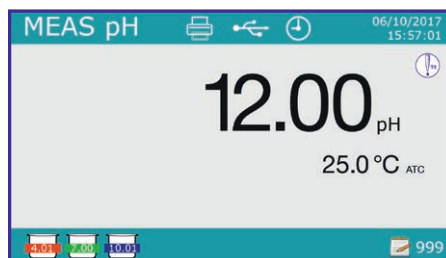
Back panel pH 8+ DHS



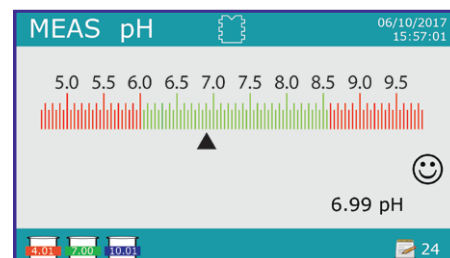
pH 8+ DHS with Stirrer



Setup Menu



Digital view



Analogic view

### How to order pH 8+ DHS

Code	Description
50001252	pH8+ DHS Kit STIRRER with pH electrode XS <b>STANDARD T-BNC DHS</b> . Cable S7/BNC 1m, temperature probe NT 55, colored buffer solutions pH 7 and pH 4, electrode holder and accessories. <b>With stirrer</b> .
50001232	pH8+ DHS Kit STIRRER with pH electrode XS <b>POLYMER</b> . Cable S7/BNC 1m, temperature probe NT 55, colored buffer solutions pH 7 and pH 4, electrode holder and accessories. <b>With stirrer</b> .
50001242	pH8+ DHS STIRRER without electrode, includes Cable S7/BNC 1m, temperature probe NT 55, colored buffer solutions pH 7 and pH 4, electrode holder and accessories. <b>With stirrer</b> .
50001192	pH8+ DHS Kit BASIC with pH electrode XS <b>STANDARD T-BNC DHS</b> . Cable S7/BNC 1m, temperature probe NT 55, colored buffer solutions pH 7 and pH 4, electrode holder and accessories. <b>Without stirrer</b> .
50001202	pH8+ DHS Kit BASIC with pH electrode XS <b>POLYMER</b> . Cable S7/BNC 1m, temperature probe NT 55, colored buffer solutions pH 7 and pH 4, electrode holder and accessories. <b>Without stirrer</b> .
50001212	pH8+ DHS Kit BASIC without electrode, includes Cable S7/BNC 1m, temperature probe NT 55, colored buffer solutions pH 7 and pH 4, electrode holder and accessories. <b>Without stirrer</b> .
50001132	Magnetic stirrer, directly controlled by the meter
32200123	pH Electrode XS <b>STANDARD T-BNC DHS</b>
32200223	XS Polymer pH laboratory electrode, glass body, maintenance free, S7 connector
50002012	NT 55 temperature probe
50000112	Mod. 3900 electrode holder
50001502	RS232 printer normal paper, for series 8+ - 80+
50001512	Power supply AC/DC 12 V/1A for series 8+ - 80+



# pH 80+ DHS

pH - mV - ION - Temperature - GLP - GMP - Data Logger

## Main features

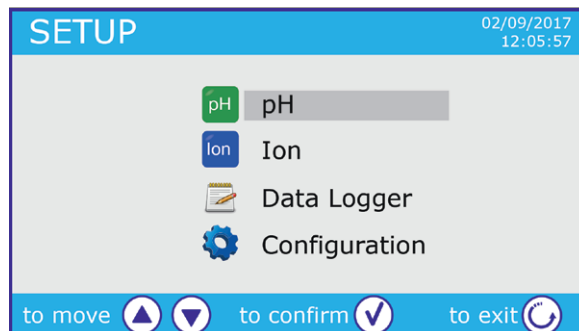
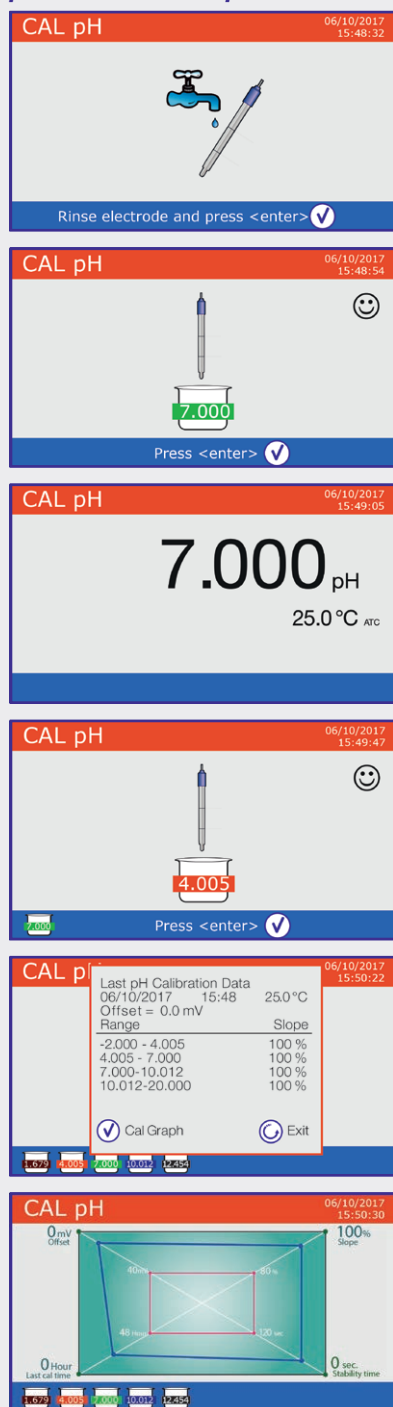
- **Selectable resolution: 0,1/0,01/0,001 pH**
- Simultaneous display of pH / mV / ISE and temperature
- Analogic view with alarm MIN/MAX
- GLP and IQ-OQ manual available
- 5 points Automatic calibration, auto recognition of USA/NIST/DIN buffer solutions
- 5 points Manual calibration (pH buffers defined by the user)
- **5 points Automatic calibration with Ion (ISE) electrode**
- Wide colored display with indication of Calibration standards used and measurement's stability
- Memory recall of last calibration, date and time and informations about the conditions of the electrode
- Calibration Timer: set frequency of calibration for high quality of measurements
- Stability measure filter (Tit - Medium - High) for high accuracy of measurements
- Alphanumeric password for calibration management and data memory delete with soft keypad included
- Stirrer plate included (in stirrer version)
- Indication of stability with icon
- 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
- Quick on-line manual
- 2 USB ports for data PC downloading and for an external keyboard included
- RS232 port for printer connection
- 3 years warranty



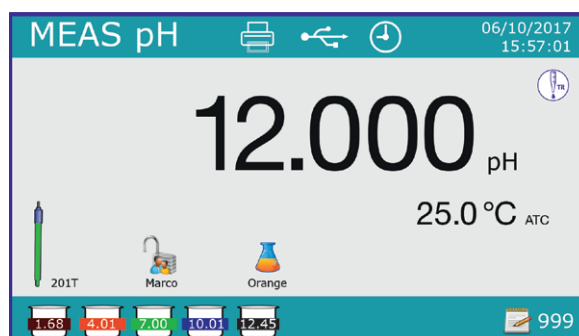
pH 80+ DHS Basic

pH 80+ DHS with stirrer and USB keyboard (included)

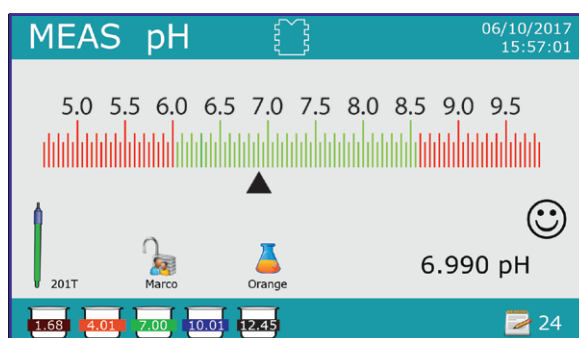
## pH calibration procedure



Setup menu



Digital view



Analog view



Back panel pH 80+ DHS

RS232 printer for  
pH 8+ DHS e pH 80+ DHS

## How to order pH 80+ DHS

Code	Description
50001392	pH 80+ DHS kit STIRRER with pH electrode XS STANDARD T-BNC DHS, temperature probe NT 55, cable S7/BNC 1m, colored buffer solutions pH 7 and pH 4, soft keypad, electrode holder, power supply and accessories. <b>With stirrer</b>
50001402	pH 80+ DHS kit STIRRER with pH electrode XS STANDARD, temperature probe NT 55, cable S7/BNC 1m, colored buffer solutions pH 7 and pH 4, soft keypad, electrode holder, power supply and accessories. <b>With stirrer</b>
50001412	pH 80+ DHS kit STIRRER without electrode includes temperature probe NT 55, cable S7/BNC 1m, colored buffer solutions pH 7 and pH 4, soft keypad, electrode holder, power supply and accessories. <b>With stirrer</b>
50001442	pH 80+ DHS kit BASIC with pH electrode XS STANDARD T-BNC DHS, temperature probe NT 55, cable S7/BNC 1m, colored buffer solutions pH 7 and pH 4, soft keypad, electrode holder, power supply and accessories. <b>Without stirrer</b>
50001422	pH 80+ DHS kit BASIC with pH electrode XS STANDARD, temperature probe NT 55, cable S7/BNC 1m, colored buffer solutions pH 7 and pH 4, soft keypad, electrode holder, power supply and accessories. <b>Without stirrer</b>
50001432	pH 80+ DHS kit BASIC without electrode includes temperature probe NT 55, cable S7/BNC 1m, colored buffer solutions pH 7 and pH 4, soft keypad, electrode holder, power supply and accessories. <b>Without stirrer</b>
32200123	pH electrode STANDARD T-BNC DHS glass body, cable fix 1m BNC pH 0...14, Temp -10...100 °C, Electrolyte KCl 3M with temperature sensor for general purposes
32200363	XS Standard pH rechargeable electrode, S7 connector, for general purposes
50001462	External USB keyboard
50001502	RS 232 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, and 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 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 PURPOSES

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
<b>POLYMER</b>	0...14	-10...+80 °C	S7 Connector	1 diaphragm open pore	<b>32200223</b>

Shaft Material:	Glass
Temperature probe:	No – <b>Yes</b> (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
<b>STANDARD</b>	0...14	-10...+100 °C	S7 connector	General use/ <b>serial number/ certificate</b>	<b>32200363</b>
<b>STANDARD HA</b>	0...14	-10...+100 °C	S7 connector	Minimal alkalin error <b>serial number/ certificate</b>	<b>32200423</b>
<b>STANDARD HF</b>	0...14	-10...+100 °C	S7 connector	For samples with HF (0,01M/200 mg/l)	<b>32200433</b>
<b>STANDARD T - BNC DHS</b>	0...14	-10...+100 °C	Fix cable / BNC	With temperature probe NTC 30KΩ RCA Cinch plug	<b>32200123</b>

Shaft Materiale:	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
<b>FLOW</b>	0...14	-10...+80 °C	S7 connector	For suspended measure and low ion media <b>serial number/ certificate</b>	<b>32200373</b>

More analogic and digital electrodes available. Please refer laboratory electrodes catalogue





## pH buffer solutions

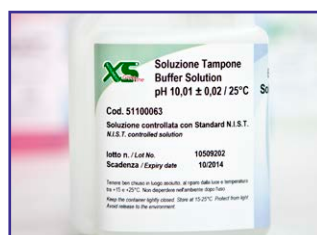
- Ergonomic bottle, 250 or 500 ml, with calibration compartment incorporated, with table of pH variation as a function of temperature, for an accurate calibration
- Cheaper, just use the necessary for calibration
- Colored for a fast identification

- Immune to the microorganisms
- 24 months guaranteed lifetime
- On the certificate are reported real value and expiry date
- Certificates of analysis downloadable on website

### XS Professional certificated DAKKS/DKD

#### pH BUFFER SOLUTIONS

Code	Packaging	pH value (25°C)	Accuracy	Color
51300003	250 ml	4,01	± 0,01	Red
51300013	250 ml	7,00	± 0,01	Green
51300023	250 ml	9,21	± 0,02	Blue
51300033	250 ml	10,01	± 0,02	Yellow
51300103	500 ml	4,01	± 0,01	Red
51300113	500 ml	7,00	± 0,01	Green
51300123	500 ml	9,21	± 0,02	Blue
51300133	500 ml	10,01	± 0,02	Yellow



Real value, expiry date and batch number reported on the bottle



Label with pH / temperature variation and QR Code to download certificate

### XS Basic traceable NIST

#### pH BUFFER SOLUTIONS

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

#### REDOX STANDARDS

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

## Datasheet

### pH 80+ DHS

### pH 8+ DHS

pH measuring range	-2...20	-2...16
Resolution / accuracy	0.1 / 0.01 / 0.001 / $\pm 0,002$	0.1 / 0.01 / $\pm 0,02$
Calibration points	1...5	1...3
Buffer auto recognition	USA, NIST, DIN, 5 editable user buffers	USA, NIST, 2 editable user buffers
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	MIN-MAX	
mV measuring range (redox) / Resolution	$\pm 2000 / 0.1 / 1$	$\pm 2000 / 1$
Ion measuring range	0,001...19999 ppm	—
Units	mol/L - mg/L - g/L	—
Calibration points	2...5	—
Temperature measuring range	-20...+120 °C	-10...+110 °C
Resolution / Accuracy	0.1/ $\pm 0,5$ °C	
Temperature compensation	Automatic or Manual 0...100 °C	
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	BNC, Cinch/RCA (ATC), RS 232 for printer, USB for PC and USB for external keyboard	BNC, Cinch/RCA (ATC), RS 232 for printer, USB for PC connection
Selectable languages	8 languages	
On-line manual	Yes	—
Magnetic stirrer	Yes (optional)	
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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