

wipHi

Wireless freedom in pH measurement!

827 pH lab



826 pH mobile



Two meters – one philosophy...

wipHi – wireless communication with printer and PC

«Point and print»

Do you require for your documentation a printout of the measuring parameters in DIN A4 format and a small label that you want to stick onto your sample vessel? Just point the built-in IrDA interface at the corresponding IrDA-compatible printer* and there you go – without any bothersome changing of cable connections and without having to adapt any printing parameters.

Data transfer to the PC/LIMS

The IrDa interface of a notebook or the optional IrDA adapter for RS 232 or USB interfaces makes it possible to transfer raw data directly to a computer or a LIMS*.



compHort — designed for easy operation

Form and function

Quality «Made in Switzerland» that you can see and feel. The modern design and the high-quality materials of our new pH Meters will meet your high expectations.

Easy operation

No confusing pictograms, but a well-structured multiple-line display. The cursor keys combined with the comfortable menu dialog provide easy access to the numerous functions of the new pH Meters.



pHidelity – «Swiss Made» technology that you can rely on

Small but smart – the measuring input

The newly developed measuring input represents top technology that is normally only encountered in higher price ranges. It supplies an extremely low-noise signal and is easily capable of providing a resolution of 0.001 pH.

pH calibration with automatic buffer recognition

Calibration can be carried out with up to three buffers and is very easy, thanks to the automatic buffer recognition and temperature correction. You can enter limit values for the slope and asymmetry potential; via the calibration interval you determine when the electrode is to be next calibrated. Of course, you can call up the calibration data at any time and output them in a separate report. If you want to be entirely on the safe side, you can also lock the <Cal> key upon completion of the calibration.

GLP – user and samples clearly identified

An identification can be entered for each user and each sample. This identification appears then in the report header or together with the measured value in the measured-value memory to ensure that a measurement can be clearly assigned later on.

Comparable measured values

The following options are available for the acquisition of measured values:

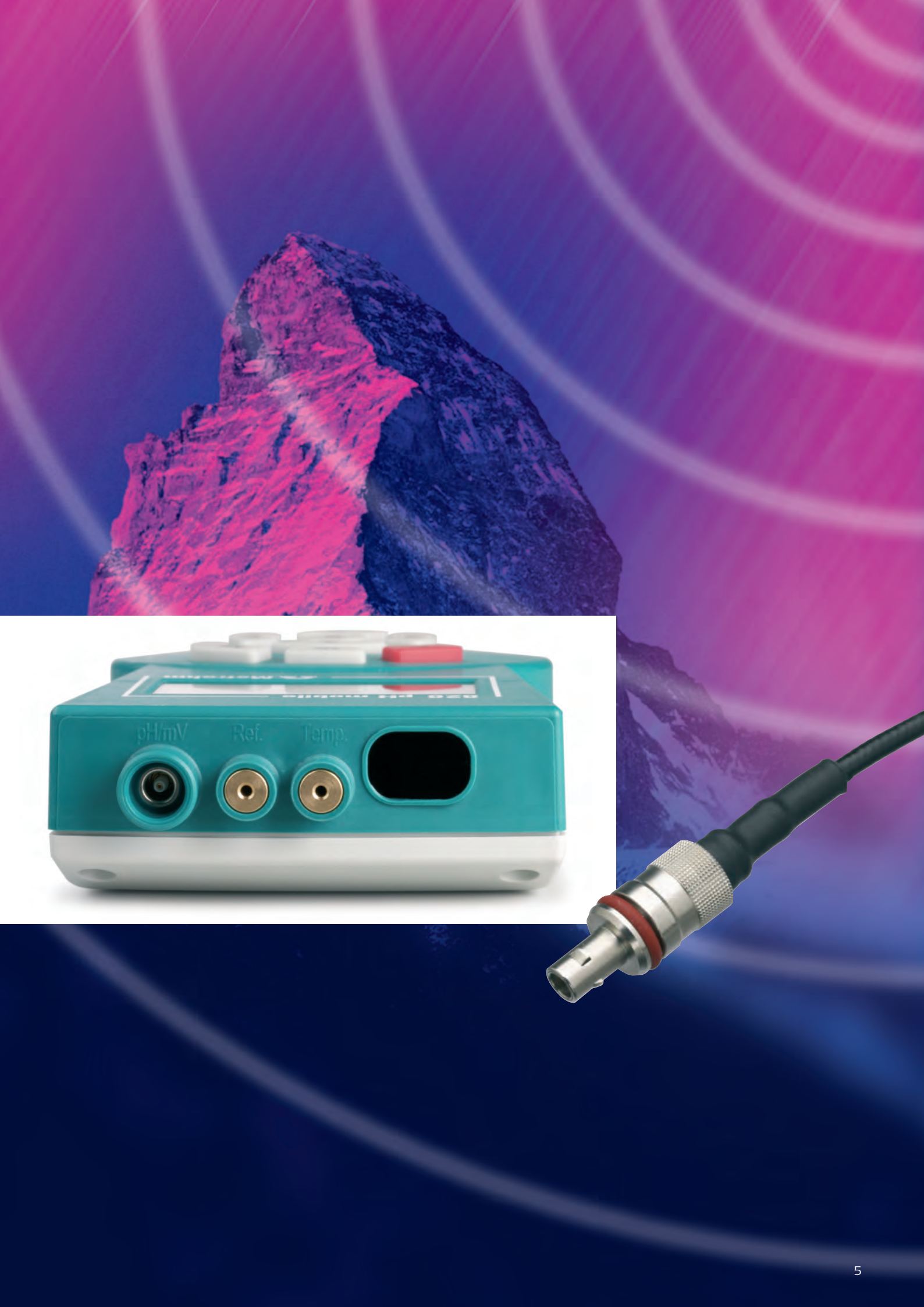
- immediately
- drift-controlled
- after a predefined time interval
- after reaching a predefined difference to the previous measured value

During the measurement, the measured values can be sent to a printer or PC or stored in a result memory that has a capacity of 200 measured values.

On the multiple-line LCD display you can see all important information at a glance. Any error occurring is clearly indicated by an easy-to-grasp warning message.



SwissMade



826 pH mobile – GLP at any time and anywhere

The battery-powered 826 pH mobile is ideal for labs, production plants and field measurements: Simply use it whenever and wherever you want to measure a pH value. The 6.0228.020 Primatrod combined pH glass electrode with robust plastic shaft and NTC temperature sensor is equipped with a fixed cable with type I plug. Combined with this pH electrode, the housing of the 826 pH mobile corresponds to protection class IP67, which means that the 826 pH mobile can be used in extremely humid environments subject to splash water. Even if the instrument should briefly become immersed in water, its functioning will not be affected.

The 827 pH lab includes either the Primatrod or the Unitrod. The Primatrod with NTC temperature sensor (6.0228.010) is especially suitable for routine GLP conforming pH measurements in clear aqueous solutions. The Unitrod with Pt1000 (6.0258.600) is for universal use and insensitive to contamination thanks to its fixed ground-joint diaphragm.



826 pH mobile – the mobile lab

The 826 pH mobile is also available in a completely equipped carrying case that contains buffer solutions, measuring vessels and sample bottles – in short everything you need for field measurements. In addition, the case can also be used as a working surface.



827 pH lab – stable and reliable

The line-powered 827 pH lab is a reliable companion for the daily lab work. The metal stand rod attached to the base plate and the most advanced electronics inside the instrument guarantee measured values that are stable in every respect.

The 827 pH lab includes either the Primatrode or the Unitrode. The Primatrode with NTC temperature sensor (6.0228.010) is especially suitable for routine GLP conforming pH measurements in clear aqueous solutions. The Unitrode with Pt1000 (6.0258.600) is for universal use and insensitive to contamination thanks to its fixed ground-joint diaphragm.



Technical specifications



826 pH mobile



827 pH lab

Measuring ranges		
pH	pH -8...22	pH -8...22
mV	±1200 mV	±1200 mV
Temperature (Pt 1000)	-150...+250 °C	-150...+250 °C
Temperature (NTC)	-5...+250 °C	-5...+250 °C
Resolution		
pH	0.001 pH	0.001 pH
mV	0.1 mV	0.1 mV
Temperature (Pt 1000 or NTC)	0.1 °C	0.1 °C
Measuring accuracy		
pH	±0.003	±0.003
mV	±0.2 mV	±0.2 mV
Pt 1000	±0.2 °C (-20...+150 °C)	±0.2 °C (-20...+150 °C)
NTC	±0.6 °C (+10...+40 °C)	±0.6 °C (+10...+40 °C)
Calibration		
pH calibration: number of buffers	1, 2 or 3	1, 2 or 3
Temperature dependence of stored buffer values is automatically taken into account	Yes	Yes
Automatic buffer recognition	Yes ¹	Yes ¹
Storage of calibration data	Yes	Yes
Automatic temperature compensation	NTC, Pt 1000	NTC, Pt 1000
Monitoring of slope and pH _s against freely definable limit values	Yes	Yes
Measurement		
Acquisition of measured value: immediately, drift-controlled, time-controlled or difference-controlled	Yes	Yes
Simultaneous display of pH value and temperature	Yes	Yes
High-impedance electrode input	1	1
Pt 1000/NTC input	2 (2 mm)	2 (2 mm)
Reference electrode input	1 (2 mm)	1 (2 mm)
Entry of user and sample identification	Yes	Yes
Result memory comprising date, time and identifications	200	200
Communication		
Printer or PC connection	IrDA (unidirectional)	IrDA (unidirectional)
Result printout according to GLP/ISO	Yes	Yes
Report can be sent to a LIMS	Yes	Yes
Miscellaneous		
Dialog guidance	Text	Text
Protection class	IP67	–
Power supplied by	Batteries: 4 x LR6 (UM3, AA), 1.5 V	Plug-in power adapter

¹ The following buffer types are automatically recognized: Metrohm, Precisa, NIST, DIN, Fisher, Fluka, Mettler, Merck Titrisol®, Merck Certipur®, Beckman, Radiometer, Baker, Hamilton.

Ordering information, options



- 2.826.0010** **826 pH mobile (IrDA) without carrying case**, including the following accessories:
- 1 x 6.2050.000 Carrying strap
 - 1 x 6.2133.000 Battery 1.5 V LR6 (UM3, AA), set of 4 pieces
 - 1 x 6.2621.140 Hexagon key 2.5 mm
 - 1 x 8.827.1003 Instructions for use for 826 pH mobile and 827 pH lab (English)

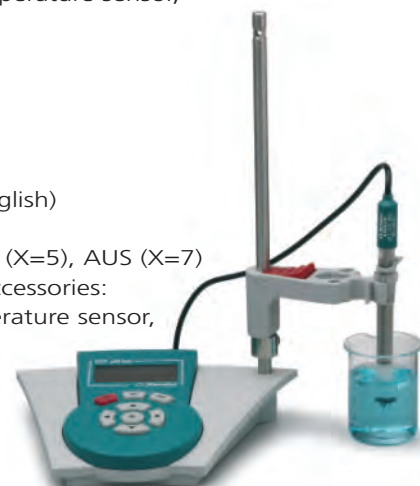
- 2.826.0020** **826 pH mobile (IrDA) without carrying case**, including the following accessories:
- 1 x 6.0228.020 LL Primatrode, combined pH glass electrode with NTC temperature sensor, fixed cable with plug I* + 1 x 2 mm
 - 1 x 6.2050.000 Carrying strap
 - 1 x 6.2133.000 Battery 1.5 V LR6 (UM3, AA), set of 4 pieces
 - 1 x 6.2621.140 Hexagon key 2.5 mm
 - 1 x 8.827.1003 Instructions for use for 826 pH mobile and 827 pH lab (English)

- 2.826.0110** **826 pH mobile (IrDA) with carrying case**, including the following accessories:
- 1 x 6.0228.020 LL Primatrode, combined pH glass electrode with NTC temperature sensor, fixed cable with plug I* + 1 x 2 mm
 - 1 x 6.1236.050 Sleeve made of PE, SGJ 14/15
 - 1 x 6.1446.000 Plastic stopper SGJ 14/15
 - 1 x 6.1613.020 Bottle 25 mL marked «pH 7» (empty)
 - 1 x 6.1613.030 Bottle 25 mL marked «pH 4» (empty)
 - 1 x 6.1614.000 Wash bottle 250 mL made of PE
 - 3 x 6.1614.030 Bottle 50 mL for samples
 - 1 x 6.2050.000 Carrying strap
 - 1 x 6.2307.230 Buffer solutions pH 4, 7 and 9 (each with 10 sachets containing 30 mL), shelf life 2 years
 - 1 x 6.2308.050 KCl electrolyte solution 3 mol/L, 50 mL
 - 1 x 6.2133.000 Battery 1.5 V LR6 (UM3, AA), set of 4 pieces
 - 1 x 6.2621.140 Hexagon key 2.5 mm
 - 1 x 6.2716.040 Carrying case for 826 pH mobile
 - 1 x 6.2717.000 Beaker made of PP 100 mL
 - 1 x 8.827.1003 Instructions for use for 826 pH mobile and 827 pH lab (English)



- 2.827.011X** **827 pH lab (IrDA) with Primatrode**; variants: EU (X=4), US (X=5), AUS (X=7) or UK X=9); including power adapter plus the following accessories:
- 1 x 6.0228.010 LL Primatrode, combined pH glass electrode with NTC temperature sensor, fixed cable with plug F + 1 x 2 mm
 - 1 x 6.2013.010 Clamping ring for stand rod 10 mm
 - 1 x 6.2016.050 Stand rod, length 30 cm
 - 1 x 6.2021.020 Electrode holder
 - 1 x 6.2621.070 Hexagon key 5 mm
 - 1 x V.020.8016 Inner hexagon lens head screw
 - 1 x 8.827.1003 Instructions for use for 826 pH mobile and 827 pH lab (English)

- 2.827.021X** **827 pH lab (IrDA) with Unitrode**; variants: EU (X=4), US (X=5), AUS (X=7) or UK X=9); including power adapter plus the following accessories:
- 1 x 6.0258.600 Unitrode, combined pH glass electrode with Pt1000 temperature sensor,
 - 1 x 6.2013.010 Clamping ring for stand rod 10 mm
 - 1 x 6.2016.050 Stand rod, length 30 cm
 - 1 x 6.2021.020 Electrode holder
 - 1 x 6.2104.600 Electrode cable head U - plug F
 - 1 x 6.2621.070 Hexagon key 5 mm
 - 1 x V.020.8016 Inner hexagon lens head screw
 - 1 x 8.827.1003 Instructions for use for 826 pH mobile and 827 pH lab (English)



* When this plug type is used, the 826 pH mobile complies with protection class IP67, which means that it is not affected by splash water and can even be immersed in water for short periods without suffering any damage.



Optional accessories

- 6.0226.100 Combined LL pH electrode for puncture measurements, with two pinhole diaphragms, plug-in head G
- 6.0235.200 LL Porotrode, combined pH glass electrode with capillary diaphragm for measurements in samples with a high protein content, plug-in head G
- 6.0257.000 Aquatrode Plus with Pt 1000, combined pH glass electrode with fixed ground-joint diaphragm, suitable for weakly buffered solutions of low ionic strength; fixed cable with plug F + 2 x B (4 mm), requires adapters 6.2103.130 and 6.2103.140
- 6.0258.010 LL Unitrode with Pt 1000, combined pH glass electrode with fixed ground-sleeve diaphragm for difficult sample matrices; fixed cable with plug F + 2 x 2 mm
- 6.0451.100 Combined LL Pt-ring electrode for redox measurements, plug-in head G
- 6.1110.100 Pt 1000 resistance thermometer, plug-in head G
- 6.2104.020 Cable for combined pH and metal electrodes with plug-in head G, length 1 m
- 6.2104.140 Cable for Pt 1000 resistance thermometer with plug-in head G, length 1 m, with plug 2 x 2 mm
- 6.2103.130 Adapter red, 2 mm plug / 4 mm socket
- 6.2103.140 Adapter black, 2 mm plug / 4 mm socket
- 6.2307.200 Buffer solution pH = 4; 30 sachets of 30 mL each, shelf life 2 years
- 6.2307.210 Buffer solution pH = 7; 30 sachets of 30 mL each, shelf life 2 years
- 6.2307.220 Buffer solution pH = 9; 30 sachets of 30 mL each, shelf life 2 years
- 6.2307.230 Buffer solutions pH = 4, 7 und 9; 10 sachets each of 30 mL, shelf life 2 years
- 6.2306.020 250 mL redox standard, can also be used as buffer pH = 7
- 6.2308.020 250 mL electrolyte solution $c(\text{KCl}) = 3 \text{ mol/L}$ for Ag/AgCl reference system
- 6.2318.000 Porolyte 50 mL (for 6.0235.200 Porotrode)
- 6.2323.000 Storage solution for combined pH glass electrodes with reference electrolyte $c(\text{KCl}) = 3 \text{ mol/L}$

Looking for the right sensor for your application? Be sure to find it under www.pH-measurement.com



www.metrohm.com