

Multiparameter (pH, Conductivity) Measuring Instruments, Phoenix Instrument



Innovative measurement technology „Made in Europe“ – this is what the new pocket and laboratory measuring instruments of the Phoenix Instrument EC series offer. During the development, the main focus was put on user-friendliness and the technical features of the instruments. The pH electrodes and conductivity cells are produced in Switzerland by experienced specialists.

Portable multimeter EC-21-multi/EC-26-multi

During the new development of the EC-21/EC-26 series, particular emphasis was placed on easy handling during daily routine. The high-resolution color display guides the user intuitively through the measurement and calibration process.

EC-21 multi

- High-resolution color display, adjustable brightness
- DHS-function, pH electrodes with internal chip
- Digital or normal analog pH-electrodes can be used
- Display of pH/mV, conductivity/TDS and temperature values
- Automatic pH calibration up to 3 points
- Automatic LF-calibration up to 5 points
- Automatic ORP 1-point calibration
- Selectable stability parameter (low-medium-high)
- Automatic and manual temperature compensation
- Protection class IP 57
- Supplied in a robust carrying case with all accessories

... additionally for the EC-26 multi

- GLP-function
- Data logger (automatic or manual) 1000 data strings
- Connection to PC via micro-USB
- Free DATA LINK +
- Automatic brightness regulation

Technical data:	EC-21 multi	EC-26-multi
pH measuring range:	0.00 – 14.00 pH	-2.00 – 16.00 pH
Resolution:	0.1/0.01 pH	0.1/0.01 pH
Calibration points:	1 – 3	1 – 3
Buffer recognized:	USA, NIST and user defined	USA, NIST and user defined
mV measuring range:	±1000 mV	1000 – 1900 mV
Resolution:	1 mV	0.1/1 mV
Conductivity measuring range:	0.00 – 200 mS	0.00 – 200 mS
Resolution:	0.1/1 µS 0.01/0.1 mS	0.01/0.1/1 µS 0.01/0.1 mS
Calibration points:	1 – 5	1 – 5
Cell constant selectable:	0.1 – 1 – 10 cm ⁻¹	0.1 – 1 – 10 cm ⁻¹
Temperature range:	0.0 – 100°C	-10 – 110°C
Resolution:	0.1 / ± 0,5°C	0.1 / ± 0,5°C
TDS measuring range:	0.1 mg/l – 200 g/l	0.1 mg/l – 200 g/l
GLP:	–	yes
CALDUE:	no	yes
Memory:	–	1000 data
Output:	–	Micro USB
IP-class:	IP 57	IP 57
Dimensions (D×W×H):	185 × 85 × 45 mm / 400 g	185 × 85 × 45 mm / 400 g
Warranty instrument:	3 years	3 years



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Article	Order No.
① EC-21-multi-0 Kit without pH electrode, included cond. cell 2301 T, temperature probe, cable S7/BNC, calibration standards, carrying case and accessories	10 13 70210
EC-21-multi-1 Kit include pH electrode 201T and cond. Cell 2301T, calibration standards, carrying case and accessories	10 13 70213
EC-21-multi-5 Kit include pH electrode 201T DHS and cond. Cell 2301T, calibration standards, carrying case and accessories	10 13 70215
② EC-26 multi-0 Kit without pH electrode, included cond. cell 2301 T, temperature probe, cable S7/BNC calibration standards, carrying case, power supply and accessories, software PC-Link, USB cable	10 13 70260
EC-26 multi-1 Kit include pH-electrode 201T and cell 2301T, calibration standards, carrying case, power supply and accessories, software PC-Link, USB cable	10 13 70261
EC-26 multi-5 Kit include pH-electrode 201T DHS and cell 2301T, calibration standards, carrying case, power supply and accessories, software PC-Link, USB cable	10 13 70265



③ Basic Bench top multiparameter EC-31-multi/EC-36-multi

During the new development of the EC-21/EC-26 series, particular emphasis was placed on easy handling during daily routine. The high-resolution color display guides the user intuitively through the measurement and calibration process.

EC-31 multi

- High-resolution color display, adjustable brightness
- DHS-function, pH electrodes with internal chip
- Digital or normal analog pH-electrodes can be used
- Display of pH/mV, conductivity/TDS and temperature values
- Automatic pH calibration up to 3 points
- Automatic LF-calibration up to 5 points
- Automatic ORP 1-point calibration
- Selectable stability parameter (low-medium-high)
- Automatic and manual temperature compensation
- Protection class IP 54

... additionally for the EC-36 multi

- GLP-function
- Data logger (automatic or manual) 1000 data strings
- Connection to PC via micro-USB
- Free DATA LINK +



Technical data:

	EC-31-multi	EC-36-multi
pH measuring range:	0.00 – 14.00 pH	-2.00 – 16.00 pH
Resolution:	0.1/0.01 pH	0.1/0.01 pH
Calibration points:	1 – 3	1 – 3
Buffer recognized:	USA, NIST and user defined	USA, NIST and user defined
mV measuring range:	±1.000 mV	1000 – 1900 mV
Resolution:	1 mV	0.1/1 mV
Conduction measuring range:	0.00 – 200 mS	0.00 – 200 mS
Resolution:	0.1/1 µS 0.01/0.1 mS	0.01/0.1/1 µS 0.01/0.1 mS
Calibration points:	1 – 5	1 – 5
Cell constant selectable:	0.1 – 1 – 10 cm ⁻¹	0.1 – 1 – 10 cm ⁻¹
Temperature range:	0.0 – 100°C	-10 – 110°C
Resolution:	0.1 / ± 0.5°C	0.1 / ± 0.5°C
TDS measuring range:	0.1 mg/l – 200 g/l	0.1 mg/l – 200 g/l
GLP:	–	yes
CALDUE:	no	yes
Memory:	–	1000 data
Output:	–	Micro USB
IP-class:	IP 54	IP 54
Dimensions:	170 × 145 × 60 mm / 530 g	170 × 145 × 60 mm / 530 g
Warranty instrument:	3 years	3 years

Article	Order No.
EC-31 multi 0	10 13 70310
Kit without pH electrode, included cond. cell 2301 T with ATC, with temperatureprobe NT 55, BNC/S7 1 m cable, pH buffer and conductivity standard, electrode holder.	
EC-31 multi 1	10 13 70331
Kit include pH electrode 201T and cond. Cell 2301T with ATC, pH buffer and conductivity standard, electrode holder. pH buffer and conductivity standard, electrode holder.	
EC-31 multi 5	10 13 70315
Kit include pH electrode 201T DHS and cond. Cell 2301T with ATC, pH buffer and conductivity standard, electrode holder.	
EC-36 multi 0	10 13 70360
Kit without pH electrode, included cond. cell 2301 T with ATC, with temperatureprobe NT 55, BNC/S7 1mt cable, power supply, software PC-Link, pH buffer and conductivity standard, carrying case and accessories.	
EC-36 multi-1	10 13 70361
Kit include pH electrode 201T and cond. Cell 2301T with ATC, pH buffer and conductivity standard, electrode holder, power supply, software PC-Link, USB- cable.	
EC-36 multi-5	10 13 70365
Kit include pH electrode 201T DHS and cond. Cell 2301T with ATC, pH buffer and conductivity standard, electrode holder, power supply, software PC-Link, USB- cable.	



④ Professional bench top multiparameter EC-45 multi

The large color display easy on to read shows all information necessary information about measurement, calibration, standards, cell condition, GLP. Anyone can use this meter easily with its intuitive menu available in up to 8 languages in the EC-45-Multi. Easy to learn. Up to 5-point pH-calibration and up to 4-point Conductivity calibration with automatic recognition of all standards. Icon support for all calibration functions and advanced electrode diagnostics. Easy to calibrate. All functions can be controlled in an intuitive and easy way. Instrument will be delivered with a stirrer.

EC-45 multi

- Large color display with indication of Calibration Buffers and measurement's stability
- DHS-function, pH electrodes with internal chip
- Indication stability of the measurement with icon
- IP54 protection
- 3 years instrument warranty
- Display pH/mV and Temperature, COND/TDS/Salinity/Resistivity and Temperature simultaneously
- Selectable Resolution: 0,1/0,01/0,001 pH; Auto range for COND
- GLP and IQ-OQ manual available
- Selectable cell constant allows for use with 2 or 4 plate cell
- Memory with re-call of last calibration date and time and information of electrode's life
- CAL DUE: set of calibration frequency for high quality of measurements
- Stability Parameter (Low-Med-High) for high accuracy measurement
- Non-volatile memory holds up to 1000 data points with date and time in automatic (Data logger) or manual
- 2 x USB ports to transfer data at PC or printer and for external keyboard
- Software PC-Link to download data (included)

Technical data:

pH meas. range:	-2 – 20 pH
Resolution:	0.1 / 0.01 / 0.001 pH
Calibration points:	1 – 5
Buffer recognized:	USA, NIST, user defined
mV meas. range/resolution:	±2000/ 0.1/1 mV
Cond. measuring range:	0.00 – 20.00/200.0/2000 µS / 2.00/20.00/200.0/1000 mS
Accuracy:	±1% full scale
Temperature compensation:	manual or automatic
Calibration points cond.:	1 to 4
Calibr. standards recognized:	84, 1413 µS / 12.88, 111.8 mS, user defined
Cell constant selectable:	0.1 – 1 – 10 cm ⁻¹
TDS measuring range:	0.1 mg/l – 500 g/l
TDS factor:	0.40 – 1.00
Accuracy TDS:	±1% full scale
Temperature range:	-20 – 120°C
Accuracy/resolution temp.:	0.1/±0.2°C
Temperature calibration:	yes
GLP:	yes, with date and time
CALDUE:	yes
Memory:	yes, 1000 data
Interputs:	2 x USB, RS-232
Protection class:	IP 54
Power supply:	AC/DC adaptor 12 V / 1000 mA
Dimensions:	165 x 195 x 68 mm, 1050 g without stirrer

Article	Order No.
EC-45 multi 2	10 13 71452
Kit without electrode and cell, with cable S7/BNC, temp. probe NT55, buffer solutions pH 7 and 4, cond. standards 1413 µS and 12,88 mS, electrode holder, power supply and accessories, incl. magnetic stirrer	
EC-45 multi 3	10 13 71453
Kit with pH-electrode XS STANDARD S7, cell glass VPT 80/1 with ATC, cable S7/BNC 1 m, buffer solutions pH 7 and pH 4, cond. standards 1413 µS and 12,88 mS, power supply and accessories, incl. magnetic stirrer	
EC-45-multi-5	10 13 70455
Kit with pH-electrode STANDARD T - BNC DHS, cond.-cell glass VPT 80/1 with ATC, pH puffer pH 7 and pH 4, cond.-standards 1413 µS and 12,88 mS, accessories, with magnetic stirrer, DHS-function	



pH electrodes for general applications

Article	Order No.
⑤ pH electrode Gel pH electrode, gel-filled with ceramic diaphragm	10 13 71204
⑥ pH electrode Polymer pH electrode, polymer-filled with open pore diaphragm	10 13 71223
⑦ pH electrode Polymer Tip pH electrode, polymer-filled with double open pore diaphragm	10 13 71443
⑧ pH electrode Standard pH standard electrode with ceramic diaphragm	10 13 71363
pH electrode Standard HA like Standard, minimal Alkali error	10 13 71423
pH electrode Standard HF like Standard, for samples with HF	10 13 71433
pH electrode Standard BNC like Standard, with fix cable BNC	10 13 71263
pH electrode Standard DIN like Standard, with fix cable DIN	10 13 71273
pH electrode Standard T-BNC like Standard, with fix cable BNC and temperature sensor	10 13 71473
pH electrode Standard T DIN like Standard, with fix cable DIN and temperature sensor	10 13 71463
pH electrode Polymer Plast pH electrode, polymer-filled with 1 open pore diaphragm and 1 ceramic diaphragm	10 13 71493
pH electrode Polymer Plast BNC like Polymer Plast, with fix cable BNC	10 13 71503
pH electrode Polymer Plast DIN like Polymer Plast, with fix cable DIN	10 13 71513
⑨ pH electrode 201 T pH electrode with epoxy body, temperature sensor and fix cable BNC	10 13 71022
pH electrode 201 T DIN pH electrode with epoxy body, temperature sensor and fix cable DIN	10 13 71249
pH electrode Flat pH electrode for surface measurements, 3-hole diaphragm with Teflon	10 13 71413
⑩ pH electrode Flow pH electrode for viscous samples and low ion media	10 13 71373
⑪ pH electrode Semi-Micro pH electrode for small volume samples	10 13 71383
pH electrode Micro pH electrode for small volume samples	10 13 71213
pH electrode Micro P pH electrode for small volume samples with mit protein, electrolyte glycerin	10 13 71253
pH electrode Gel Plast BNC pH electrode with epoxy body, fix BNC-cable and double ceramic diaphragm	10 13 75223

