

## C Technical specifications

---

The full specifications apply only after at least 1 hour warm-up.

### **Operating data**

#### **pH measurement**

pH range	0 to 14 (spec. valid between 2 and 12)
Accuracy	
temperature compensated	±0.1 pH within +4 to +40 °C
not temperature compensated	±0.2 pH within +15 to +25 °C ±0.5 pH within +4 to +15 °C and +25 to +40 °C
Response time	Max. 10 s (0–95% of step)
Long term drift	Max. 0.02 pH/h (measured at pH 4.0)
Flow rate sensitivity	Max. 0.1 pH units within 0–10 ml/min

#### **Conductivity measurement**

Conductivity range	1 µS/cm to 999.9 mS/cm
Deviation from theoretical conductivity	Max. ±2% of full scale calibrated range or ±10 µS/cm whichever is greater in the range 1 µS/cm to 300 mS/cm
Reproducibility	
short term	Max. ±1% or ±5 µS/cm
long term	Max. ±3% or ±15 µS/cm
Noise	Max. ±0.5% of full scale calibrated range
Response time	Max. 3 s (0–95% of step)
Temperature sensor	
Accuracy	±2.0 °C
Drift	±0.5 °C per 10 h
Flow rate sensitivity	±1% within 0–100 ml/min
Environment	+4 to +40 °C 20–95% relative humidity 84–106 kPa (840–1060 mbar) atmospheric pressure

### **Flow cells**

#### **pH cell**

Max Flow rate	100 ml/min
Max Pressure	0.5 MPa (5 bar, 72 psi)
Back pressure	Max. 0.02 MPa (0.2 bar, 2.9 psi)
Internal volume	88 µl
Wetted materials	pH electrode and flow cell: Glass, FFKM (perfluororubber), titanium Dummy electrode: PTFE (polytetrafluoroethylene)
Chemical resistance	The wetted parts are resistant to organic solvents and salt buffers commonly used in chromatography of biomolecules, except 100% Ethyl acetate, 100% Hexane, and 100 % Tetrahydrofuran (THF).

### Conductivity cell

Max Flow rate	100 ml/min
Max Pressure	5 MPa (50 bar, 725 psi)
Back pressure	Max. 0.01 MPa (0.1 bar, 1.5 psi)
Internal volume	14 µl
Wetted materials	Titanium, CTFE
pH stability range	1–13, 1–14 (<1 days exposure)
Chemical resistance	The wetted parts are resistant to organic solvents and salt buffers commonly used in chromatography of biomolecules, except 100% Ethylacetate, 100% Hexane, and 100 % Tetrahydrofuran (THF).

### Physical data

Control	Stand alone or from a PC with UNICORN-version 2.20 or higher, through UniNet 1 connection.
Degree of protection housing	IP 20
flow cells	IP 44
Power requirements	100–240 V AC, 50–60 Hz
Power consumption	25 VA
Functions	Languages selectable; English, German, Spanish, French, Italian
pH electrode cable length	1.5 m, BNC connector
Cond. cell cable length	1.5 m, D-sub 9 pole connector
Inlet- and outlet tubing	UNF 10–32 2B "Fingertights" with capillary tubing 1/16" outer diameter
Analogue outputs	<b>0–1 V and 4–20 mA full scale, overrange function</b> (see section 2. <i>Installation</i> for pin configuration)
Display	2 rows with 20 characters each
Dimensions, H × W × D	100 × 260 × 370 mm
Weight	8.5 kg
Compliance with standards	The declaration of conformity is valid for the instrument only if it is: <ul style="list-style-type: none"> <li>• used in laboratory locations</li> <li>• used in the same state as it was delivered from GE Healthcare except or alterations described in the User Manual</li> <li>• connected to other CE labelled GE Healthcare modules or other products as recommended.</li> </ul>
Safety standards	This product meets the requirement of the Low Voltage Directive (LVD) 73/23/EEC and other international requirements through the following harmonized standards: <ul style="list-style-type: none"> <li>• EN 61010-1</li> <li>• IEC 61010-1</li> <li>• CAN/CSA-C22.2 No. 61010-1</li> <li>• UL61010-1</li> </ul>

---

**Physical data****EMC standards**

This device meets the requirements of the EMC Directive 89/336/EEC and other international requirements through the following harmonized standards:

- EN 61326 (emission and immunity)
- EN 55011, GR 2, Class A (emission)
- This device complies with part 15 of the FCC rules (emission).

Operation is subject to the following two conditions:

- 1 This device may not cause harmful interference.
  - 2 This device must accept any interference received, including interference that may cause undesired operation.
-