

PH ELECTRODES

PORTABLE INSTRUMENTS

SOFTWARE

ACCESSORIES

ALARM / PROTECTION, LEVEL

FOR DEVICES WITH CINCH CONNECTION THE ADAPTER GAD 1 BNC IS NEEDED!



GAD 1 BNC
Item No. 601382

STERILIZABLE



| | GE 100 | GE 101 | GE 104 | GE 108 | GE 114 | GE 117 | GE 120 | GE 125 | GE 126 | GE 151 | GE 171 | GE 173 |
|--------------------------------|------------------------|---------------------------------|-------------------------|-----------------------|--------------------------|----------------------------------|--|--|-------------------------|--------------------------------|--|---|
| Measuring range | 0..14 pH 0..80 °C | 2..11 pH 0..60 °C | 0..14 pH 0..80 °C | 0..14 pH 0..80 °C | 0..14 pH 0..60 °C | 0..14 pH 0..80 °C | 0..14 pH 0..60 °C | 0..14 pH 0..70 °C | 0..14 pH 0..+80 °C | 0..14 pH 0..80 °C | 0..14 pH 0..140 °C | 0..14 pH 0..80 °C |
| Conductivity | > 100 µS/cm | > 100 µS/cm | > 20 µS/cm | > 100 µS/cm | > 200 µS/cm | > 100 µS/cm | > 200 µS/cm | > 200 µS/cm | > 100 µS/cm | > 100 µS/cm | > 100 µS/cm | > 50 µS/cm |
| Temperature measurement | No | No | No | No | No | integr. Pt1000 4 mm banana | No | integr. Pt1000 4 mm banana | No | No | No | No |
| Waterproof | No | No | No | No | optional | No | No | Yes | No | No | No | No |
| Pressure resistant | No | No | No | 6 bar | No | 6 bar | No | 1 bar | 5,5 bar | No | 10 bar | 6 bar |
| Cable | 1 m ¹⁾ | 1 m ¹⁾ | 1 m ¹⁾ | 2 m ¹⁾ | 1 m | 2 m ²⁾ | 1 m | 2 m | 5 m | 1 m ¹⁾ | without | 1 m ¹⁾ |
| Electrolyte | 3 mol/l KCl | 3 mol/l KCl | 3 mol/l KCl | Gel electrolyte | Gel electrolyte | Gel electrolyte | Gel electrolyte | Gel electrolyte | Gel electrolyte | 3 mol/l KCl | Gel electrolyte | Gel electrolyte |
| Diaphragm | 2 x ceramics | 2 x ceramics | variable grinding | 2 x ceramics | 1 x Pellon | 2 x ceramics | 2 x ceramics | 1 x ceramic | 2 x ceramics | 1 x ceramic | 2 x ceramics | joint |
| Thread | without | without | without | PG 13.5 | without | PG 13.5 | without | without | 1/2" NPT | without | PG 13.5 | PG 13.5 |
| Electrode shaft | Tyrl, Ø 12 mm x 120 mm | Glass, Ø 12 or 6 x 120 mm | Glass, Ø 12 mm x 120 mm | PSU, Ø 12 mm x 120 mm | Epoxy, Ø 12 mm x 120 mm | PSU, Ø 12 mm x 120 mm | PVC, Ø 22 mm x 110 mm | Epoxy, Ø 12 mm x 120 mm | ABS, Ø 26,4 mm x 147 mm | Glass, Ø 12 mm x 120 mm | Glass, Ø 12 mm x 120 mm | Glass, Ø 12 mm x 120 mm |
| Particularities | Universal electrode | Tip Ø 6 mm, small sample volume | for low-ion media | low maintenance | Low cost low maintenance | temperature compensated | Insertion electrode, blade Ø 13 mm x 60 mm | submersible, water-proof IP67 (also BNC connector) | extreme low maintenance | chemical-resistant glass shaft | for extreme conditions, sterilizable, autoclavable | for process chemistry, biochemistry, alkali-resistant |

PRICE PER CONNECTION:

| | | | | | | | | | | | | |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| BNC | | | | | | | | | | | | |
| Item No. | 600704 | 600693 | 602063 | 600713 | 604701 | 600730 | 600698 | 600731 | 610987 | 600727 | | 600735 |
| S7 *) | | | | | | | | | | | | |
| Item No. | | | | 606089 | | | | | | | 606375 | 606572 |

*) Note: For the S7 connection, the GEAK-2S7-BNC or GEAK-5S7-BNC cable is required, for devices with a cinch connection the GAD 1 BNC adapter is also required. Electrodes are consumables. Service life with careful handling: > 2 years / guarantee: 12 months

OPTIONS:

Longer cables for ¹⁾²⁾
(available cable lengths up to 5 m)
Special designs
(Electrode with thread, special lengths, special applications, etc.)

ACCESSORIES AND SPARE PARTS:

Cable BNCM / BNCF
Item No. 606158
Extension cable for electrodes with BNC connection, cable length: 3 m



BNC connector



S7 connection on the electrode shaft

DIAPHRAGM:

The membrane establishes the electrical connection between the reference system and the sample. At the same time, it should prevent the medium to be measured from contaminating the reference electrolyte.

Ceramic membrane
Porous ceramic rods are inserted to allow low outflow rates.
Application: general applications in clean to slightly dirty media

Joint / movable cut
The roughened surface between the cut glass of the electrode and the glass sleeve enables an electrolyte flow of several ml/h.
Application: low-ion and heavily soiled samples

Pellon membrane
A Pellon tissue is inserted.
The permeable membrane enables fast response times and stable measured values.
Application: in clean to slightly soiled media



Ceramic rod



Glass sleeve



REFERENCE ELECTROLYTE:

The reference electrolyte enables a constant voltage in the reference system and establishes the electrical connection between the membrane and the reference electrode.

Liquid electrolyte
3 mol/l KCl is mainly used here. Liquid electrolytes usually enable a faster response time and can be replaced if they are dirty.

Gel electrolyte
This is where the electrolyte is solidified in order to reach low-maintenance electrodes that allow a short-term measurement regardless of the position. No noticeable leakage of electrolyte can be observed under normal measuring conditions.

ELECTRODES WITH S7 CONNECTION:

The electrodes offered are equipped with an S7 industrial screw plug head, which is also known as the S8 industrial screw plug head. In contrast to the S7 laboratory plug head, this is suitable for direct installation in fittings with PG 13.5 thread.

AREAS OF APPLICATION ELECTRODES

| APPLICATION | GE100 | GE101 | GE104 | GE108 | GE114 | GE117 | GE120 | GE125 | GE126 | GE151 | GE171 | GE173 | GR105 | GR175 |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Sewage | | | | | | | | | • | | | • | | |
| Aquarium water | • | | • | • | • | • | | | • | • | | | • | • |
| Soil testing | | • | | | | | | | | | | | | |
| Emulsions | | • | • | | | | | | | | | | | |
| Field measurements | | | | • | • | • | | • | | | | | • | |
| Fish farming | • | | • | • | • | • | | • | • | • | | | • | • |
| Galvanic baths | | | | | | | | | | | | • | | • |
| Beverages | | | | | | | | • | | • | | • | • | • |
| Low-ion media | | | • | | | | | | | | | • | | |
| Cosmetics | | | • | | | | | | | | | | | |
| Food samples | | • | | | | | • | | | | | | | |
| Sea water | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| Online measurement | | | | | | | | | | | • | • | | • |
| Process chemistry | | | | | | | | | | • | • | • | | • |
| Swimming pool water | • | | | • | • | • | | • | • | | | • | • | • |
| Suspensions | | • | • | | | | | | | | | | | • |
| Drinking water | • | | • | • | • | • | | • | • | | | • | • | • |
| Water-based lacquers | | | • | | | | | | | | | • | | |

Note: The information provided is a general recommendation. It must be checked which electrodes are suitable for the respective area of application.

REDOX ELECTRODES



GR 105-BNC
Item No. 607798
Redox electrode with BNC connection



GR 175-BNC
Item No. 607801
Redox electrode, pressure-resistant, BNC connector

GR 175-S7
Item No. 607802
Redox electrode, pressure-resistant, S7 plug head, without connection cable^{*)}

| TECHNICAL SPECIFICATIONS: | GR 105 | GR 175 |
|---------------------------|---|-------------------------|
| Measured variable: | Redox | |
| Measuring range: | ± 2000 mV, 0.80 °C | |
| Conductivity: | > 100 µS/cm | |
| Temperature measurement: | No | |
| Waterproof: | No | |
| Pressure resistant: | No | 6 bar |
| Cable: | 1 m ¹⁾ | without / 1 m |
| Electrolyte: | 3 mol/l KCL | Gel electrolyte |
| Diaphragm: | 2 x ceramics | 1 x ceramic |
| Metal electrode: | Platinum dome Ø 5 mm | |
| Thread: | without | PG 13.5 |
| Electrode shaft: | Tyrl, Ø 12 mm x 120 mm | Glass, Ø 12 mm x 120 mm |
| Min. immersion depth: | 15 mm | |
| Scope of delivery: | Redox electrode, operating instructions | |

OPTIONS:
Longer cables for ¹⁾²⁾
(available cable lengths up to 5 m)

EQUIPMENT:
GRP 100
Item No. 601424
Redox test solution 220 mV, 100 ml



^{*)} Note: For the S7 connection, the GEAK-2S7-BNC or GEAK-5S7-BNC cable is required, for devices with a cinch connection the GAD 1 BNC adapter is also required. Electrodes are consumables. Lifespan with careful handling: >2 years./Warranty: 12 months