

FEATURES

EMEC pH and Redox (ORP Potential) electrodes are the ideal complements to Emec controllers for an accurate and reliable control of your processes.

PH and Redox easy-maintenance electrodes provides accurate reading value and fast response, performances required for the most accurate measurements.

All pH and Redox electrodes work with sea-water.

Single and double junction models are available. Choose double junction models if you are working with materials like sulphide, sulfur and silver.

The section below shows the electrode's differences so that you can select the electrode that best fit in your application.

pH ELECTRODES

| Model | EPHS | EPHM | EPHL | EPHM/D |
|------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Measuring Range | 0÷14 | | | |
| Resolution | 0,01 | | | |
| Max Pressure/Temperature | 7bar/70°C (3,5bar/80°C) | 7bar/70°C (3,5bar/80°C) | 7bar/70°C (3,5bar/80°C) | 7bar/70°C (3,5bar/80°C) |
| Body | Epoxy | | | |
| Installation Diameter | 12 mm | 12 mm | 12 mm | 12 mm |
| Electrical Connection | BNC | BNC | BNC | BNC |
| Cable Length | 0.8 m | 4.5 m | 15 m | 4.5 m |
| Minimum Working Conductivity | 100µS | 100µS | 100µS | 1µS |
| Features | - | | | Low ionic |

| Model | EPHM/HF | EPHSN6 | EPHMD/100 | EPHSC | EPHSC/SN6 |
|------------------------------|-----------------------------|----------------------------|-----------------|----------------------------|----------------------------|
| Measuring Range | 0÷14 | | | | |
| Resolution | 0,01 | | | | |
| Max Pressure/Temperature | 7bar/70°C (3,5bar/80°C) | 7bar/70°C (3,5bar/80°C) | 7bar/100°C | 7bar/70°C (3,5bar/80°C) | 7bar/70°C (3,5bar/80°C) |
| Body | Epoxy | | | | |
| Installation Diameter | 12 mm | PG 13,5 | 12 mm | 12 mm | PG 13,5 |
| Electrical Connection | BNC | SN6 | BNC | BNC | SN6 |
| Cable Length | 4.5 m | without cable | 4.5 m | 4.5 m | without cable |
| Minimum Working Conductivity | 100µS | 100µS | 100µS | 100µS | 100µS |
| Features | Hydrofluoric acid resistant | - | Double junction | self cleaning | self cleaning |

ORP (REDOX) ELECTRODES

| | ERHS | ERHM | ERHL | ERHHL | ERHM/D |
|--------------------------|----------------------------|----------------------------|----------------------------|-------------------|----------------------------|
| Measuring range | -2000 to +2000 mV | -2000 to +2000 mV | -2000 to +2000 mV | -2000 to +2000 mV | -2000 to +2000 mV |
| Resolution | 1 | | | | |
| Max Pressure/Temperature | 7bar/70°C (3,5bar/80°C) | 7bar/70°C (3,5bar/80°C) | 7bar/70°C (3,5bar/80°C) | 6bar/80°C | 7bar/70°C (3,5bar/80°C) |
| Body | Epoxy | Epoxy | Epoxy | Glass | Epoxy |
| Installation Diameter | 12 mm | 12 mm | 12 mm | PG 13,5 | PG 13,5 |
| Electrical Connection | BNC | BNC | BNC | BNC | BNC |
| Cable Length | 0.8 m | 4.5 m | 15 m | 10 m | 4,5 cm |
| Features | - | - | - | high linearity | low ionic |

| | ERHSN6 | ERHMD/100 | ERHSC | ERHSC/SN6 |
|--------------------------|----------------------------|-------------------|----------------------------|----------------------------|
| Measuring range | -2000 to +2000 mV | -2000 to +2000 mV | -2000 to +2000 mV | -2000 to +2000 mV |
| Resolution | 1 | | | |
| Max Pressure/Temperature | 7bar/70°C (3,5bar/80°C) | 7bar/100°C | 7bar/70°C (3,5bar/80°C) | 7bar/70°C (3,5bar/80°C) |
| Body | Epoxy | Epoxy | Epoxy | Epoxy |
| Installation Diameter | PG 13,5 | PG 13,5 | 12 mm | PG 13,5 |
| Electrical Connection | SN6 | BNC | BNC | SN6 |
| Cable Length | without cable | 4,5 cm | 4.5 m | without cable |
| Features | - | double junction | self-cleaning | self-cleaning |

MORE INFO

Technical features

(Specific features on the tables)

Electrode's lifetime is affected by the working conditions: such as temperature, solution type (acid or alkaline). Usually working at room temperature with a weak solution the electrode's lifetime is around 2 years. Increasing temperature drastically changes the lifetime. Electrodes get old quickly while stocked.

Calibration

Wash the electrode and dry it without wipes, just shaking it. Don't wipe or brush, this would create electrostatic charges that can influence the reading of the electrode. Follow the controller's electrode calibration procedure, always use new buffer solutions.

Cleaning

When the reading of the electrode is slow or unstable it may be because it's dirty, cleaning is needed at fixed intervals to remove the dust. Remove the electrode from the system, wash it with clean fresh water and then dip it in to an acid solution of HCl (max 10%) for five minutes. Abundantly rinse it with fresh water and perform a new calibration.

Stocking

Always keep the electrodes in the original stocking bottles, the liquid inside is a transparent KCl at pH4. Never leave the electrodes dry, keep it in water for short time stocking.