ORP Electrodes

Data Sheet

EMEC ORP electrodes assures long-time stability and accuracy.
Easy-maintenance electrodes provides accurate reading value and fast response, performances required for the most accurate measurements.

Single and double junction models are available. ORP electrodes double junction models only are suitable for sea-water. Double junction system offers better electrode protection and guarantees a longer service life. Choose double junction models if you are working with materials like *sulphide*, *sulfur* and *silver*.

DURABILITY

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.

MAINTENANCE

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.

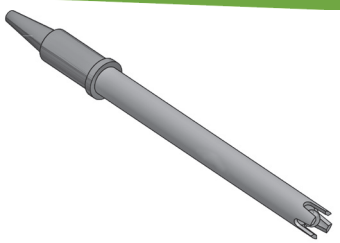
STOCKING

Always keep the electrodes in the original stocking bottles. Never leave the electrodes dry, keep it in water for short time stocking.

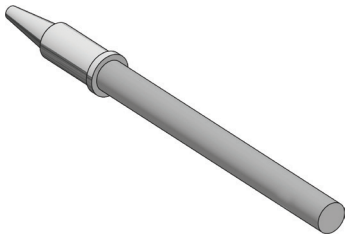
The section below shows the electrode's differences so that you can select the electrode that best fit in your application.

R3-07-22

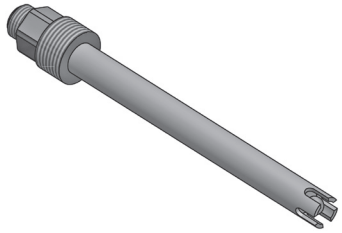
ERHS
ERHM
ERHL
ERHMD
ERHMD/100



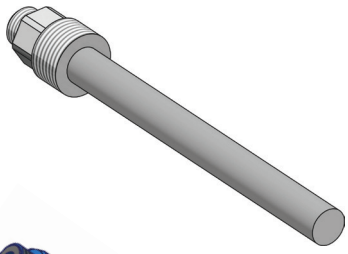
ERHSC
ERHMD/LI



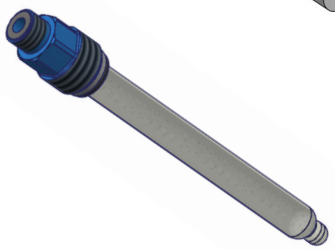
ERHSN6



ERHSC/SN6



ERHHLB/SN6



MODELS	Electrode	Range	Pressure/ Temperature	Connection	Cable	Body	Min conductivity
ERHS	combined	± 1000 mV	7 bar / 70°C (3,5 bar / 80°C)	BNC	1,5 m	Ø 12 Plastic	100 µS
ERHM	combined	± 1000 mV	7 bar / 70°C (3,5 bar / 80°C)	BNC	5 m	Ø 12 Epoxy	100 µS
ERHL	combined	± 1000 mV	7 bar / 70°C (3,5 bar / 80°C)	BNC	15 m	Ø 12 Epoxy	100 µS
ERHHLB/SN6	combined - for low Cl_2 concentration	± 1000 mV	6 bar / 80°C	SN6 / PG13,5 threading	-	Ø 12 glass	100 µS
ERHSN6	combined	± 1000 mV	7 bar / 70°C	SN6 / PG13,5 threading	-	Ø 12 Epoxy	100 µS
ERHMD/100	double junction - combined	± 1000 mV	7 bar / 100°C	BNC	5 m	Ø 12 Epoxy	100 µS
ERHM/D	double junction - combined	± 1000 mV	7 bar / 70°C (3,5 bar / 80°C)	BNC	5 m	Ø 12 Epoxy	100 µS
ERHSC	double junction - combined - self-cleaning	± 1000 mV	7 bar / 70°C (3,5 bar / 80°C)	BNC	5 m	Ø 12 Epoxy	100 µS
ERHSC/SN6	double junction - combined - self-cleaning	± 1000 mV	7 bar / 70°C (3,5 bar / 80°C)	SN6 / PG13,5 threading	-	Ø 12 Epoxy	100 µS
ERHMD/LI	double junction	± 1000 mV	3,4 bar / 80°C	BNC	5 m	Ø 12 Epoxy	3 µS

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qualityaustria SYSTEM CERTIFIED
ISO 9001:2015 No.07728/0
ISO 14001:2015 No.00997/0
ISO 45001:2018 No.01121/0

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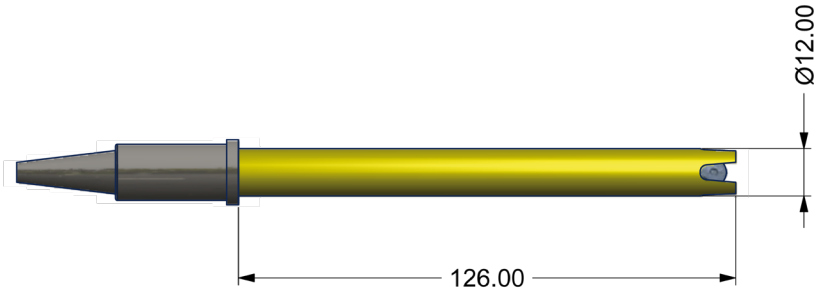
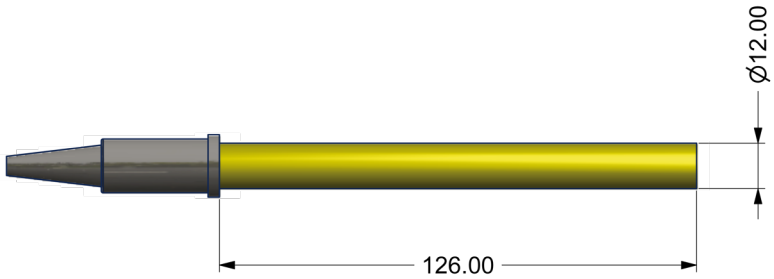
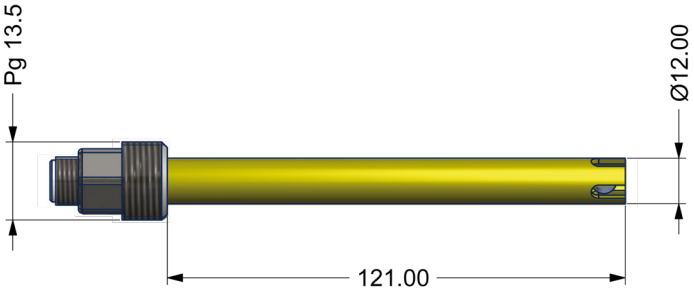
ERHMD/100



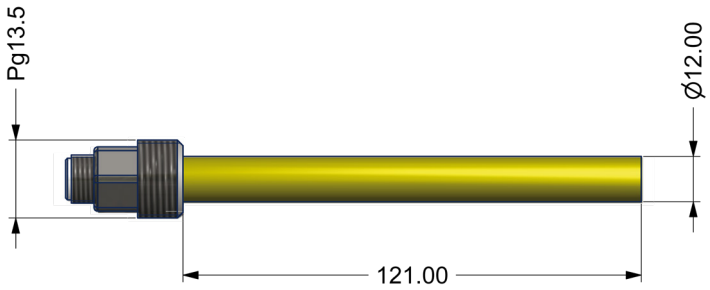
ERHSC
ERHMD/LI



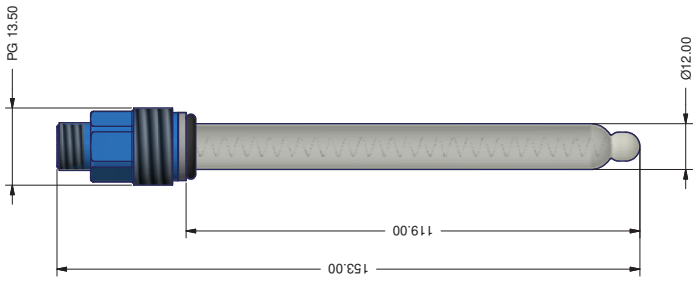
ERHSN6



ERHSC/SN6



ERHHLB/SN6



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ACCESSORIES

For updated list of accessories refer to technical datasheet.

ASSEMBLIES

- **PEF1** - Off-line probe holder
For pH, ORP, chlorine amperometric cells and temperature electrodes. Flow level control and proximity switch (mod. SEPR). Max 50°C. Fittings 6x8.
- **PEF5** - Off-line probe holder
For pH, ORP (PG13,5 thread), chlorine amperometric cells and temperature electrodes. Flow level control and proximity switch (mod. SEPR). Max 50°C. Fittings 6x8.
- **PEF2** - Off-line probe holder
For pH, ORP, chlorine open amperometric cells and temperature electrodes. Flow level control and proximity switch (mod. SEPR). Max 50°C. Fittings 6x8.
- **PEF3** - Off-line probe holder
For pH, ORP (PG13,5 thread) chlorine open amperometric cells and temperature electrodes. Flow level control and proximity switch (mod. SEPR). Max 50°C. Fittings 6x8.
- **PEF22** and **PEF23** - Off-line probe holder for MAX5 connection
- **NPED1** - Off-line probe holder
For Ø12 electrodes, with PG13,5 thread. Max 50° C, 5bar. Fittings 6x8.
- **NPED2** - Off-line probe holder
For two electrodes, epoxy Ø12. Max 50° C, 5bar. Fittings 6x8.
- **NPED3** - Off-line probe holder
For pH and ORP Ø12 electrodes and conductivity probes with 3/4"threading. Max 50° C, 5bar. Fittings 6x8.
- **NPED4** - Off-line probe holder
For two EPH, ERH electrodes, epoxy Ø12. Max 50° C, 5bar, flow sensor with .O. contact. Fittings 6x8.
- **NPED4/2F** - Two wires version for instruments with N.C. contact.
- **NPED4-3/4** - Off-line probe holder
For two EPH, ERH electrodes, 3/4" threading, epoxy body Ø12. Max 50° C, 5bar, flow sensor with .O. contact.Fittings 6x8.
- **PEA** - In-line probe holder
For pH and ORP electrodes, Ø12. 1/2" connection, max 65°C. PVDF body.
- **PEB** - In-line probe holder
For pH and ORP electrodes, Ø12. 3/4" connection, max 65°C.
- **PEL** - PVDF in-line probe holder for "T" connection.
For pH and ORP electrodes with 1/2" or 3/4" thread. Max 90°C, 7 bar (130°C, 3 bar).
- **PELC** - PVDF in-line probe holder for saddle connection
For pH and ORP electrodes with 1/2" or 3/4" thread. Max 90°C, 7 bar (130°C, 3 bar).
- **PEC** - PVC Immersion probe holder
For pH and ORP electrodes, Ø12. Length 100 cm.
- **PEC/SN6** - PVC Immersion probe holder
For pH and ORP electrodes, with PG13,5 thread. Length 100 cm.
- **GHIERA** - PG13,5 threading nut with o-ring

BUFFER SOLUTIONS

Technical buffer solutions for ORP electrodes:

- **BSD** - 650 mV, 50ml.

AMPLIFIER

- **ADI1 RH** - Amplifier for ORP electrodes with gal anic isolation. Max distance 150m. 1 channel.
- **ADI2** - Amplifier for ORP electrodes with gal anic isolation. Max distance 150m. 2 channels.

CABLES

- **CASN6S** - Cable BNC/SN6 for probe ERHSN6. Length 5mt.
- **CASN6M** - Cable BNC/SN6 for probe ERHSN6. Length 10mt.
- **CASN6L** - Cable BNC/SN6 for probe ERHSN6. Length 15mt.