FLS pH/ORP 400
GLASS BODY BULB ELECTRODE

The FLS 400 line of pH/ORP electrodes with glass body has been designed for fitting a wide range of applications. The ceramic junction guarantees high performances in terms of pressure and temperature. Different types of ceramic junction allow finding the proper solution in according with application needs: annular for a faster response time, 3-diaphragm for higher pressure rate. Moreover the standard double junction prevents the contamination of reference solution granting a long operating time. Version with long outline cable (9 mt) or with head connection (S7) are available.

APPLICATIONS

- Water treatment
- Neutralization systems
- Water quality monitoring
- Process control
- Agriculture and fertilizing systems
- Plating plant and tannery
- Cooling towers and scrubbers

MAIN FEATURES

- Glass body
- Sensors suitable for extreme applications
- Installation easy and cheap
- Cheap adaptors for installations
- Special versions available on request
- High performance electrodes

TECHNICAL DATA

General

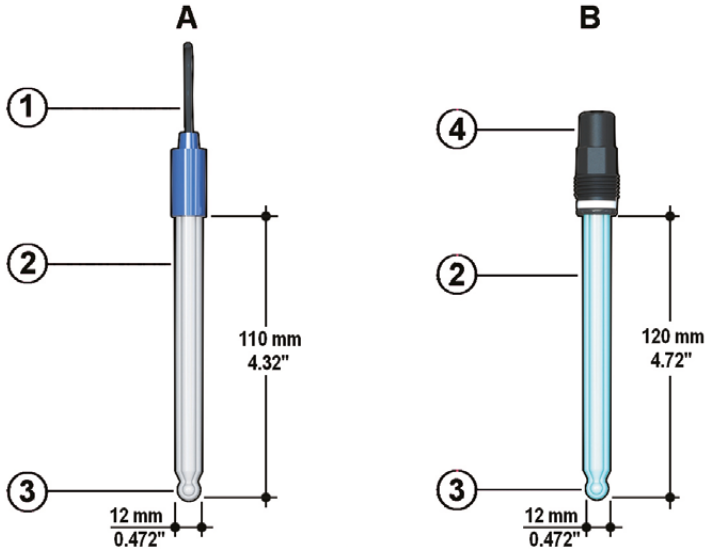
• Operating range:
- pH electrodes: 0 - 14 pH (0 - 12.3 pH without Na+ error)
- ORP electrodes: ± 2000 mV
• Pipe size range: DN15 to DN100 (0.5” to 4”)
• Zero point voltage point new electrode performances: 7pH ± 0.2pH
• Efficiency new electrode performances: > 97% @ 25°C (77°F)
• Response time new electrode performances:
- pH: 2 sec for 95% of signal change
- ORP: application dependent
• Reference:
- electrolyte: 3M KCl polymeric gel (different substrates in according with model)
• Process connection:
- in-line installation with: PG13,5 (PH435CD); threaded nipple 1/2” (PH431CD; ORP431CD)
• Max working pressure/ working temperature:
- 6 bar (90psi) @ 130°C (266°F) ;16 bar (240psi) @ 25°C (77°F) (PH435CD)
- 2 bar (30psi) @ 100 °C (212 °F); 7bar (100psi) @ 25°C (PH431CD; ORP431CD)
• Wetted materials:
- body: glass
- junction: annular ceramic (PH431CD; ORP431CD); 3-diaphragm ceramic (PH435CD)
- sensing surface: glass membrane (pH); platinum (ORP)

Standards & Approvals

• Manufactured under ISO 9001
• Manufactured under ISO 14001
• CE
• EAC

Specific for pH-ORP.400							
Model	Body	Junction material/type	Reference solution	Sensing surface	O-ring	Connection	Max working pressure @ working temperature
PH435CD	glass	Ceramic/Double junction	KCl 3M	Glass type H	Silicone	S7	6 bar @ 130°C/ (85 psi @ 266°F)
PH431CD	glass	Ceramic/Double junction	KCl 4M	Glass type GX2	-	9 mt (27 ft) cable	2 bar @ 100°C/ (30 psi @ 212°F)
ORP431CD	glass	Ceramic/Double junction	KCl 4M	Platinum	-	9 mt (27 ft) cable	2 bar @ 100°C/ (30 psi@ 212°F)

DIMENSIONS



A PH431CD, ORP431CD
B PH435CD

1 Cable: 9mt
2 Glass body
3 pH glass bulb
4 S7

ORDERING DATA

pH4XX Bulb pH Electrodes with glass body						
Part No.	Description /Name	Applications/ Operative Range	Cable (sold separately)	Connection	Installation	Weight (gr.)
PH431CD	Double Junction combination pH/Reference electrode	0 - 14 pH (0 - 12.3 pH without Na+ error)	Not required	9 mt (27 ft)	GEG135	200
PH435CD	Double Junction combination pH/Reference electrode	For high temperature/0 - 14 pH (0 - 12.3 pH without Na+ error)	CE5S7	S7	GEG135 GEG135SE EG135FS EG135FL	200

ORP4XX Bulb ORP Electrodes with glass body						
Part No.	Description /Name	Applications/ Operative Range	Cable (sold separately)	Connection	Installation	Weight (gr.)
ORP431CD	Double Junction combination ORP/ Reference electrode	± 2000 mV	Not required	9 mt (27 ft) cable	GEG135	200