

# FLS pH/ORP 200 EPOXY BODY BULB ELECTRODES



This FLS line of electrodes has been designed to provide a cost effective multi-purpose solution for in line or submersion measurement of pH and ORP in a wide range of applications.

Single and double junction versions are available as well as models with or without quick disconnect top caps. These epoxy body electrodes can stand several applications thanks to the high chemical resistance of the material. A simple and reusable gland can be used for economic electrode in-line mounting while a 1/2" or 3/4" coupler with a pipe extension is enough for submersion mounting. A special version is dedicated to installation on FLS T fitting as well as to FLS clamp saddle adding just a nut.

## APPLICATIONS

- Water treatment
- Neutralization systems
- Water quality monitoring
- Swimming Pools and spas
- Aquaculture
- Agriculture and fertilizing systems
- Process control

## MAIN FEATURES

- Epoxy body
- Single or double junction technology
- Large gel reference volume
- Easy and quick installation system
- Outline cable or BNC connection
- Special versions on request
- Low cost fittings



# TECHNICAL DATA

## General

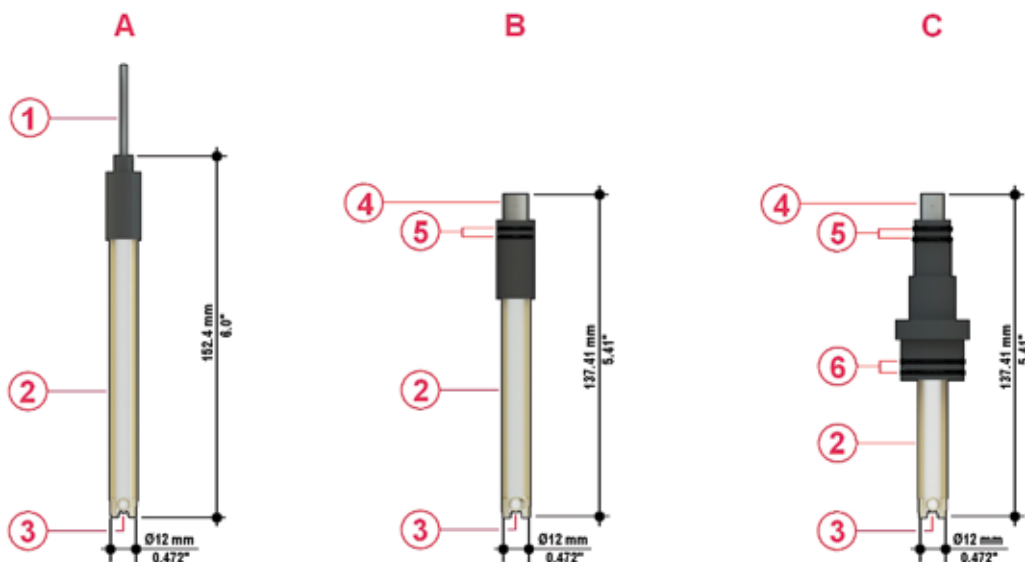
- Operating Range:
  - pH Electrodes: 0 - 14 pH (0 - 12.3 pH without Na+ error)
  - ORP Electrodes:  $\pm 2000$  mV
- Pipe Size Range: DN15 to DN100 (0.5" to 4")
- Zero voltage point new electrode performances: 7.00pH  $\pm 0.2$ pH
- Efficiency new electrode performances: > 97% @ 25°C (77°F)
- Response time new electrode performances:
  - pH: 2 sec for 95% of signal change
  - ORP: application dependent
- Reference:
  - electrolyte: solidified gel 3.5M KCl for single junction versions KCl-KNO3 for double junction versions
- Process Connection:
  - in-line installation with: threaded nipple 1/2", 3/4" or PG13,5 FLS installation fittings
  - submersible installation
- Max Working pressure/ working temperature:
  - 7 bar (100 psi) @ 25°C (77°F)
  - 1 bar (14,5 psi) @ 65°C (149°F)
- Wetted materials:
  - body: epoxy
  - o-ring junction: silicone
  - junction: pelon
  - sensing surface: glass membrane (pH) platinum (ORP)
- O-ring: Buna-N (PH222 CD, PH223 CD, ORP222 CD, ORP223 CD)

## Standards & Approvals

- Manufactured under ISO 9001
- Manufactured under ISO 14001
- CE
- GOST R

Specific for pH-ORP.200							
Model	Body	Junction material/type	Reference solution	Sensing surface	O-ring	Connection	Max working pressure @ working temperature
PH200C	epoxy	nylon/S.J.	3,5M KCl	glass membrane	silicone	5 mt. (16.5 ft.) Cable	7 bar @ 25°C/ 1 bar @ 65°C (100 psi @ 77°F/ 14,5 psi @ 149°F)
PH222CD	epoxy	nylon/D.J.	3,5M KCl/ Sat'd KNO3	glass membrane	silicone	Twist-Lock (BNC)	7 bar @ 25°C/ 1 bar @ 65°C (100 psi @ 77°F/ 14,5 psi @ 149°F)
PH223CD	epoxy	nylon/D.J.	3,5M KCl/ Sat'd KNO3	glass membrane	silicone	Twist-Lock (BNC)	7 bar @ 25°C/ 1 bar @ 65°C (100 psi @ 77°F/ 14,5 psi @ 149°F)
ORP200C	epoxy	nylon/S.J.	3,5M KCl	platinum	silicone	5 mt. (16.5 ft.) Cable	7 bar @ 25°C/ 1 bar @ 65°C (100 psi @ 77°F/ 14,5 psi @ 149°F)
ORP222CD	epoxy	nylon/D.J.	3,5M KCl/ Sat'd KNO3	platinum	silicone	Twist-Lock (BNC)	7 bar @ 25°C/ 1 bar @ 65°C (100 psi @ 77°F/ 14,5 psi @ 149°F)
ORP223CD	epoxy	nylon/D.J.	3,5M KCl/ Sat'd KNO3	platinum	silicone	Twist-Lock (BNC)	7 bar @ 25°C/ 1 bar @ 65°C (100 psi @ 77°F/ 14,5 psi @ 149°F)

## DIMENSIONS



A PH200 C ORP200 C  
 B PH222 CD ORP222 CD  
 C PH223 CD ORP223 CD

1 Cable: 5 mt (6,5 ft.)  
 2 Epoxy body  
 3 pH glass bulb  
 4 BNC connector

5 Buna-N O-rings  
 6 FPM O-rings

## ORDERING DATA

PH2XX Bulb pH Electrodes with epoxy body						
Part No.	Description /Name	Applications/ Operative Range	Cable (sold separately)	Connection	Installation	Weight (gr.)
PH200C	Combination pH/Reference Electrode	0 - 14 pH (0 - 12.3 pH without Na+ error)	not required	5 mt. (16.5 ft.) Cable	EG50P, EG75P, MK150200, MIFV20X05, MIMC20X05	200
PH222CD	Cartridge-type Double Junction Combination pH/Reference Electrode	0 - 14 pH (0 - 12.3 pH without Na+ error)	CN 653, CN 653 TC1	Twist-Lock (BNC)	EG50P, EG75P, MIFV20X05, MIMC20X05	90
PH223CD	Cartridge-type Double Junction Combination pH/Reference Electrode for FLS fittings	0 - 14 pH (0 - 12.3 pH without Na+ error)	CN 653	Twist-Lock (BNC)	F3.SP2.4	100

ORP2XX Bulb ORP Electrodes with epoxy body						
Part No.	Description /Name	Applications/ Operative Range	Cable (sold separately)	Connection	Installation	Weight (gr.)
ORP200C	Combination ORP/Reference Electrode	± 2000 mV	not required	5 mt. (16.5 ft.) Cable	EG50P, EG75P, MK150200, MIFV20X05, MIMC20X05	200
ORP222CD	Cartridge-type Double Junction Combination ORP/Reference Electrode	± 2000 mV	CN 653	Twist-Lock (BNC)	EG50P, EG75P, MIFV20X05, MIMC20X05	90
ORP223CD	Cartridge-type Double Junction Combination ORP/Reference Electrode for FLS fittings	± 2000 mV	CN 653	Twist-Lock (BNC)	F3.SP2.4	100