



# 332PxxxxxA

## Dissolved Oxygen measuring cell, Ø12 mm

Group of cells for the measure of Oxygen designed for laboratory applications, PVC or PVDF body, Ø12 mm, 120 mm length. Series 332P cells are membrane polarographic sensors including two electrodes immersed into an electrolyte solution and separated from the sample by a PTFE membrane permeable to gaseous oxygen. These cells have been specifically designed for laboratory applications, they can however be installed into Mod.SI0A, SI0B, SI0G or SI0H immersion fittings and into Mod.D0A, D0C or D0D through flow cells; they can also be installed in closed pipelines using the Mod.SI16 sensor fitting. This cells can be therefore used not only in laboratory but also in standard dissolved oxygen measurements where operating conditions are not too hard (e.g. in drinking water plants).



### Advantages

- Standard dimensions, Ø 12 mm, L.120 mm
- Polarographic membrane cell
- Integral temperature sensor
- Measuring range: 0 to 20 ppm
- Operating temperature up to 70 °C

### Operating principle and realization

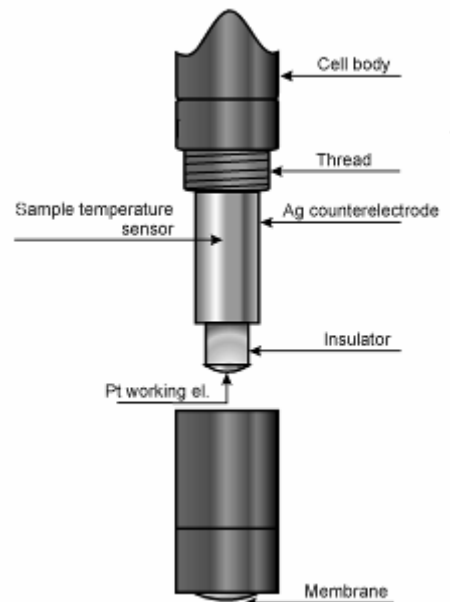
Series 332P cells are classic Clark cells, with platinum working electrode and silver counter electrode. These cells have PVC or PVDF body, Ø 12mm L.120mm. The two electrodes are installed in the lower tip, immersed in the electrolyte solution and separated from the sample by a PTFE membrane permeable to oxygen gas. The cell includes one or two temperature sensor(s) (refer to order code breakdown) for measure thermo compensation and temperature indication.

These cells are available with integral cable (refer to order code breakdown)

Series 332P cells are available with the options listed in the Order Code Breakdown.

### Technical Specifications

Cell body:.....PVC or PVDF  
 Electrodes:..... Platinum working electrode, Silver counter electrode  
 Measuring range:.....0÷20 ppm O<sub>2</sub>  
 Accuracy:.....0.25 % f.s.  
 Response time:.....20" to reach 90 % of full value  
 Operating temperature limits: .....5÷50 °C (PVC); 5÷70 °C (PVDF)  
 Operating pressure limits:.....atmospheric  
 Minimum sample flow rate under the membrane: .....0,5 cm/sec  
 Dimensions : ..... Ø 12mm, length. 120 mm  
 Cable:..... integral, std 1 m, max.15 m  
 Weight:.....100 g w/o cable



### Installation, Maintenance and Calibration

Minimum sample flow rate required under the membrane is 0,5 cm/sec: the sample has therefore to be stirred in laboratory measurements, while in on-line applications the site of installation must be chosen accordingly.

Calibration of 332P dissolved oxygen measuring cell and connected electronic can be performed leaving the cell in air. In this type of cell no zero calibration is required because of its good stability.

Zero point can always be checked just immersing the cell in a sodium bisulphite solution (approx.1 g/L).

The only required maintenance is the check of the calibration to be performed once every one or two months, after cleaning the membrane.

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## Optional accessories

### Electrolyte solution

Electrolyte solution for 332P, 100ml bottle ..... Mod.E/332

### Maintenance Kit for 332P

including 10 PVDF cartridges with PTFE membrane, 10  $\mu\text{m}$  + 20 ml electrolyte bottle ..... Mod.332M10-PVDF

including 10 PVDF cartridges with PTFE membrane, 25  $\mu\text{m}$  + 20 ml electrolyte bottle ..... Mod.332M25-PVDF

including 10 PVC cartridges with PTFE membrane, 10  $\mu\text{m}$  + 20 ml electrolyte bottle ..... Mod.332M10-PVC

including 10 PVC cartridges with PTFE membrane, 25  $\mu\text{m}$  + 20 ml electrolyte bottle..... Mod.332M25-PVC

### Powder for zero point check

Sodium sulphite, powder, for zero point control, 10 g powder bag ..... Mod.T/332

### Sensor fittings for 332P

Sensor fitting for the installation of 332P cell into closed pipelines:..... Mod.SI/6

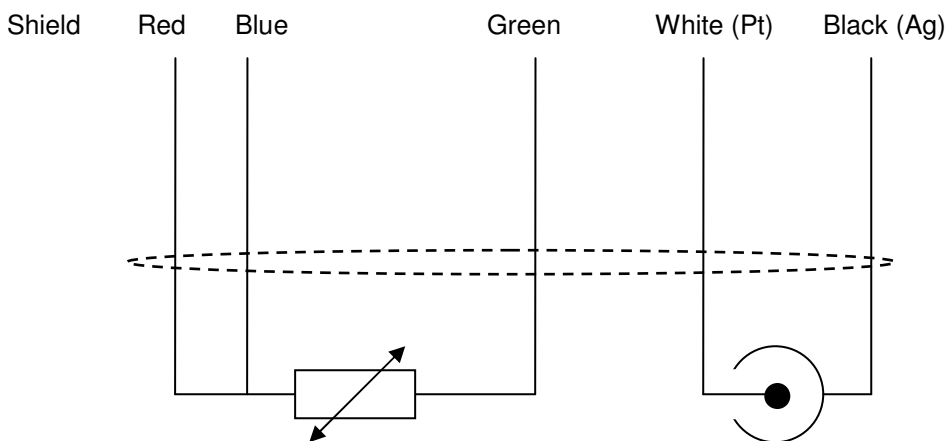
Immersion fitting,  $\varnothing 32$  mm, for direct installation of 332P cell into channels and basins: .....Mod.SI0A

Immersion fitting,  $\varnothing 32$  mm, c/w chemical cleaning system, for direct installation of 332P cell into channels and basins: .....Mod.SI0B

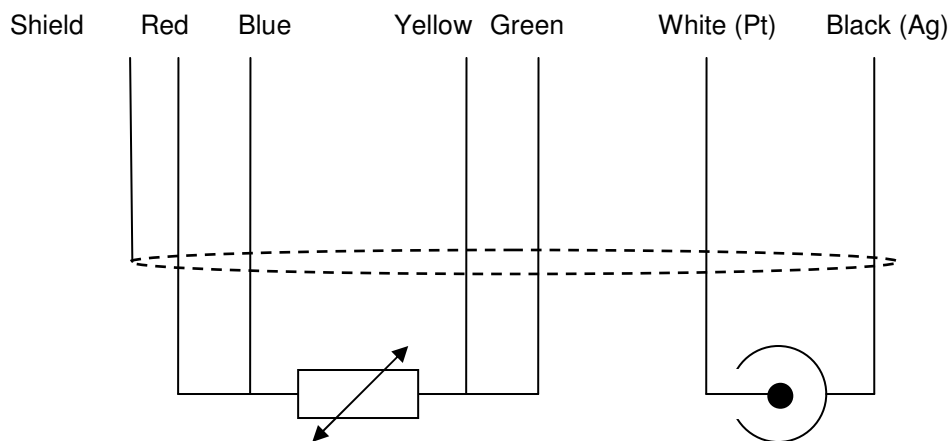
## Wirings

### Wirings for cable color code Rev.A

#### Wiring diagram, DO cell, 3 wires Pt100



#### Wiring diagram, DO cell, 4 wires Pt100



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## Order code breakdown

	332	x	x	x	x	x	x	x
Cells for the measure of oxygen	332							
<b>Type of cell</b>								
Cell for laboratory use, Ø 12mm, L.120 mm (332/P)		P						
<b>Temperature compensation</b>								
Reserved			0					
Sensor Pt100			1					
Sensor TC100			2					
Sensor Pt1000			4					
Special execution			9					
<b>Body material</b>								
Reserved				A				
PVC (standard)				B				
PVDF (optional)				C				
Special execution				Z				
<b>PTFE Membrane thickness</b>								
Reserved					0			
10 µm PTFE membrane					1			
25 µm PTFE membrane					2			
Special execution					9			
<b>Cable and connector</b>								
Reserved							Y	
Integral shielded cable, 1 m (standard)							A	
Integral shielded cable, 3 m							B	
Integral shielded cable, 5 m							C	
Integral shielded cable, 10 m							D	
Integral shielded cable, 15 m							E	
Integral shielded cable, 3 m and PG 13.5 connector							F	
Integral shielded cable, 5 m and PG 13.5 connector							G	
Integral shielded cable, 10 m and PG 13.5 connector							H	
Integral shielded cable, 15 m and PG 13.5 connector							L	
Integral shielded cable, 3 m and SS head c/w flange							M	
Integral shielded cable, 5 m and SS head c/w flange							Q	
Integral shielded cable, 10 m and SS head c/w flange							R	
Integral shielded cable, 15 m and SS head c/w flange							S	
Special execution							Z	
<b>Connector on instrument side</b>								
No connector								0
Conn.CN/2109.1 c/w linearizing circuit for Mod.HD2109.1								3
7 poles connector for bench top DO meter Mod.360, CN/13								4
Special execution								9
<b>Cable color code revision (factory selected code)</b>								
Revision A CV/7025-SCH (cable for P, C and B)								A

