

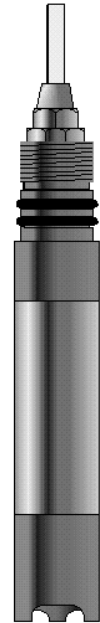
Oxygen measuring cell for industrial applications

Group of cells for the measure of Oxygen designed for industrial applications, PVDF/AISI 316 SS body. Series 332I 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 a sturdy design for industrial applications and can be positioned in immersion installations or into a float for variable level installations.

These cells can be used in difficult installations and have small maintenance requirements. Typical applications are in wastewater treatment plants, oxydation treatments, fish breeding plants.

Advantages

- Small dimensions, sturdy execution
- Polarographic membrane cell
- Integral temperature sensor
- Measuring range: 0 to 20 ppm
- Operating temperature up to 50 °C
- Very little maintenance requirements
- Can be positioned in immersion installations
- A float is available for installation in variable level basins



Operating principle and realization

Series 332I cells are classic Clark cells, with platinum working electrode and silver counter electrode. These cells have PVDF body, Ø 32mm L.140mm. The three 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 a temperature sensor for measure thermo compensation and temperature indication. The cells are available with multipolar shielded integral cable 5,10 or 15 m length.

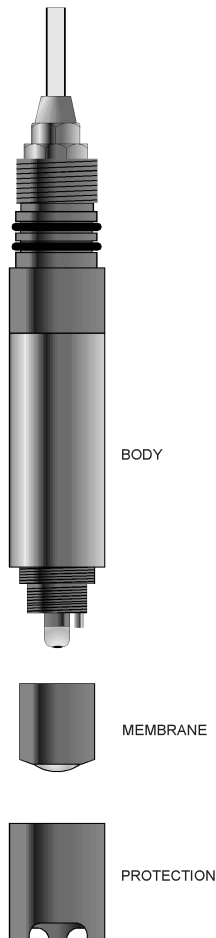
Series 332I cells are available with the options listed in the Order Code Breakdown.

Installation, Maintenance and Calibration

Mod.332I cell has to be installed in a position that is representative of the process dissolved oxygen, having a good sample mixing but no turbulence. Minimum sample flow rate required under the membrane is 0,5 cm/sec: the site of installation must be chosen accordingly. Calibration of 332I 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.

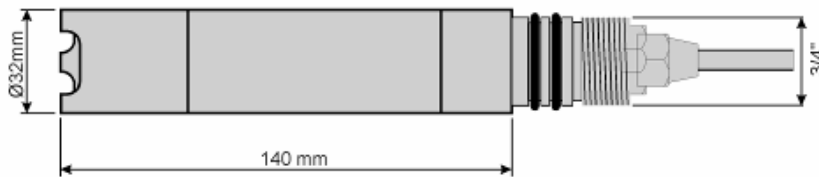
In difficult applications, where the membrane may be fouled frequent cleanings may be required: 332I cell may be supplied c/w an automatic cleaning system (hydraulic cleaning); the cleaning sequence is directly driven by the µP electronic unit.



332IxExxB

Technical Specifications

Cell body:.....PVDF + AISI 316
 Electrodes:.....Pt working electrode, Ag counter electrode
 Membrane:.....PTFE membrane, permeable to O₂ gas. Thickness: 10µm, 75 µm (standard)
 Measuring range:.....0÷20 ppm O₂
 Accuracy:.....0.25 % f.s.
 Response time:.....20" to reach 90 % of full value
 Operating temperature limits:.....5÷50 °C
 Operating pressure limits:.....max.10 bar
 Minimum sample flow rate under the membrane:.....0,5 cm/sec
 Dimensions : Ø 32mm, length. 140 mm
 Connection for immersion pipe:.....3/4" M
 Cable:.....integral multipolar shields cable, 5 m, 10 m or 15 m
 Weight:.....400 g w/o cable



Accessories for the installation

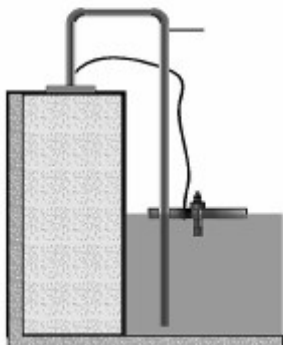
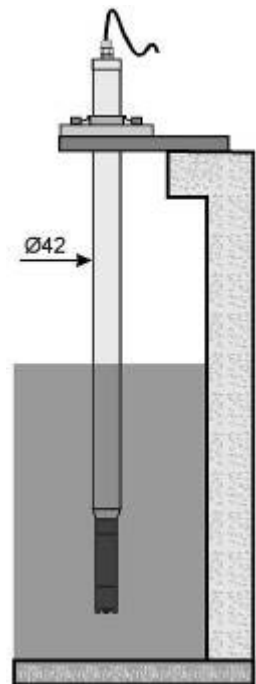
Sensor fitting for immersion installation, PP, (Ø 42 mm), c/w fixing flange, lengths from 600 mm up to 1500 mm upon requestMod.SI0ExB0Ex

Sensor fitting for imm. inst., c/w chemical cleaning system, PP, (Ø 42 mm), c/w fixing flange, lengths from 600 mm up to 1500 mm upon request ... Mod.SI0ExB0Ex

Float for the installation of Mod.332I cell in variable level basins and to avoid the use of too long immersion fittings.....Mod. SI/GAL

SS AISI 316 pipe for float installation: it allows float moving up and down; can be installed near the tank or basin; can also be installed on Mod.P/TE pipe....Mod.SI/T-G

SS AISI 304 pipe c/w shelter for installation of the electronic unit near the basin or tank; it is supplied c/w the base plate for floor fixing; the height of installation of the shelter can be adjusted.....Mod. P/TE

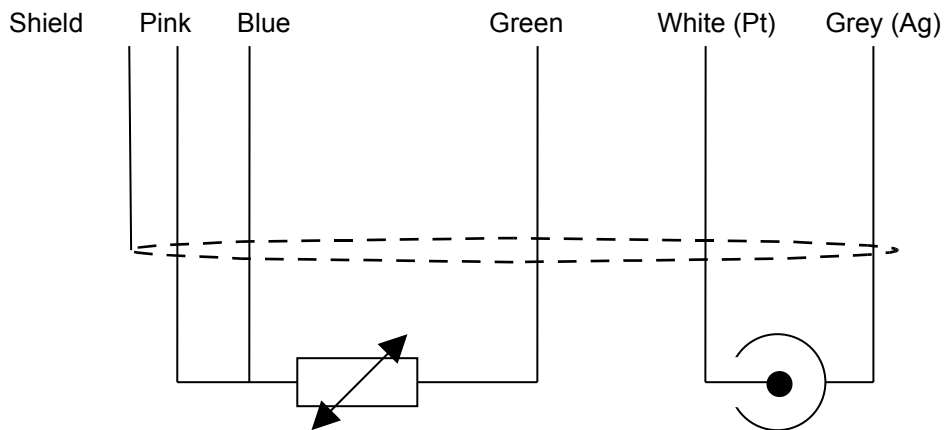


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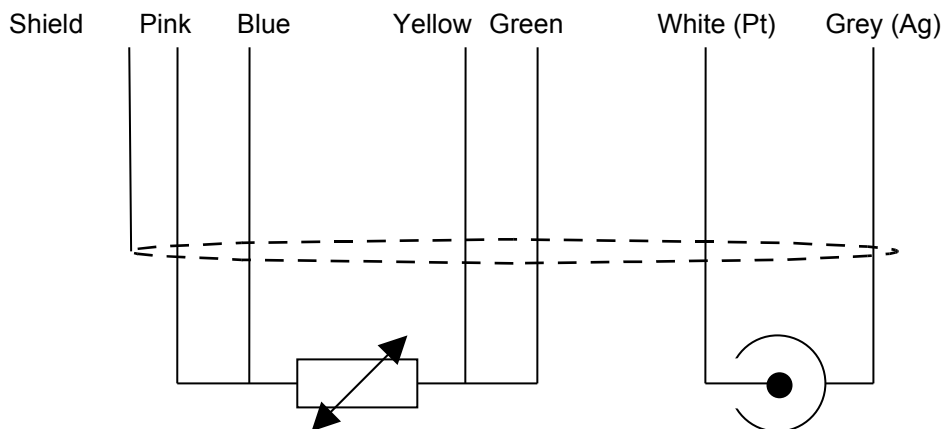
Wirings

Cable color code rev.B

Wiring diagram, DO cell, 3 wires Pt100



Wiring diagram, DO cell, 4 wires Pt100



332IxExxB

Order code breakdown

	332	x	x	x	x	x	x	x
Cells for the measure of oxygen	332							
Type of cell								
Cell for industrial applications (332/I)		I						
Temperature compensation								
Reserved			0					
Sensor Pt100			1					
Sensor TC100			2					
Sensor Pt1000			4					
Special execution			9					
Body material								
Reserved				A				
PVDF+AISI316				E				
Special execution				Z				
PTFE Membrane thickness								
Reserved					0			
10 µm PTFE membrane					1			
75 µm PTFE membrane					3			
Special execution					9			
Cable and connector								
Reserved						Y		
Integral shielded cable, 3 m						B		
Integral shielded cable, 5 m						C		
Integral shielded cable, 10 m						D		
Integral shielded cable, 15 m						E		
Special execution						Z		
Connector on instrument side								
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	
Cable color code revision (factory selected code)								
Revision B CV/345								B

Optional accessories

Electrolyte solution

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

Maintenance Kit for 332I, including

5 PVDF cartridges with PTFE membrane, 10 µm + 100 ml electrolyte bottle..... Mod.332IM10-PVDF

3 PVDF cartridges with PTFE membrane, 75 µm + 100 ml electrolyte bottle..... Mod.332IM75-PVDF

Powder for zero point check

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