

Reference electrode with large electrolyte volume and connection to electrolyte reservoir

Reference electrodes with a large electrolyte volume and a spout for the connection to the electrolyte reservoir so assuring long operating periods without refilling requirements.

These electrodes can be installed into Mod.SI0Axxxxx and SI0Bxxxxx immersion probes and into Mod.D0Axxx, D0Cxxx and D0Dxxx through flow cells; in both cases the electrodes can be connected to the electrolyte reservoir (Mod.123/28) through a silicone hose (Mod.123/6x9).

Electrodes Mod.301V are designed for the use in dirty solutions containing fouling substances and/or suspended solids.

Advantages

- Suitable for the insertion into immersion probes Mod.SI0A and SI0B and into through flow cells Mod.D0A, D0C and D0D
- Electrode body with large electrolyte volume
- Spout for the connection to the electrolyte reservoir (long operating life; hydraulic head on porous diaphragm)
- Very rugged, suitable for the use in fouling solutions
- Salt bridge, many different external electrolytes available

Operating principle and realization

These electrodes can be installed into Mod.SI0Axxxxx and SI0Bxxxxx immersion probes and into Mod.D0Axxx, D0Cxxx and D0Dxxx through flow cells. The body of these electrodes can contain a large volume of electrolyte so assuring long operating life without refilling requirements. When connected to the electrolyte reservoir operating autonomy further increases; the hydraulic head on the porous diaphragm keeps it clean even in processes containing fouling substances. Electrodes Mod.301V are designed for the use in dirty solutions containing fouling substances and/or suspended solids. Electrodes 301V with increased area porous diaphragm are best suited for the use in solutions including fouling substances. These electrodes are available with the options indicated in the Order Code Breakdown.

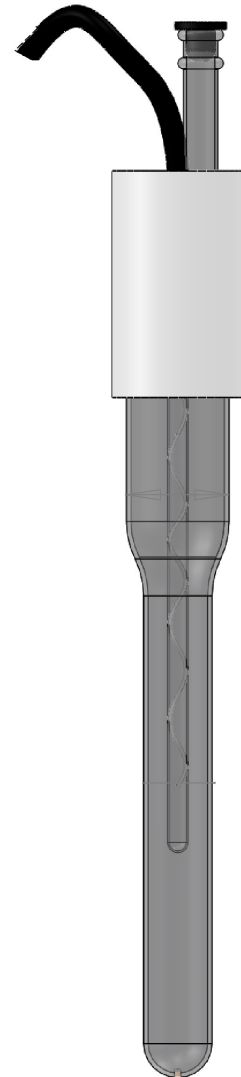
Calibration & Maintenance

Reference electrodes are used in combination with pH, ORP or ISE measuring electrodes.

Calibration procedure depends upon the measuring electrode use with the reference electrode.

Required maintenance is the cleaning of porous diaphragm (frequency depends on the application) and electrolyte refilling (the level of electrolyte must always be at least few cm higher than the level of the liquid in which the electrode is immersed).

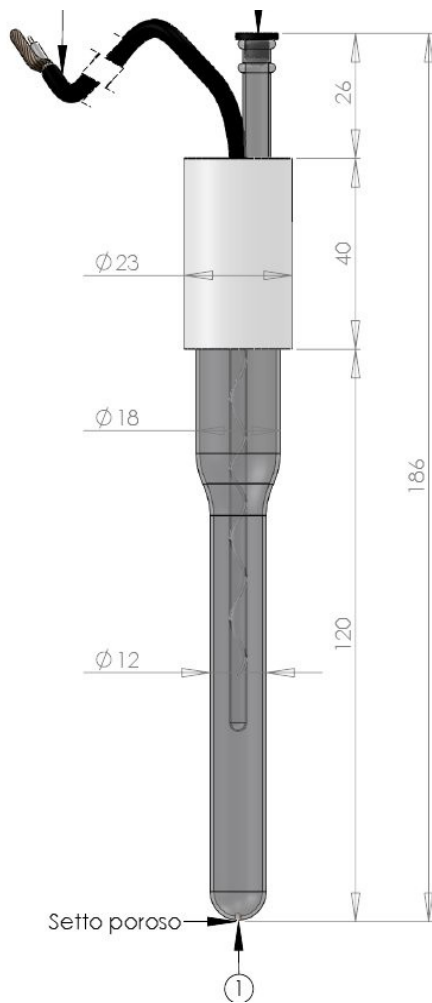
When the electrode is installed into an immersion probe we strongly recommend to periodically inspect the level of electrolyte solution in the probe body: as indicated above it must always be at least few cm higher than the level of the liquid in which the probe is immersed.



301Vxxxx0xxA

Technical Specifications 101VxZxx0xxA

Type of electrode:.....Reference Electrode for industrial application
 Reference:..... Ag/AgCl, Hg/Hg₂Cl₂, Hg/HgO, Hg/HgSO₄, Hg/TlCl, according to order code breakdown
soluzione 3,3 M KCl, saturato con AgCl per riferimento Ag/AgCl,
 Internal electrolyte:3,3 M KCl solution, saturated with AgCl for Ag/AgCl reference;
 External electrolyte (salt bridge version) :KCl, 3,3 M gel; KCl solution; saturated KNO₃ solution;
saturated NaCl solution; according to order code breakdown
 External electrolyte (salt bridge version, electrode with annular porous diaphragm)..... KCl gel
 Electrolyte refilling:vertical spout on the head of the electrode
 Porous diaphragm:..... standard:ceramic, Ø 1mm (301VxxA0xxA);
increased area: ceramic Ø 1,8 mm approx (301VxxB0xxA); annular porous diaphragm (301VxxC0xxA)
 Operating temperature limits:..... 0÷100 °C
 Operating pressure limits:depending upon position of the electrolyte reservoir over the probe
 Dimensions:.....see figure
 Cable:.....integral, 5 m, 10 m , 15 m according to order code breakdown



Optional Accessories

pH 7,00 buffer solution.....T/101-7x
 pH 4,00 buffer solution.....T/101-4x
 pH 9 buffer solution.....T/101-9x

Refilling electrolyte, 3,3 M KCl solution, saturated with AgCl
E/123-1x
 Refilling electrolyte, saturated KNO₃ solution.....E/123-3x
 Refilling electrolyte, 3,3 M KCl gel, saturated with AgCl
E/123-1x-4

where x = A : 250 ml bottle; x = B : 500 ml bottle; x = C : 1000 ml bottle.

Electrolyte reservoir for 101V and 101VD.....123/28
 Silicone rubber hose 6x9.....123/6x9

301Vxxxx0xxA

Order Code Breakdown

	301	x	x	x	0	x	x	x	x	A
Industrial reference electrode	301									
Type of reference electrode Electrolyte reserve and spout		V								
Use at low/high temperature										
Not suitable			0							
Suitable for 0°C ÷ -30°C			1							
Suitable for 0°C ÷ +130°C			2							
Type of internal reference										
Internal reference Ag/AgCl				A						
Internal reference Hg/Hg ₂ Cl ₂				B						
Internal reference Hg/HgO				C						
Internal reference Hg/HgSO ₄				D						
Internal reference Hg/TlCl				E						
Reference version										
Standard/Standard					0					
Salt bridge, same salt					1					
Salt bridge external salt KCl					2					
Salt bridge external salt KCl gel					4					
Salt bridge external salt KNO ₃					5					
Salt bridge external salt NaCl					6					
Diaphragm version										
Reserved						Z				
Standard, Ø 1mm ceramic diaphragm						A				
Increased area porous diaphragm						B				
Synthetic annular diaphragm						C				
Fixed Code								0		
Cable and connector										
Integral cable 1 m length									A	
Integral cable 5 m length									C	
Integral cable 10 m length									D	
Integral cable 15 m length									E	
S7 Screw connector									F	
S7 Screw connector, c/w PG13.5 threaded process connection									M	
SS head with flange, integral cable, 5 m length									Q	
Ex head with sealed cable, 1/2"									R	
Ex head with S7 screw connection, 1/2"									S	
Ex head with sealed cable, 1/2" NPT									T	
Ex head with S7 screw connection, 1/2" NPT									U	
Special execution									Z	
Plug										
No plug										0
BNC, coaxial mounted										1
DIN standard, coaxial, mounted										2
Banana type, Ø 4 mm										7
Fixed Code										A