

Sensor fitting for immersion installation, 60 mm diameter, c/w mechanical self cleaning system

Sensor fitting for immersion installations suitable to mount up to 4 electrodes for the measure of pH, ORP and temperature, c/w mechanical cleaning system. These probes are handy and can be easily installed on basins, channels and open tanks.

Mod.SI60AP sensor fittings are made of PP, PVDF or SS, with Ø60 mm body and are supplied c/w mounting flange. The probe head houses the terminal board, the electrolyte reservoir and the terminal board.

This probe is designed for pH and ORP measures in industrial liquids containing high amounts of suspended solids or fouling substances and in all those plants where reliable measures for long operating periods are required without frequent cleaning of the sensors.

The SI0I probe must not be used in liquids containing oil and fatty substances (in this case we recommend to use the SI0H probe c/w chemical cleaning system and in liquids containing abrasive substances (in this case use the Sb0B probe or the Sb0C probe).

Typical applications for SI0I sensor fittings are pH and ORP analysis in wastewater treatment plants, in basins, channels and tanks, in neutralization processes, in sedimenter, in oxidation-reduction treatments.



Advantages

- Sturdy and compact execution
- Suitable to house up to 4 sensors for pH, ORP and Temperature measure
- Easy to install
- Automatic mechanical cleaning system, electric or pneumatic actuation
- Self cleaning on measure and reference electrode
- Supplied c/w sliding fixing flange
- Cable outlet from tight cable glands
- Electrolyte reservoir for pH and ORP reference electrodes
- Extremely low maintenance requirements
- Electrodes protection can be removed

Operating principle and realization

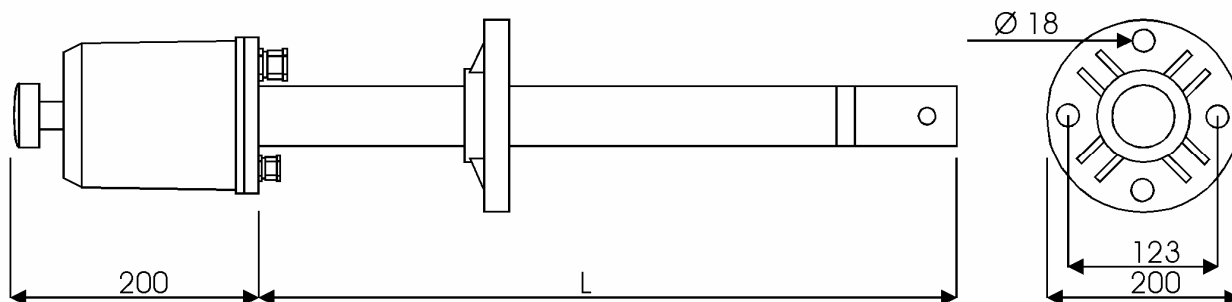
SI0I sensor fitting includes a body with 60 mm diameter, 600, 1000 or 1500 mm standard length, an electrode holder c/w electrode protection and a sealed housing on the upper part of the fitting that includes the terminal board, the electrolyte reservoir and the ratio motor for brush actuation. The fitting body is available in PP and PVDF; SS only upon request. The electrode holder allows easy electrode replacement and the electrode protection may be easily removed if not required. The electrolyte reservoir assures long operating periods without refilling requirements and a good hydraulic head that keeps clean the porous diaphragm. In the pneumatic version the ratio motor is not installed and the brush is actuated through compressed air. The sensor fitting can be easily installed through a sliding flange, ISO/DIN DN50, that can be fixed in its position on the body with two screws (included).

These probes can mount up to 4 electrodes: typical configurations are: simple pH electrode, reference electrode, temperature sensor; simple ORP electrode, reference electrode, temperature sensor; in both these cases the brush cleans the measure electrode and the reference electrode; it is also allowed to mount a simple pH electrode, a simple ORP electrode, a reference electrode with increased leakage porous diaphragm, a temperature sensor. In this case the brush cleans the two simple electrodes and not the reference.

SI0lxxxx

Electrodes that can be installed into the SI0lxxxx sensor fitting

pH	Simple pH measuring electrode.....	S101APxZ0A0A0
	+ Reference electrode.....	301lxxxA0A0 or 301lxxxB0A0 (increased leakage)
ORP	Simple ORP measuring electrode	S201AP0x0A0A0
	+ Reference electrode.....	301lxxxA0A0 or 301lxxxB0A0 (increased leakage)
pH and ORP	Simple pH measuring electrode.....	S101APxZ0A0A0
	Simple ORP measuring electrode	S201AP0x0A0A0
	+ Reference electrode.....	301lxxxB0A0 (increased leakage)
Temperature	Temperature sensor Pt100	T0x2xxx



Technical Specifications

Allowed sensors:.....	refer to the given list
Body material:.....	PP , PVDF or SS
Operating temperature limits: (*) :	5 to 70 °C (PP); 5 to 110 °C (PVDF) 5 to 120 °C (SS)
Storage temperature limits:.....	0 to +60 °C
Brush actuator power supply:	SI0lxx1xx: 24 Vac; SI0lxx2xx: 110 Vac; SI0lxx3xx: 220 Vac
.....	SI0lxx4xx: filtered compressed air P>2 bar
Electrodes cable outlet:	q.ty 1 cable gland PG13,5, q.ty 2 cable glands PG 9
Max.allowed distance from sensor to instrument:	max 50 m
Mounting:	supplied c/w mounting flange ISO/DIN DN50
Dimensions:	Ø60 mm, length 600 – 1000 – 1500 mm
Weight:.....	apprx.1,5 Kg (600 mm version)

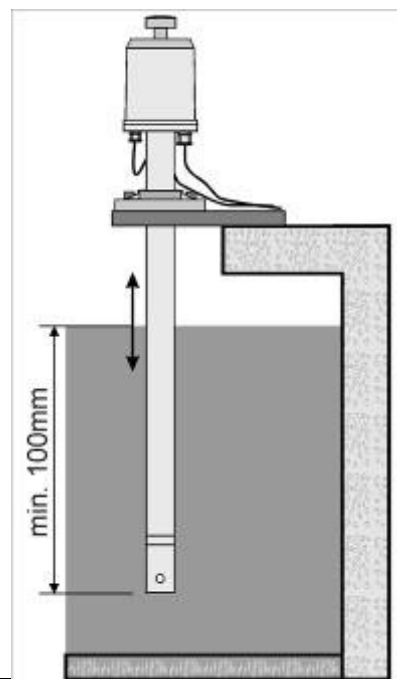
(*) Operating temperature must always respect limits given for each sensor.

Installation, Calibration & Maintenance

The sensor fitting can be installed through the sliding flange in basins or tanks, in a vertical position; it may also be installed in a inclined position, with a maximum deviation of 75° from vertical axis. A stainless steel mounting bracket is optionally available (see order code breakdown). The immersion depth can be set by moving the position of the flange on the fitting body; the flange can then be fixed with the two screws. A 100 mm immersion depth is enough for correct sensor operation. Make sure the sensor protection caps have been removed before the start up.

This probe has very low maintenance requirements: it is recommended to operate a check of the sensitivity of the measuring chains at periodical intervals defined by the operators on the basis of his own experience of the specific process.

The calibration can be operated either by comparison to properly calibrated portable instruments or extracting the probe from the process liquid, cleaning it and then immersing it into the solutions with known value of the parameter to be calibrated. A threaded calibration vessel is optionally available, see order code breakdown. Periodically inspect the level of electrolyte in the reservoir (when it is present) and refill when required.



SI0xxxxx

Order code breakdown

	SI0	x	x	x	x	x	x
Immersion fittings	SI0						
Type of sensor fitting Ø 60 c/w mechanical cleaning system SI/60AP		I					
Probe length (measured under the flange)							
Reserved			0				
600 mm			2				
1000 mm			4				
1500 mm			5				
Special execution			9				
Probe construction material							
Reserved						A	
Polypropylene, PP (standard)						B	
PVDF, Ø 60 mm fittings, length up to 1000 mm (Note 1)						E	
PVDF, Ø 60 mm fittings, length up to 1500 mm (Note 1)						H	
SS AISI 316, Ø 60 mm fittings, length up to 1000 mm (Note 1)						M	
Special execution						Z	
Mechanical cleaning system actuator							
Reserved						0	
Electric, 24 Vac						1	
Electric, 110 Vac						2	
Electric, 220 Vac						3	
Pneumatic						4	
Special execution						9	
Calibration vessel							
Reserved							A
For fittings Ø 60 mm							D
Not included							E
Stainless steel mounting bracket							
Reserved							0
For fittings Ø 60 mm							3
Not included							4

Note 1: Chemical cleaning system is always made of PP.

Accessories included in the supply

Sliding flange ISO/DIN DN50

Optional Accessories

Stainless steel bracket for wall installation Probe code SI0Ixxx3

Calibration vessel to be screwed on the electrode holder.....

..... Probe code SI0IxxxDx

Electrolyte reservoir Mod.123/28

Silicone rubber hose for electrolyte reservoir connection..... MOD.123/6X9

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

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

pH 9 buffer solution..... T/101-9x

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

Known ORP value standard solution, 468 mV, 250 ml bottle..... T/201-468A

Known ORP value standard solution, 220 mV, 250 ml bottle..... T/201-220A

