

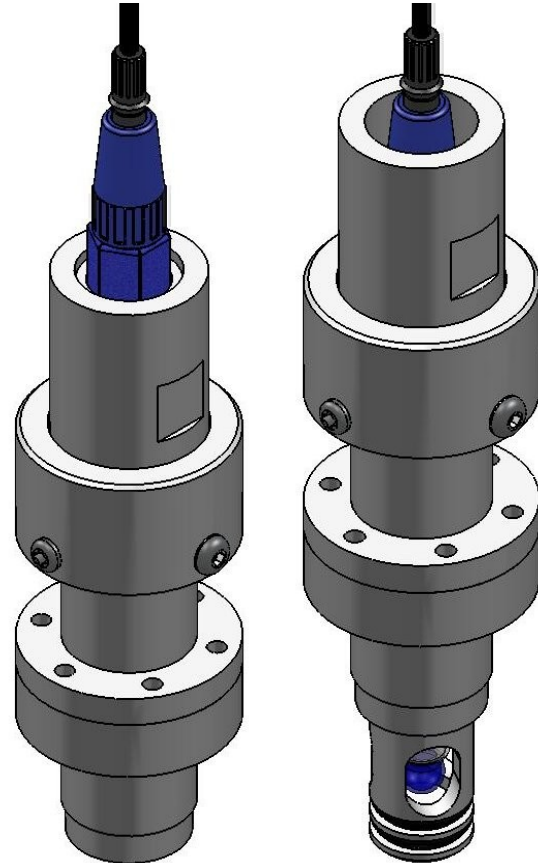
Stainless Steel sensor fitting, retractable in line, for pH or ORP measures

Sensor fitting with stainless steel AISI 316L body, designed to fit pH or ORP electrodes. This probe allows to extract the electrodes for cleaning, calibration, maintenance or replacement while the process is running. Mod.IMM-S-074 sensor fitting can be installed in fermenters, reactors and in all those processes where operating conditions are very demanding (e.g. high pressures, high temperatures, CIP, in line sterilization). The sensor withdrawal can be manually operated in a very simple manner. The probe can be easily installed thanks to its small dimensions.

Typical applications of the SIEST sensor fittings are the measure of pH or ORP in reactors and fermenters, in the pharmaceutical industry, in food and beverage industry, in chemical processes.

Advantages

- Suitable to house pH or ORP sensors
- Small dimensions
- Sensors can be extracted and inserted while the process is running
- Operating temperature limits -10 to 130°C
- Operating pressure up to 20 bar (ambient temperature)
- No maintenance requirements



Operating principle and realization

Mod.IMM-S-074 sensor fitting is completely made of AISI316L stainless steel, with seals available in different materials according to order code. Process connections are weld-in socket (included in supply, it is a part of the Mod.IMM-S-074) with flange for the connection to the sensor fitting body.

During the extraction the electrode is retracted into a sealed chamber and the weld-in socket is closed off flush with the inner reactor (or pipe) wall, so that the electrode can be extracted from the probe even while the process is running.

Technical Specifications

Allowed sensors:.....	refer to the given list
Body material:.....	AISI 316L stainless steel
Sealing O-Ring:.....	NBR, Viton, Silicone, Kalrez according to selected model number
Operating temperature limits:	-10 to 130°C (*)
Storage temperature limits:.....	-10 to +70 °C
Operating pressure limits:.....	up to 20 bar (ambient temperature), (5 bar @ 130°C) (*)
Process connections:.....	Mod.IMM-S-074 includes the weld-in socket (code IMM-S-071), flanged for the connection to the probe body (see dimension drawing)
Insertion depth :.....	Minimum 18 mm, maximum 35 mm (the fitting has a stop)
Minimum allowed diameter of the pipeline:.....	45 mm
Electrode cable:.....	separate, Mod.CV-S7-x, with S7 screwed connector
Dimensions:.....	see figure
Weight:	approx. 1,5 Kg

IMM-S-074

(*) Always with respect to the limits specified for the installed electrode.

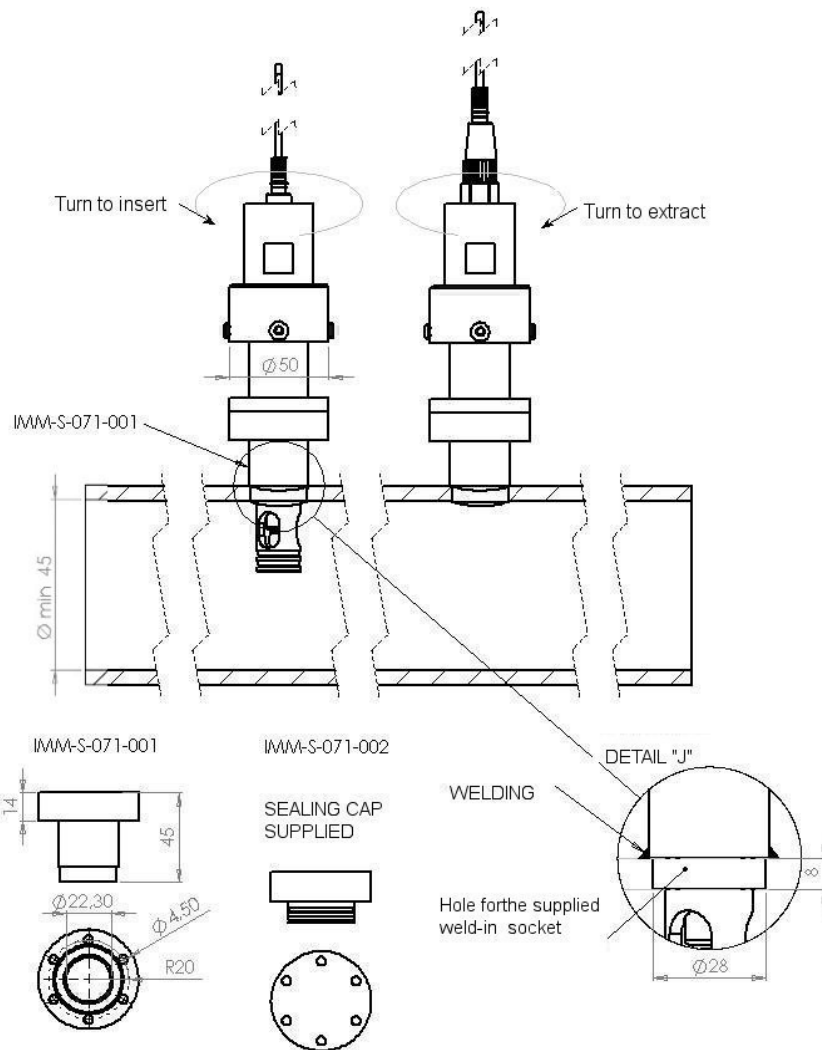
Installation, Calibration & Maintenance

Separate the fitting body from the weld-in socket. Solder the socket on the pipe or tank, so that it is in a vertical position (minimum allowed angle from horizontal line is 15°); the electrode cannot work upside down. Close the nipple (weld in socket) with the cap supplied (code IMM-S-071-002); test the hydraulic circuit without the probe.

Fix the sensor fitting body to the weld-in socket through the flange, using 6 SS screws 4 x30 (not included in supply).

Connect the electrode to the cable and the cable to the electronic unit. Immerse the electrode in water and wait approximately 30 min. for stabilization. Then operate calibration with standard buffer solutions. Rinse the electrode with water, disconnect from the cable. Insert the electrode into the sensor fitting and screw the electrode hand-tight. Reconnect the cable. Rotate the probe body according to the arrows to insert the electrode in the process. When the insertion is complete the probe body does not rotate any more.

Periodic calibration of the measuring chain is operated, if required, by extracting the electrode from the process (even when the process is running) and then from the probe body and using standard buffer solutions into beakers.



IMM-S-074

Order code breakdown

	IMM-S-074	
Stainless Steel sensor fitting, retractable in line, for pH and ORP electrodes	IMM-S-074	
O-Ring material (seals at contact)		
NBR		A
Viton		B
Silicone		C
Kalrez		D
Other on request		Z

Optional Accessories for IMM-S-074 sensor fitting

Calibration solutions, to be chosen according to measured parameter.

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

Cable with connector for electrodes.....CV/S7-x
where x = length of the cable, in m (x = 1, 3, 5, 10, 15, 20)

Cap for weld in socket.....IMM-S-071-002
Weld-in socket (nipple).....IMM-S-071-001

Electrodes that can be installed into the IMM-S-074 sensor fitting

pH Combined Electrode.....101GEL2Zxx0M0A
ORP Combined Electrode.....201GEL2xxx0M0A

pH and ORP electrodes may be selected with a wide range of options. The order code breakdown is shown in the following pages.

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Order code breakdown, pH electrode

	101	GEL	2	Z	x	x	0	M	0	A
Combined pH electrode	101									
Type of pH electrode										
Seale, gel filled		GEL								
Use at low/high temperatures										
Suitable for 0°C ÷ +130°C range			2							
Integral temperature sensor										
Not included				Z						
Reference version										
Standard						0				
Dual junction, external salt KCl gel						4				
Porous diaphragm version										
Standard (ceramic diaphragm, Ø 1mm)							A			
Increased area ceramic porous diaphragm							B			
Fixed code									0	
Cable and connector										
S7 screw connector, PG 13,5 process connection								M		
Plug on instrument side										
No plug									0	
Fixed Code										A

IMM-S-074

Order code breakdown, ORP electrode

	201	GEL	2	x	x	x	0	M	0	A
Combined ORP electrode	201									
Type of ORP electrode										
Sealed, gel filled		GEL								
Use at low/high temperatures										
Suitable for 0°C ÷ +130°C			2							
Metal										
Reserved				Z						
Gold				A						
Silver				B						
Platinum				C						
Platinum, annular				D						
Reference version										
Standard							0			
Dual junction, external salt KCl gel							4			
Porous diaphragm version										
Standard (ceramic diaphragm, Ø 1mm)								A		
Increased area ceramic porous diaphragm								B		
Fixed code									0	
Cable and connector										
S7 screw connector, PG 13,5 process connection								M		
Plug on instrument side										
No plug									0	
Fixed code										A