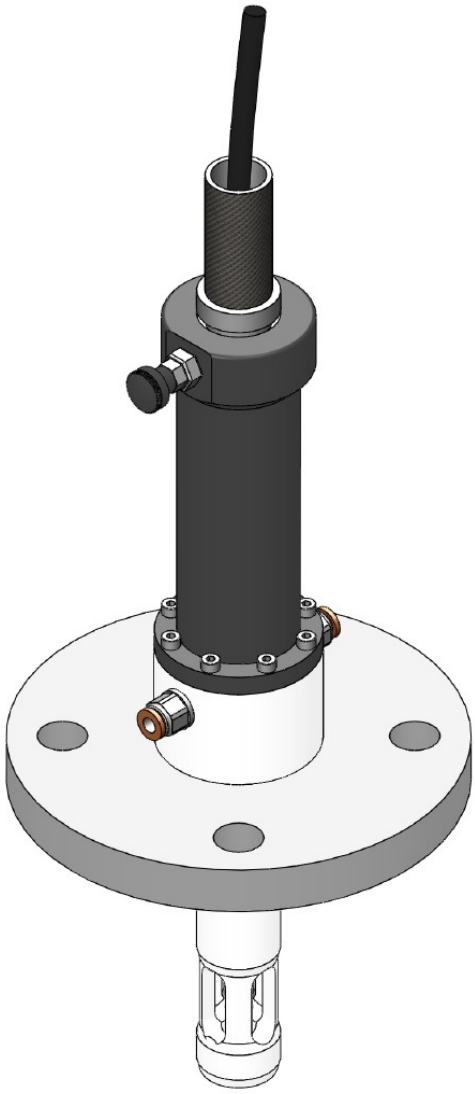
IMM-S-094

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



Sensor fitting designed to house pH and ORP electrodes or Conductivity cells with standard dimensions, 12 mm diameter, 120 mm lenght. This probe allows to extract the sensor for cleaning, calibration or maintenance while the process is running. The sensor withdrawal is manually operated.
Typical applications of the Mod.IMM-S-094 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. The use of this probe is also recommended in those processes with the tendency to rapidly poison the electrodes destroying them. With IMM-S-094 probe the sensors can be inserted into the process only when the measure is strictly necessary, then the sensor can be retracted into the flushing chamber: this will dramatically increase the sensor life.

Advantages

- **Suitable to house pH or ORP electrodes and Conductivity cells, with standard dimensions 12 mm diameter and 120 mm length**
- **Sensors can be extracted and inserted while the process is running**
- **Sensor extraction/insertion are manually operated**
- **Operating temperature limits -10 to 100°C**
- **Operating pressure up to 8 bar @ ambient temperature**
- **No poisoning of the process during cleaning of the sensor nor during calibration**
- **Very little maintenance requirements**
- **Recommended for processes that tend to poison the sensor**

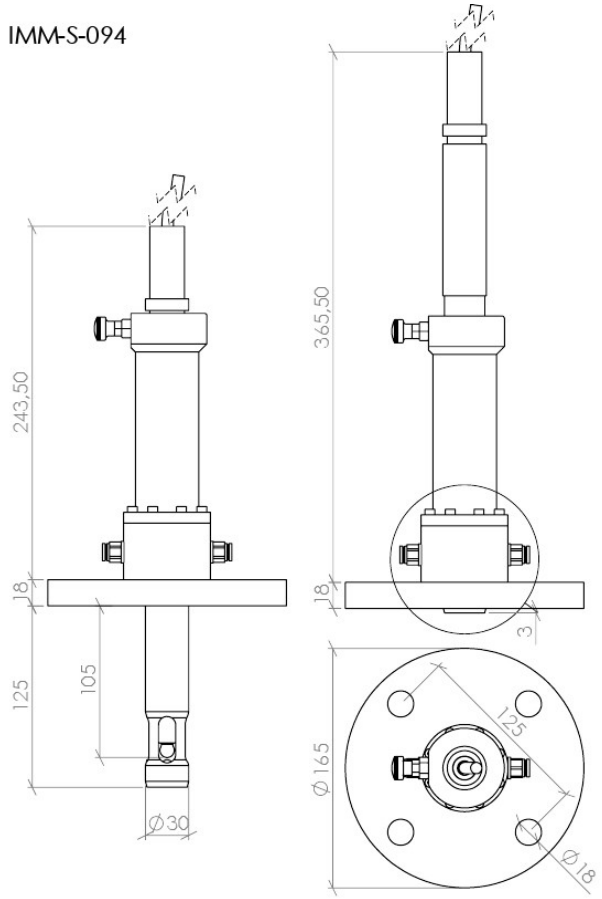
Operating principle and realization

Mod.IMM-S-094 sensor fitting is made of PVDF, with PTFE and Viton seals. Process connections are flanged, DN50.
Flushing connections are 6 mm diameter.
For cleaning or calibrating, the electrode is retracted into the flushing chamber: when the electrode is retracted the flushing chamber is closed and completely separated from the process vessel.. In this position the electrode can be cleaned with water or with proper cleaning solution, can be calibrated with proper calibrating solutions or can be replaced, even while the process is running.

IMM-S-094

Technical Specifications

Construction material.....PVDF, AISI 316 SS; material at contact with the process fluid: PVDF
Sealing.....Viton and PTFE; material at contact with the process fluid: PTFE
Suitable electrodes: .....pH and ORP electrodes, Conductivity cells Ø12 mm, L.120 mm
Process connections :..... flanged, DN50
Flushing solution connections :.....n.2 hose fittings Ø6
Operating temperature limits : .....0÷100 °C
Storage temperature limits: .....-10÷70 °C
Operating pressure limits :.....0÷8 bar @ ambient temperature
Cable outlet: .....integral cable, lor connector on the electrode
Dimensions:.....see Figure
Insertion depth :.....105 mm (see Figure)
Weight: .....approx. Kg.1,5



Installation, Calibration & Maintenance

Install the probe on the plant through its flanged connection, then connect the calibrating circuit.
Note (1): when the flushing solution connections are not in use they MUST be left open otherwise a pressure will create during the extraction of the sensor: this pressure will make very difficult to extract completely the sensor out of the process.
If desired the flushing solution connections may be connected to hoses that are left open and inserted into a drain (to collect the small quantity of process liquid that comes out during sensor extaction.

pH and ORP electrodes may be selected with a wide range of options. Contact our Technical Department to find out the solution that best suits Your application needs.

Optional Accessories

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

Known conductivity standard solution, 250 ml bottle.....T/401-A