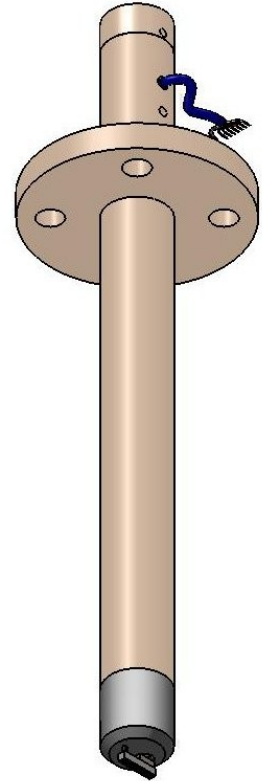


Turbidity measuring cell for immersion applications c/w mechanical cleaning system

Cells for the measure of Turbidity designed for immersion installation in industrial applications. Measuring system is nephelometric, 90 degrees side scattering. Probe body is made of PP, 42 mm diameter, various available lengths, and includes a fixing flange for probe installation. Mod.702F includes sensor mechanical cleaning system through a glass wiper actuated by a motor. Typical applications are in drinking water plants, wastewater treatment plants, sedimentation basins, swimming pools.



Advantages

- Small dimensions, sturdy execution, c/w mounting flange
- IP 66 protection degree
- Measuring range 0 to 2000 NTU
- Very good linearity
- Optical system power supply from electronic unit
- Many available probe lengths: 600 – 1000 – 1500 mm
- Designed for immersion installations
- Mechanical cleaning of the optical system: no detergent is added to process fluid under measure
- Mechanical cleaning sequence can be driven by the uP transmitter
- Very little maintenance requirements

Operating principle and realization

Measuring system has an optical group that concentrates the light emitted by the light source into the liquid in measure; the light beam is scattered by the solids suspended in this liquid; the photo receiver measures the light scattered at a 90° angle from the light source. The optical system is separated from the sample through a transparent glass that can be periodically wiped by the glass wiper actuated by the ratio-motor. The Frequency and duration of cleaning (cleaning sequence) can be directly driven by the electronic unit Mod.uP or, as an alternative, by external timers.

Nephelometric cells Mod.702F is powered by a highly stabilized source so that emitted light is perfectly constant even with power mains variations of $\pm 15\%$.

The light source is a IRED diode (880 nm). The light receiver is a silicon photodiode.

Sensor body is PVC, probe body is PP, 42 mm diameter, 600, 1000, 1500 mm lengths. A sliding flange, DN32, is supplied for probe installation. The cable for connection to the electronic unit is integral to the cell, length according to order code breakdown. Cable outlet is from PG9 cable gland.

Installation, Maintenance and Calibration

Install Mod.702F cell in a location that is representative of process characteristics, with good sample mixing and without turbulence. The turbidity measuring chain is factory calibrated and doesn't need any calibration at start up. The calibration can be verified as follows: check the zero point immersing the probe, after cleaning it perfectly, in a turbidity free water (or liquid); fresh distilled water can be used for calibrations of instruments with low measuring ranges (e.g. up to 20 NTU). Check the slope with a formazine solution with a proper turbidity value prepared from the standard 4000 NTU formazine solution.

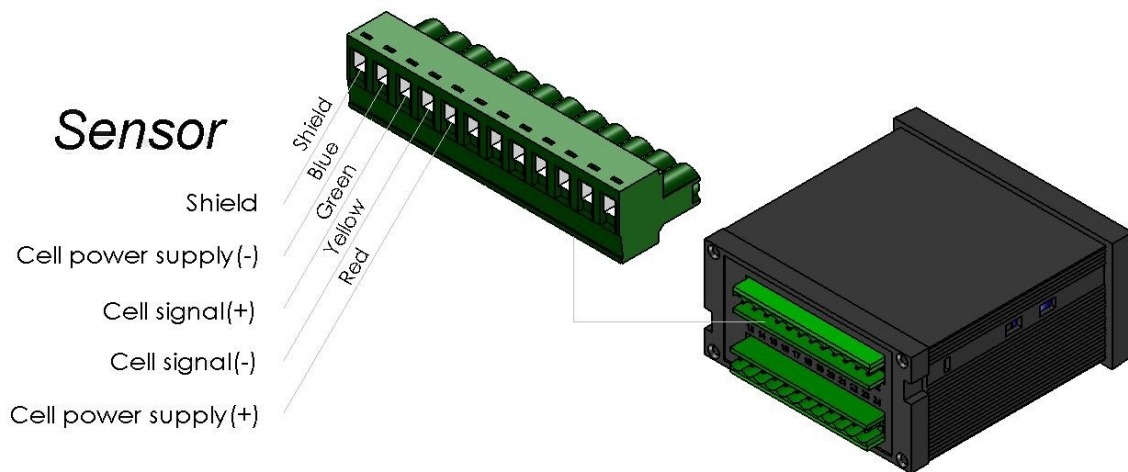
702F cells have low maintenance requirements: the probe includes an automatic chemical cleaning system; the cleaning sequence is directly driven by the μ P electronic unit.

702F

Technical Specifications

Light source:..... IRED diode, 880 nm
Light receiver: silicon diode
Measuring system: Nephelometric, single beam
Measuring range: 0 ÷ 2 / 2000 NTU
Receiver and emitter power source: from the electronic unit)
Cable for the connection to electronic unit:..... integral, 5 m, 10 m, 20 m according to selected code
Ratio-motor power supply:.....24 Vac, 110 Vac or 220 Vac ± 10% according to model number breakdown
Immersion depth:..... 10÷1500 mm, according to chosen probe length
Flow direction:.....any direction; the liquid should be free of bubbles
Mounting:..... in vertical position
Mounting flange (supplied): ISO/DIN DN32
Max. operating temperature:..... 50 °C
Storage temperature limits: -30 to+50 °C
Probe body material:..... PP
Sensor material:..... PVC
Seals material:..... NBR (VITON upon request)
Protection degree:..... IP66
Dimensions: Ø 42,length: 600, 1000, 1500 mm
Weight: according to chosen probe length

Wirings



702F

Order code breakdown

	702	x	x	x	x	x	x	x	x
Turbidity measuring cell	702								
Type of cell Immersion probe c/w mechanical cleaning system		F							
Construction material Probe PP, sensor PVC Special execution			2 9						
Probe length Reserved 600 mm under the flange 1000 mm under the flange 1500 mm under the flange Special execution				A B C D Z					
Cable length (measured from cable gland) 5 meters (CV/7025-SCH) 10 meters (CV/7025-SCH) 20 meters (CV/7025-SCH) Special execution					1 2 3 9				
Fixed Code						A			
Mounting bracket Reserved For probes Ø 42 mm Not included							0 2 4		
Fixed Code								A	
Wiper Motor Actuation Reserved Electric, 24 Vac Electric, 110 Vac Electric, 220 Vac Pneumatic Special execution									0 1 2 3 4 9

Optional accessories

Standard formazine suspension, 4000 NTU

Standard formazine suspension for turbidity calibration, 1000 ml bottle.....Mod.T/701-C

Sensor assembly..... Mod.702/346