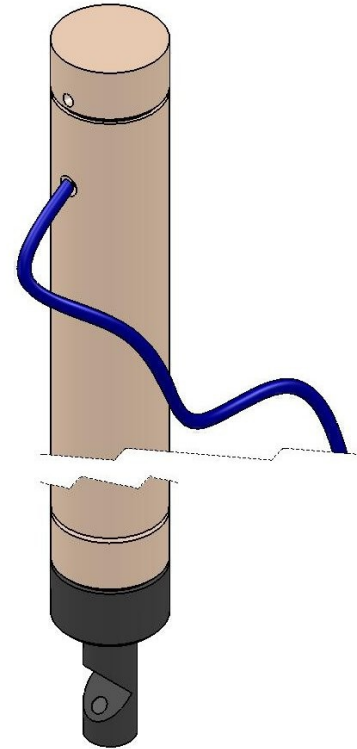


702A and 702B

Turbidity measuring cell for immersion applications

Group of 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. The cells can optionally include a temperature sensor. Mod.702B includes sensor chemical cleaning system. 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: 300 - 600 - 1000 - 1500 mm
- Designed for immersion installations
- Accessories for chemical cleaning of the optical system available
- 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.

Nephelometric cells Mod.702A and 702B are 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.

Mod.702B probe is supplied c/w the hydraulic system for chemical cleaning; the cleaning sequence is directly driven by the uP electronic unit.

These cells can optionally include a temperature sensor.

Sensor is made of PVC, probe body is made of PP, 42 mm diameter, 300, 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.702A or 702B 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.

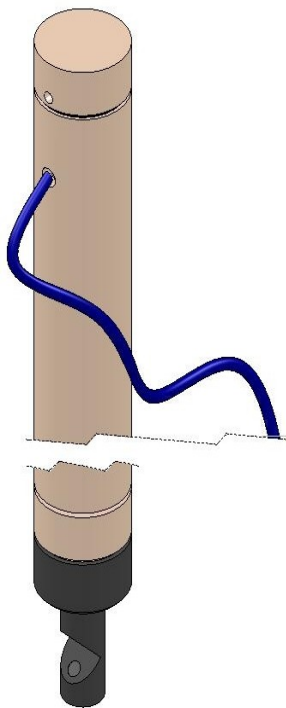
702A and 702B cells have low maintenance requirements : it is just suggested to perform periodical cleaning of the light receiver. Mod.702B probe includes an automatic chemical cleaning system; the cleaning sequence is directly driven by the μ P electronic unit.

702A and 702B

Technical Specifications

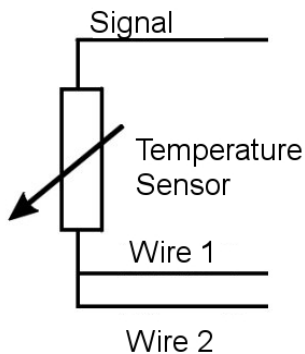
Light source:.....IRED diode, 880 nm
 Light receiver:silicon diode
 Measuring system:Nephelometric, single beam
 Measuring range: 0 ÷ 2 / 2000 NTU
 Receiver and emitter power source:from the electronic unit)
 Cable for the connection to electronic unit:.....integral, 5 m, 10 m, 20 m according to selected code
 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: 300, 600, 1000, 1500 mm
 Weight:according to chosen probe length

Cable color code, turbidity sensor W/O temperature sensor:



Color or abbreviat.	Description
SCH	Shield
Blue	Cell power supply (-)
Green	Cell signal (+)
Yellow	Cell signal (-)
Red	Cell power supply (+)

Cable color code, turbidity sensor C/W temperature sensor:



Color or abbreviat.	Descrizione
SCH	Shield
Blue	Cell power supply (-)
Green	Cell signal (+)
Yellow	Cell signal (-)
Red	Cell power supply (+)
TEMPERATURE SENSOR	
White	Signal
Brown	Wire 1
Black	Wire 2

702A and 702B

Order code breakdown

	702	x	x	x	x	x	x
Turbidity measuring cell	702						
Type of cell							
Immersion probe		A					
Immersion probe c/w chemical cleaning system		B					
Construction material							
PP Probe body, PVC sensor			2				
Special execution			9				
Probe length							
Reserved				A			
600 mm under the flange				B			
1000 mm under the flange				C			
1500 mm under the flange				D			
300 mm (three hundred) under the flange							
Special execution				Z			
Cable length (measured from cable gland)							
5 meters (CV/7025-SCH)					1		
10 meters (CV/7025-SCH)					2		
20 meters (CV/7025-SCH)					3		
Special execution					9		
Temperature sensor							
Standard (NOT included)						A	
Temperature sensor included						B	
Special Execution						C	
Mounting bracket							
Reserved							0
For probes Ø 42 mm							2
Not included							4

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