

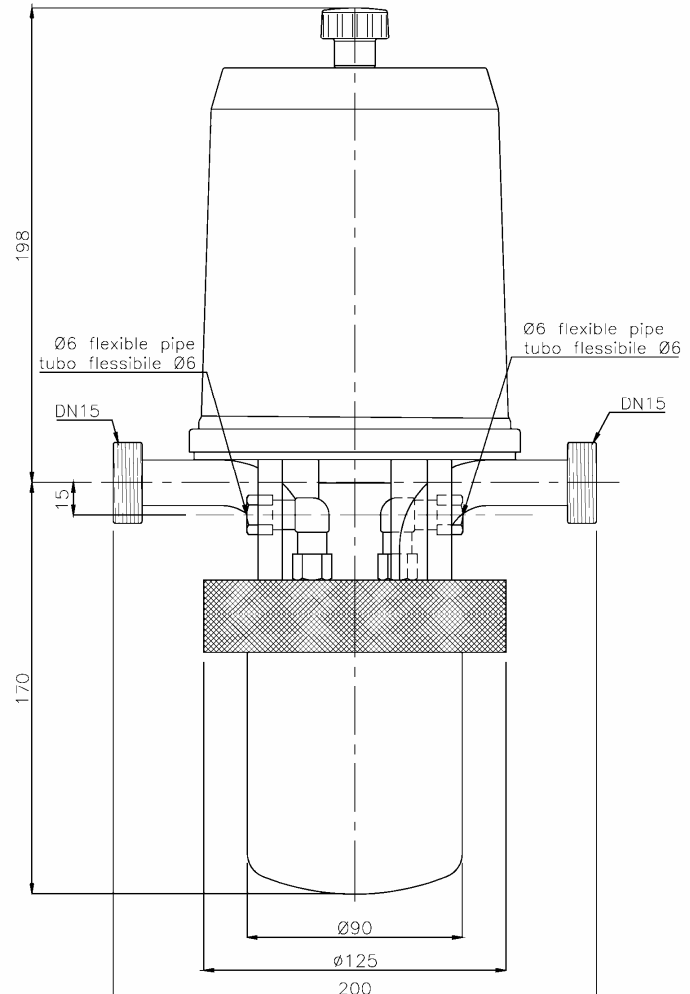
AISI 316 stainless steel through flow turbidity cell

Group of cells for the measure of Turbidity designed for through flow installation in industrial applications. Measuring system is nephelometric, 90 degrees side scattering. Probe body is made of AISI316 stainless steel and includes the cleaning system for the cleaning of optical parts and a bracket for wall mounting.

Typical applications are in drinking water plants, wastewater treatment plants, sedimentation basins, swimming pools.

Advantages

- **Sturdy execution, simplified installation**
- **Measuring range 0 to 2000 NTU**
- **Very good linearity**
- **Optical system power supply from electronic unit**
- **Process connections: sanitary type DN15**
- **Designed for through flow installations**
- **Complete with accessories for chemical cleaning of the optical system**
- **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 cell Mod.701C4A0A0 is powered by a highly stabilized source so that emitted light is perfectly constant even with power mains variations of ±15%.

The light source is a semiconductor with high light intensity and a peak of emission at 594 nm. The light source is designed to remain constant for years.

The light receiver is CdS type, encapsulated in a steel housing sealed under vacuum; it is sensitive to wavelengths in the range 580 – 600 nm. Only the light receiver group is in contact with the fluid.

Mod.701C4A0A0 probes supplied complete with the hydraulic system for chemical cleaning; the cleaning sequence is directly driven by the uP electronic unit.

Sensor body is AISI 316 Stainless steel. A bracket for wall mounting is included in the supply.

The cable for connection to the electronic unit is supplied with the cell, length 5 m.

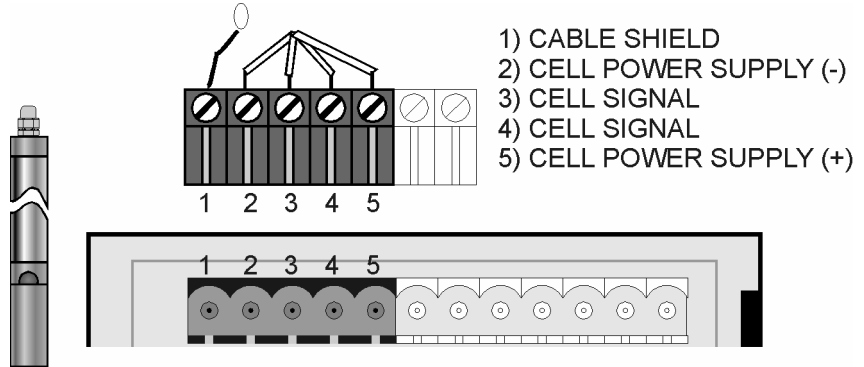
701C4A0A0

Installation, Maintenance and Calibration

Install Mod.701C4A0A0 cell in by-pass configuration, select 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: to check the zero point clean perfectly the cell, then let a turbidity free water (or liquid) flow inside the cell; 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.

701C4A0A0 cell has low maintenance requirements: it is just suggested to perform periodical cleaning of the light receiver. The automatic chemical cleaning system (for hydraulic cleaning) is included in the cell; the cleaning sequence is directly driven by the μ P electronic unit.

Wirings



Technical Specifications

Light receiver: Cadmium Sulphide (CdS), in steel housing sealed under vacuum
Light source: Alln GaP semiconductor, with high emission intensity
Measuring system: Nephelometric, single beam
Measuring range: 0 ÷ 2 / 2000 NTU
Receiver power source: 50 mV/pp (from electronic unit)
Light emitter power source: 1,9 Vdc (from electronic unit)
Cable for the connection to electronic unit: supplied with the cell, 5 m length
Max distance from cell to instrument: 5 m
Process connections: sanitary type, DN15 one for sample inlet one for sample drain
Mounting: in vertical position
Mounting bracket (supplied): for wall mounting
Max. operating temperature: 50 °C
Storage temperature limits: -30 to +50 °C
Operating pressure limits: 2 bar
Body material: AISI 316 Stainless Steel
Dimensions: see drawing
Weight: 7 kg including mounting bracket

701C4A0A0

Order code breakdown

	701	x	x	x	x	x	x
Turbidity measuring cells	701						
Type of cell Through flow cell, AISI 316, c/w chemical cleaning syst. (701/S-003)	C						
Costruction material Stainless steel AISI 316			4				
Special execution			9				
Fixed code				A			
Fixed code					0		
Fixed code						A	
Fixed code							0

Optional accessories

Standard formazine suspension, 4000 NTU

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

Receiver assemblyMod.701-s-003-A02

Emitter assembly Mod.D07-A01-1