



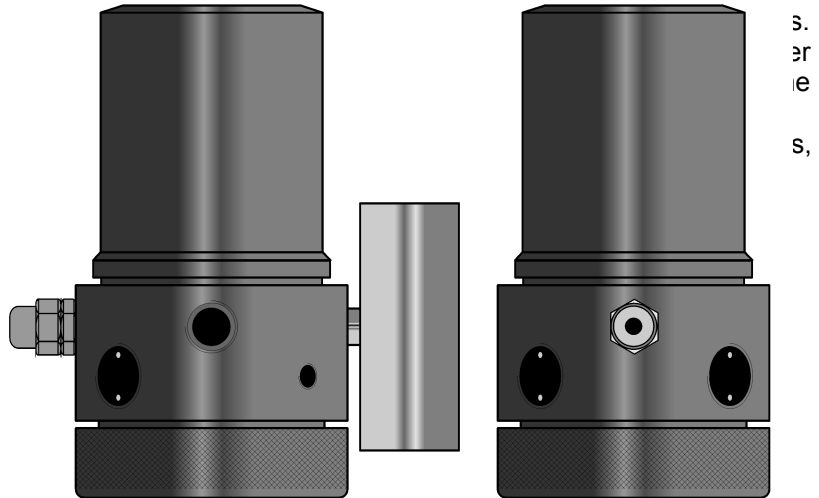
702DxA0A0 and 702ExA0A0

Through flow turbidity measuring cell

Group of cells for the measure of Turbidity. Measuring system is nephelometric, 90° filled PP and includes a mounting bracket for pipeline using rigid pipings. Typical applications are in drinking water and swimming pools.

Advantages

- Small dimensions, sturdy execution
- IP 55 protection degree
- Measuring range 0 to 2000 NTU
- Very good linearity
- Optical system power supply from electronic unit
- Process connections: 1/2" F
- Designed for through flow installations
- Can be directly mounted on the pipeline using rigid piping
- 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.702D and 702E 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.702E probe is supplied c/w/with the hydraulic system for chemical cleaning; the cleaning sequence is directly driven by the uP electronic unit.

Sensor body is glass fiber filled PP, black in order to avoid light reflection on cell walls.

A bracket for wall mounting is included in the supply.

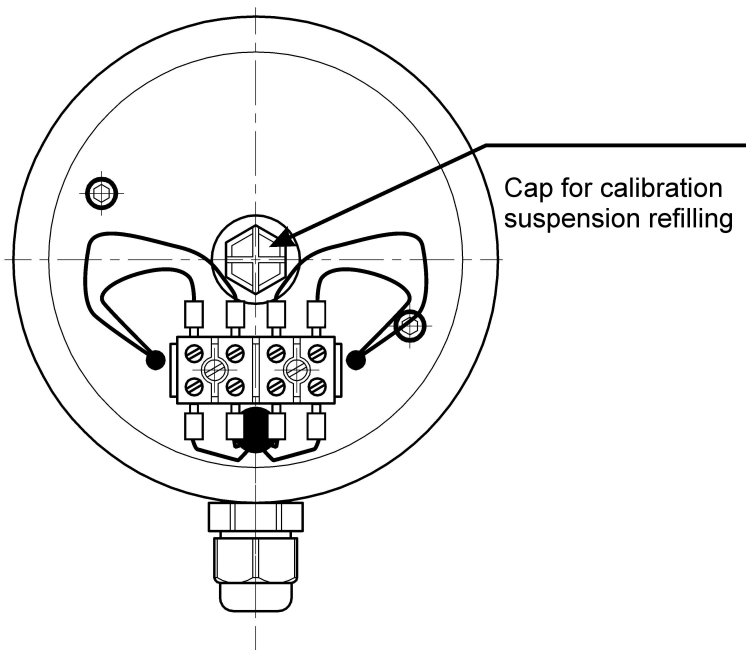
The cable for connection to the electronic unit is supplied with the cell, length 5 m.

Cable outlet is from a PG9 cable gland.

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Wirings

Internal wiring		uP Transmitter wiring	
Shield	Shield	Terminal 1	
Emitter -	Blue	Terminal 2	
Reciver +	Green	Terminal 3	
Reciver -	Yellow	Terminal 4	
Emitter +	Red	Terminal 5	



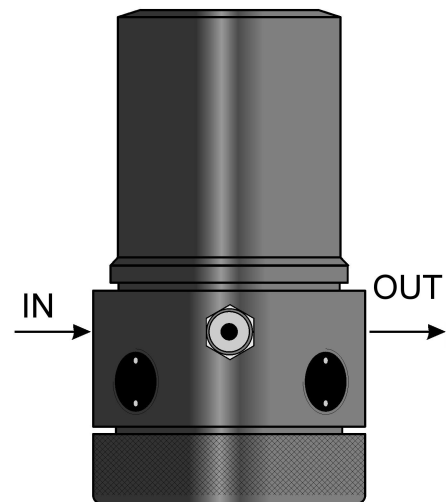
Installation, Maintenance and Calibration

Install Mod.702D cell in by-pass configuration, select a location that is representative of process characteristics, with good sample mixing and without turbulence.

WARNING ! correct hydraulic connections to the cell are essential for cell operation. Connect sample IN and sample OUT as indicated in the figure on the right.

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.

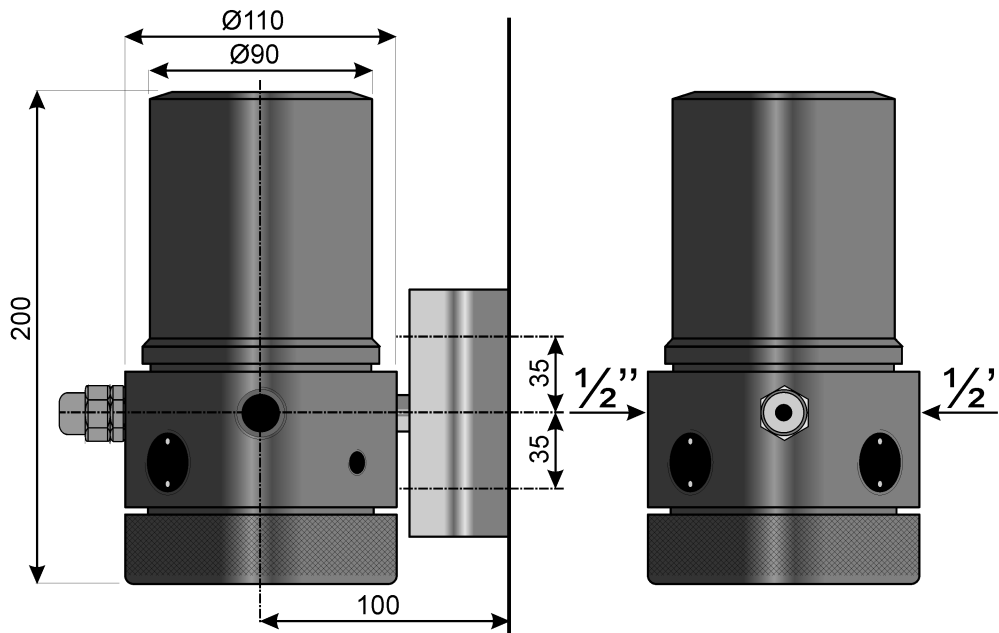
702D and 702E cells have low maintenance requirements : it is just suggested to perform periodical cleaning of the light receiver. Mod.701E includes the automatic chemical cleaning system; the cleaning sequence is directly driven by the μ P electronic unit.



702DxA0A0 and 702ExA0A0

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:.....supplied with the cell, length according to order code
Process connections:..... $\frac{1}{2}$ " F one for sample inlet one for sample drain
..... Mod.702ExA0A0 two $\frac{1}{8}$ " F threaded connections for cleaning solution inlet
Mounting:..... in vertical position
Mounting bracket (supplied): for wall mounting
Direct mounting on the pipeline:..... using rigid piping
Operating temperature limits:..... 5 to 90°C PP 30% GF
Storage temperature limits: -30 to+50 °C
Operating pressure limits:..... 2 bar ambient temperature
Body material:..... black glass fiber filled PP (PP 30% GF)
Protection degree:..... IP55
Dimensions: \varnothing 110mm, h.200 mm
Weight: 1 kg including mounting bracket



702DxA0A0 and 702ExA0A0

Order code breakdown

	702	x	x	A	x	A	0
Turbidity measuring cells	702						
Type of cell							
Through flow cell		D					
Through flow cell c/w chemical cleaning system		E					
Construction material							
Black PP 30% GF			1				
Special execution			9				
Fixed code				A			
Cable length							
5 m cable (CV/7025-SCH)					1		
10 m cable (CV/7025-SCH)					2		
20 m cable (CV/7025-SCH)					3		
Special execution					9		
Fixed code						A	
Fixed code							0

Optional accessories and spare parts

Standard formazine suspension, 4000 NTU

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

Receiver assembly Mod.D07-1A2-2

Emitter assembly Mod.D07-1A1-2