HANNA instruments

HI7660-28

Low Range Turbidity Probe for HI510 and HI520 Process Controllers

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Low Range Turbidity Probe for HI510 and HI520 Process Controllers

The HI7660-28 are nephelometric turbidity probes designed for use with Hanna Instruments® HI510 or HI520 Universal Process Controller. The system is designed to measure low turbidity values according to the nephelometric method (ISO 7027 – EN 27027).

An integral temperature sensor measures water temperature and adjusts the probe signal for temperature-related changes over the range of 0 to 50 °C (32 to 122 °F).

The controller displays both measurements simultaneously.

Turbidity is a key indicator of water quality and effectiveness of water filtration.

The system is suitable for applications in drinking water, municipal and industrial water treatment, desalination and water quality monitoring.

The majority of low-measurement applications using the HI7660-28 probe require installation in a pressurized flow cell. The HI7676602 flow cell is designed to eliminate ambient light effects and maintain sample pressure inside the flow cell. This minimizes sample out-gassing, a common problem in many turbidity systems that can cause measurement errors.

- Digital probe stores model, firmware version, and serial number
- Built-in temperature sensor for measurement and compensation
- Stored calibration data includes: calibration date and time, turbidity calibration standard, offset, and slope
- ISO 7027 sensors use a near infrared light-emitting diode (LED) to eliminate color interference
- Factory calibrated turbidity probe
- Adheres to ISO 7027 – EN 27027 standards

Principle of operation

Turbidity is a term that defines the opaqueness or cloudiness of water.

The HI7660-28 are optical probes that follow ISO 7027 – EN 27027 standards.

The unit of measure is FNU.

A light beam from an infrared source is sent through an optical window of the probe into the sample.

The light is scattered by suspended particles in the sample. The 90° scattered light is reflected through a second window where it is converted to an electrical signal proportional to the turbidity of the standard or sample.

HI7660-28 measurement specifications

Turbidity	Range	0.000 to 4.000 FNU 0.00 to 40.00 FNU 0.0 to 400.0 FNU
	Resolution	0.001 FNU 0.01 FNU 0.1 FNU
	Accuracy	0.000 to 4.000 FNU 0.05 ± 2% reading 0.00 to 40.00 FNU 0.3 ± 2% reading 0.0 to 400.0 FNU 2.0 ± 2% reading
	Calibration*	Factory calibration (default) Single solution (determine slope) Two points (determine slope and offset)
	Calibration timeout	Off (default) 1 to 99 days
Additional Specifications	Averaging samples	1 to 60 samples (default,1 sample)
	Temperature Compensation	Automatic, 0.0 to 50.0 °C (32 to 122 °F)
	Temperature source	Automatic (from probe)
	Operating temperature	−5 to 50 °C (23 to 122 °F)
	Repeatability	2%
	Protocols	MODBUS RTU

HI7660-28 sensor specifications

Sensor	Light source	Infrared LED
	Light detector	Photodiode for turbidity measuring

HI7660-28 general specifications

Body	Type	PVC
	Length	115 mm (without cable gland)
	Diameter	39.5 mm
	Probe weight	190 g
	Cable weight	10 m › 480 g 5 m › 240 g
	Total weight	Probe with 10 m cable › 670 g Probe with 5 m cable › 430 g
Operating pressure		0 to 6 bar @ 25 °C (77 °F) 0 to 3 bar @ 50 °C (122 °F)
Protection rating		IP68
Cable length		zz, see Series configuration

*The probe is shipped factory calibrated (zero and slope).

Ordering information

Each **HI7660-28** probe is supplied with:

- Quick reference guide
- Probe quality certificate

HI7660 – 2 8 z z

Choose your configuration	
2	Turbidity sensor
8	Smart probe with RS485 connection
zz	02, 05, 10 fixed cable length (dimension expressed in meters)

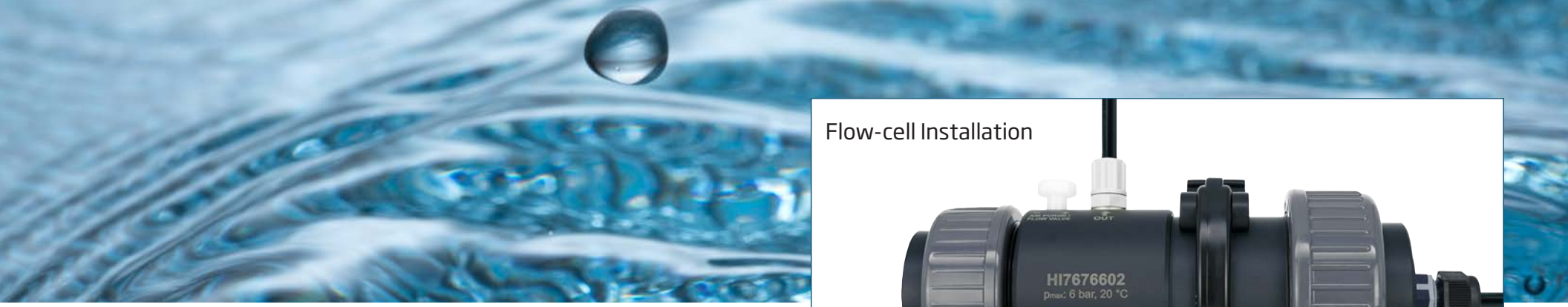
Accessories

HI7676602 Flow Cell for HI7660-28 Probe

HI7676603
Calibration Beaker for HI7660-28 Low Range Turbidity Probe

HI7676604
Dry Standard for HI7660-28 Low Range Turbidity Probe

Dimensions



Flow-cell Installation

HI7676602 Flow-cell installation

The cell is supplied complete with:

- Locking collar
- Probe adapter (with o-ring)
- Wall mounting bracket
- Inlet/outlet tube

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