HI7660-28

Low Range Turbidity Probe

HI510 & HI520 Process Controller Compatible

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Scan the QR code or follow the link to download HI7660-28 user manual.
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Scan the QR code or follow the link to download HI510 user manual.
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Thank you for choosing Hanna Instruments!

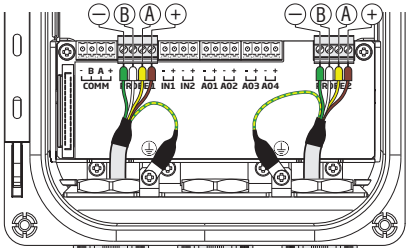
The HI7660-28 **nephelometric low range turbidity** probes are intended for industrial process control when paired with the HI510 and HI520 Universal Process Controllers.
Each HI7660-28 is supplied with quick reference guide and probe quality certificate.

Application

Drinking water, municipal and industrial water treatment, desalination, water quality monitoring

Probe Wiring

1. With the controller disconnected from power, run the probe cable through the conduit opening.
2. Connect the probe leads to the removable terminal connector marked PROBE (PROBE1 or PROBE 2 if using HI520).
   Follow the lead markings (positive/negative) to ensure correct wiring.
3. Carefully put the wired terminal connector into place on the board.
4. Position excess cable through cable gland before tightening the nut.
5. Remove the ground screw and hardware located below the PROBE connector and attach ground lead (⏚).



HI520
turbidity probe wiring
with second probe
connected to PROBE 2

Probe cabling color code

Marking	Attached Cable
−	GREEN
B	WHITE
A	YELLOW
+	BROWN
⏚	GREEN/YELLOW

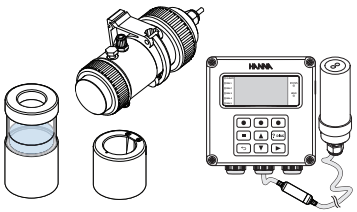
Note: *Ensure wiring regulations are correctly followed when controller unit is part of a larger industrial installation.*

Probe Recognition

- Power the HI5X0 process controller.
- On the HI520, enable the channel for the wired probe.
- Probe should be recognized by the controller.

Note: *If the probe is not recognized, see procedure on MAN7660-28, section 9 Probe Recognition and Restoring Communications.*

Probe Calibration



Required

- HI5X0 Process Controller
- HI7660-28 Turbidity Probe
- HI7676602 Flow Cell
- HI7676603 Calibration Beaker
- HI7676604 Dry Turbidity Standard

Procedure

- Press ☰ key from the live reading display to access the top-level menu items.
- On the HI520, press ▲ ▼ keys to highlight the channel to which HI7660-28 is connected.
- Press **CAL**.
  The controller enters calibration mode.

- **HI7676603 beaker calibration preparation**
  - › Rinse a clean calibration beaker 1 or 2 times with calibration standard. Discard rinses. Fill up the beaker with calibration standard to the indicated fill line.
  - › Hold the beaker at a 45-degree angle then slowly insert the probe. Allow 1or 2 minutes for measurement to stabilize. If needed, gently swirl beaker contents to re-suspend the formazin.

- **HI7676602 flow cell calibration preparation**
  - › Divert any incoming water, remove the probe, and clean the flow cell.
  - › Orient the cell vertically.
    HI7660-28 should be at the bottom of the cell and the removable cap at the top. Remove the end cap.
  - › Rinse 1 or 2 times with standard, discard, then fill the cell to excess. Replace the flat cap first by sliding it horizontally, across the excess liquid.
  - › Allow 1 or 2 minutes for measurement to stabilize.

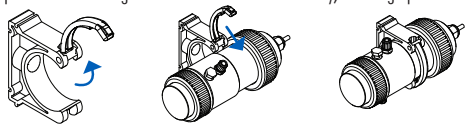
- **Standard value selection**
  - › Filter the deionized water (0.45 µm) for offset calibration.
  - › Calibrate the slope near the midpoint of the selected range.
- **Steps**
  - › Rinse 1 or 2 times with standard then discard.
    Slowly add calibration standard to chosen calibration vessel.
  - › Wait for measurement stabilization.
  - › Use ▲ ▼ to adjust the value of the displayed standard to the value of the standard being used.
    Note: *The first calibration point cannot be greater than 0.200 FNU*
  - › Confirm the calibration.
  - › Proceed with second calibration point following first point calibration recommendations.
    Note: *The live measurement must fall within 30% of the selected standard value*
- **In-situ process calibration**
  - › Select first point for *offset* (turbidity value <0.200 FNU) or second point for *slope* calibration.
  - › Obtain a reference measurement turbidity value.
  - › Press ▲ ▼ keys to adjust calibration value to the reference turbidity value.

Calibration Recommendations

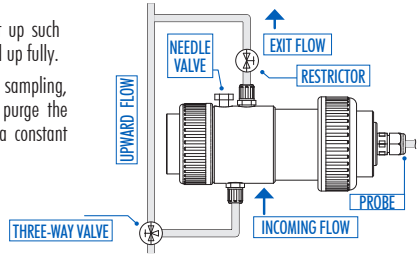
- If permitted by regulations, use HI7676604 dry turbidity standard to verify calibrations periodically.
- A calibration beaker is the recommended option when calibrating with formazin.
- Use a soft cloth to clean the optical window prior to attempting a new calibration or validation.

Installation

- Use supplied wall-mounting bracket to fix the cell horizontally, ensuring upward flow direction.



- The system should be set up such that it allows the cell to fill up fully.
- With high pressure liquid sampling, use the needle valve to purge the system and to maintain a constant flow rate.



All Hanna instruments conform to the CE European Directives and our production facilities are ISO 9001 certified. Low range turbidity probes are warrantied for two years from date of purchase against defects in workmanship and materials when used for their intended purpose and maintained according to instructions. For technical information e-mail us at tech@hannainst.com. Visit www.hannainst.com for more information about Hanna Instruments and our products.

Please retain for future use.

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