Installation ITM-3

Electrical Connection ITM-3

M12 Plug-In Configuration ITM-3

M12 PLUG-IN LEFT
4-20mA OUTPUTS
CABLE TERMINATIONS

M12 PLUG-IN RIGHT
SWITCHING OUTPUT
RANGE CONTROL VOLTAGE
CABLE TERMINATIONS

DO NOT mount ITM-3A on top or bottom of piping as resulting air space or sediment collection may cause erroneous readings

Standard Clamp and Gasket Required
(Not supplied)

– CAUTION –
Pay careful attention near the sapphire sensor face. Do not strike with hard or sharp object. Clean with soft cloth and mild

NOTE: For 3 wire connection - Power Supply(pin 4) should be tied to - Output(pin 1)

Display operating hours
R=15620

Damping adjustment
T90 time in s

Hysteresis adjustment
HV

Threshold adjustment
E1

Meas. range 2
(E1 = 24 V)

Meas. range 1

Display turbidity and switching status

Display Mode
After 1 min. the device switches automatically back to the display mode.

Start

Vertical Pipe
Mount with connector downward in all installations

Horizontal Pipe

DO NOT mount ITM-3A on top or bottom of piping as resulting air space or sediment collection may cause erroneous readings

Horizontal Pipe

Standard Clamp and Gasket Required
(Not supplied)

Sold and Serviced in North America by: Anderson Instrument Company, Inc. • 156 Auriesville Road • Fultonville, NY 12072 • 800-833-0081
Installation

**Adjustment**
- The factory setting of the device is measuring range 1 (0-100 % = 4-20 mA).
- With an external control voltage (24 V DC) range 2 can be selected (E1 = 24 V DC). (See “Electrical Connection”)

**Switching the Measurement Range**
- The digital control input E1 is galvanically isolated from the power supply. Ground: clamp 9 (0 V)

<table>
<thead>
<tr>
<th>E1*</th>
<th>Measurement Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1 (factory setting: 0-100 %)</td>
</tr>
<tr>
<td>1</td>
<td>2 (factory setting: 0-10 %)</td>
</tr>
</tbody>
</table>

*0 = 0 V DC / 1 = 24 V DC

**Note**
- Select suitable measurement range in applications with high turbidity variances (e.g. milk / milk water mixture) for precise measurement.

**Cleaning / Maintenance**
- Don’t use sharp items or aggressive detergents for cleaning the optics.
- In case of using pressure washers, don’t point nozzle directly to electrical connections!

**Calibration**
Device is factory calibrated. A periodical calibration is not neccessary. To check the sensor drift perform the following steps:
- Clean the optics and immerse the sensor into a basin with distilled water.
- Ensure that no air bubbles or dirt particles falsify the measurement and agitate the sensor slightly.
- The ITM-3 shows a value between 0.4 - 0.7 % for distilled water.
- If displayed value is outside the specified range, send the unit in for recalibration.

**Showcase Diagram of different Media**

Depending on particle form and size, the slope of the characteristic curve is decreasing while turbidity is increasing. This is primarily caused by dampening/absorption effects due to multiple reflections inside the media. The turbidity measured in the production process can deviate from the graphs shown above, depending on product, process step and production process.

* Average turbidity of customary milk products at different dilutions.