LENNTECH
WATER TREATMENT SOLUTIONS

CUD33 compact turbidity device

Optical phase separation device for maximized product yield and optimized cleaning processes in Food & Beverage applications

More information and current pricing:
www.nl.endress.com/CUD33

Benefits:

- **Maximized yield:** Detect phases of your CIP process fast and avoid product loss due to precise and rapid recognition of phase changes.
- **Compact design:** Benefit from installation dimensions to save space and install the phase separation device even in tightest areas.
- **Easy handling and truly maintenance-free by design:** Only an annual ball lens cleaning is required, independent of CIP cycles. The innovative design without replaceable sealing materials eliminates O-ring changes and ongoing maintenance effort.
- **Reliable measurements:** The unique ball lens prevents interference due to air bubbles.
- **Simple installation:** Various process connections allow for easy installation in pipes. No further configuration is necessary, since the compact device delivers measured values once it's connected to the PLC.
- **Compliance:** The phase separation device complies with all relevant hygienic certifications such as 3-A, EHEDG, EU Food Contact Materials (EC) 1935/2004 and US Food Contact Materials FDA CFR 21.

Specs at a glance

- **Measuring range** 0 to 100% turbidity
- **Process temperature** -10 to 100°C 135°C for max. 2 hours
- **Process pressure** 0 to 20 bar (0 to 290 psi) abs

Field of application: The compact CUD33 turbidity device enables reliable and resource-saving CIP cleaning in food & beverage applications. It takes phase separation to the next level, ensuring maximum product output by fast and reliable detection of media change, e.g. milk/water. The 4...20 mA output can be easily connected to any transmitter or control system. Furthermore, the device offers all common

process connections in phase separation applications: G1/2" threaded, Varivent and Tri-Clamp connection.

Features and specifications

Turbidity

Measuring principle
Single beam scattered light

Application
Food & Beverages
mainly phase separation

Installation
Direct installation via G 1/2″ process connection
Tri-Clamp or Varivent

Measuring range
0 to 100% turbidity

Measuring principle
NIR backscattering sensor

Design
Compact form factor
hygienic design

Material
Stainless steel 1.4435 (316L)
surface roughness Ra < 0.37 µm

Dimension
142 mm x 24.5 mm (5.59 x 0.96 in)

Process temperature
-10 to 100°C
135°C for max. 2 hours

Turbidity

Process pressure

0 to 20 bar (0 to 290 psi) abs

Connection

G 1/2″ process connection
Tri-Clamp or Varivent

Ingress protection

IP69 (including connection cable)

Output / communication

4 ... 20 mA
4 ... 20 mA / IO-Link

Certificates, declarations and approvals

US Food Contact Materials FDA CFR 21
EU Food Contact Materials (EG) 1935/2004
CN Food Contact Materials GB 4806
EHEDG EL Class I
3-A

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