

# TurbiGuard

In-line Process Monitor for Medium to High Turbidity Measurement



## Applications

- Turbidity measurement and monitoring in beverages such as beer, fruit juices, etc.
- Supervision of centrifuges, separators, whirlpools
- Monitoring of filter performance and filter breakthrough
- Determination of solids concentration
- Yeast dosing

## Advantages

- Sealless design
- Extremely low maintenance
- High measuring span
- Linearized factory calibration over the whole measuring range
- Easy configuration and system integration

## Industries

- Beverage
- Food and Dairy Industry
- Chemical Industry
- Pharmaceutical Industry

## Innovations with tangible benefits



### Sealless Design

The days of spending time doing routine maintenance for regular replacement of seals have gone. The sealless design with sapphire windows is well-proven and established. This allows the TurbiGuard to be used in practically all process applications – from turbidity measurement in the brewing process to monitoring tasks in the chemical industry.



### Simple Concept

A single instrument which can be widely used for almost all applications, simply mounted in a standard housing without the need of tools, combined with the highest flexibility in configuration and communication – just the way state-of-the-art instruments should be designed.



### Quality- and Cost optimized

The TurbiGuard is factory calibrated with a true, linearized Formazine calibration. Once installed it is only necessary to perform an occasional zero check. The use of well-proven optical components guarantees the quality and reduces costs of purchase and maintenance. This results in a favourable total cost of ownership.



### Flexible Configuration

For simple applications and system integration the instrument configuration and communication can be easily done using the integrated Ethernet interface with a web browser in combination with the existing outputs. For a more comfortable installation and operation the optional control unit SICON with touch screen technology and colour display can be connected.



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Details and technical data:



# TurbiGuard

## Technical data

### Sensor

Measuring principle: Absorption  
 Wavelength: LED 880 nm  
 Measuring range: 0 .. 100 / 0 .. 1000 EBC  
 0 .. 400 / 0 .. 4000 NTU  
 0 .. 69,000 ASBC  
 Resolution: 0.5 EBC / 2 NTU / 34 ASBC  
 Path-length: 10 mm  
 Outputs: 1 × 0/4 .. 20 mA  
 2 × Open-Collector-Transistor  
 In-line housing Varivent®

Installation:  
 or compatible

Pipe diameter: ≥DN 40  
 Material sensor head: Stainless steel, 316L  
 Material housing: Stainless steel, 304  
 Windows: Sapphire  
 Sample temperature: -10 .. +100 °C / 14 .. +212 °F  
 Cleaning: CIP / SIP compatible up to  
 +120 °C / +248 °F @ 2 h

Pressure: 1 MPa (10 bar) / +100 °C  
 145 psi / +212 °F

Ambient temperature: -10 .. +50 °C / +14 .. +122 °F  
 Ambient humidity: 0 .. 100 % RH  
 Protection degree: IP66  
 Power supply: 9 .. 30 VDC  
 Power consumption max.: 2 W (3 W with Profibus DP)

### Operation

Configuration: Ethernet / Web-Browser  
 Communication (optional): Profibus DP, Modbus RTU,  
 HART

### Control unit SICON (optional)

Power supply: 9 .. 30 VDC  
 Power consumption max.: 8 W (with instrument)  
 Display: 1/4 VGA, 3.5"  
 Operation: Touchscreen  
 Ambient temperature: -10 .. +50 °C / +14 .. +122 °F  
 Ambient humidity: 0 .. 100 % RH

Protection degree: IP66  
 Outputs: 4 × 0/4 .. 20 mA, galv.  
 separated  
 7 × digital  
 Inputs: 5 × digital, freely configurable  
 Digital interfaces: Ethernet, microSD-card,  
 Modbus TCP  
 Optional modules (max. 2): Profibus DP, Modbus RTU,  
 HART  
 4 × 0/4 .. 20 mA outputs,  
 galv. separated  
 4 × 0/4 .. 20 mA inputs

