

MONITEK® ACOUSTIC SUSPENDED SOLIDS PROBE

MODEL AS3

ULTRASONIC REFLECTION
MEASUREMENT DEVICE

THE MODEL AS3 ACOUSTIC SENSOR, TOGETHER WITH THE MODEL AT3 TRANSMITTER, HAS BEEN SPECIALLY DESIGNED TO MEASURE PARTICLE CONCENTRATION IN A VARIETY OF LIQUIDS. THE SYSTEM CAN BE USED TO MONITOR, CONTROL AND OPTIMIZE INDUSTRIAL PROCESSES

Description:

The model AS3 Acoustic Sensor employs the principle of ultrasonic reflection. Ultrasonic pulses, reflected by particles, will be detected, evaluated and displayed as measurement values. The large span of measurement ranges (0 - 10 ppm lowest range up to 0 - 10,000 ppm highest range) cover many different applications.

Various sensor configurations allow for installation into process pipes, tanks or open channels. Optionally, the sensor can be provided for hazardous area, Zone I - Zone II, or Class 1 Div. 1, which expands the range of applications. A maximum cable length of 100 m (approx. 330 feet) allows the AT3 Transmitter to be located outside the hazardous area.

Features:

- Principle of measurement: ultrasonic reflection
- Measurement frequencies: 5 MHz and 15 MHz
- NEMA 4X / IP65
- Process insertion through pipe adapter with ball valve
- Insertion/removal without process interruption (max. 5 bar)
- Maximum pressure 20 bar (higher pressure on request)
- Maximum process temperature 90°C (110°C with air cooling)
- Insensitive to color
- Insensitive to coatings
- No wearing parts
- Self cleaning effect (ultrasonic pulses)
- Minimum maintenance
- Compatible with converter type: AT3

Applications:

Drinking water
Waste water
Chemical industry
Paper industry
Biotechnology
Beverages
Ultra filtrate
Filtrate
Pigments
Condensate
Process water
Water in oil / oil in water

Specifications:

Line size: > DN 50 (> 2 1/4")
Pressure: Max. 20 bar (higher pressure on request)
Temperature: Max. 90°C (110°C with cooling)
Material: 316 SS/PEEK (other materials on request)
Range: Application specific (max. 1 % TSS)
Cable length: 100 m (approx. 330 feet)
Optional hazardous area: Ex-zone I, Ex-zone II, Class 1 Div1
Sensor length: Approx. 300 mm / 12" (other lengths on request)
Sensor diameter: 22.3 mm / 0.9" (without cable)
Weight: Approx 3 kg / 6.6 lbs.



AS3 Probe

ACOUSTICAL SUSPENDED SOLIDS PROBE

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ACOUSTICAL CONCENTRATION TRANSMITTER

MONITEK® ACOUSTIC SUSPENDED SOLIDS TRANSMITTER

MODEL AT3

ULTRASONIC REFLECTION MEASUREMENT DEVICE

THE MODEL AT3 TRANSMITTER, TOGETHER WITH THE AS3 PROBE HAS BEEN SPECIALLY DESIGNED TO MEASURE PARTICLE CONCENTRATION IN A VARIETY OF LIQUIDS. THE SYSTEM CAN BE USED FOR INSPECTION, CONTROL AND OPTIMIZATION OF INDUSTRIAL PROCESSES

Description:

The acoustic measurement system AT3 / AS3 uses the principle of ultrasonic reflection. Ultrasonic pulses, reflected by particles, will be detected, evaluated and displayed as measurement values. The large span of measurement ranges (0 -10 ppm lowest range up to 0 -10,000 ppm highest range) covers many different applications. A process calibration curve can be created with between two and sixteen samples. A user friendly interface provides great assistance in setting up of the instrument.

Features:

- Principle of measurement: ultrasonic reflection
- Measurement frequencies: 5 MHz and 15 MHz
- High measurement sensitivity
- Programmable range (maximum 1 % TSS)
- Programmable measurement units (ppm, mg/l, %, etc.)
- Analog output: 0/4 - 20 mA (isolated)
- Linearization of measurement values
- Four programmable setpoint relays
- Backlit graphic display
- Stainless steel enclosure 316 SS/1.4571 (IP65/NEMA 4X)
- Optional hazardous area: Ex-zone I, Ex-zone II, NEMA 7
- Compatible with Monitek® AS3 sensor
- Precision: +/- 1% of range



AT3 Transmitter

Applications:

Drinking water
Waste water
Chemical industry
Paper industry
Biotechnology
Beverages
Ultra filtrate
Filtrate
Pigments
Condensate
Process water
Water in oil / oil in water

Specifications:

Supply voltage: 90 - 265 VAC, 50 - 60 Hz
Power requirement: max. 65 VA
Setpoints: programmable
Relay capacity: 48 V, 2 A
Measurement range: programmable (max. 1 % TSS)
Temperature range: -10°C - +50°C
Analogue output: 0/4 - 20 mA (isolated)
Dimensions/weight: 440 x 360 x 222 mm / 14.5 kg
17 x 14 x 8.75 / 32 lbs.

Technical data subject to change

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