Data Sheet
SS/7330_2

UV Nitrate Analyzer

7330 Series

- **Reagentless operation**
  – no expensive consumable reagents
- **Automatic cleaning**
  – maintains the integrity of the measurement with minimal intervention
- **Virtually zero maintenance**
  – replacement of wiper blades once a year is the only planned maintenance
- **Dual-wavelength measurement**
  – provides compensation for both turbidity and organics avoiding the need for expensive sample filtration, a major source of maintenance
- **Long lamp life**
  – up to 10 years operation keeping cost of ownership to an absolute minimum.
- **Automatic on-line diagnostics maintain the intensity of the light source**
  – continuous on line diagnostics maintains the integrity of the measurement.

A robust, reagentless analyzer for continuous on-line Nitrate measurement

7330 UV Nitrate Analyser

The 7330 UV Nitrate Analyzer has been designed for use on potable water treatment plants as a means of determining the quality of the final treated water. Used also for blending of high and low nitrate waters and for borehole waters. The 7330 provides continuous analysis with the minimum of manual intervention and extremely low running costs – there are no expensive chemical reagents required.

The flow-through system is supplied complete with inlet isolating valve, drain valve and a wall-mount bracket as standard.

Calibration is a simple procedure using demineralized water for setting zero and sodium nitrate to calibrate span. The inherent design ensures that the system is extremely stable and calibration needs only to be carried out at 3-monthly intervals.

Dual-Wavelength Measurement

In addition to the measurement of Nitrate at 210nm another measurement at a different wavelength compensates for both turbidity and organics interference. This sophisticated advanced technology ensures a superior compensation providing greater security of performance in applications when there are widely fluctuating sample conditions. This removes the need for expensive and maintenance-prone filtration systems, significantly reducing maintenance demands and simplifying the measurement.

Reagentless Operation

The analyzer is a straight-through system requiring no consumable reagents or pump tubes, keeping the cost of ownership to an absolute minimum.

Maintenance

Due to the simplicity of the analyzer maintenance is minimal. Apart from periodic validation of the calibration of the analyzer, and annual replacement of the wiper blades, there is no need for manual intervention.

Calibration

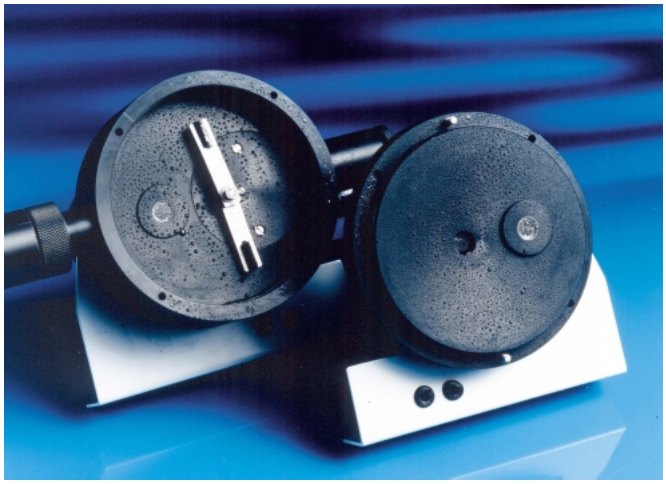
Calibration is a simple procedure using high-quality demineralized water for zero and sodium nitrate as the standard solution to adjust the span.

Installation

A wall mounting bracket is supplied as standard to enable the sensor system to be mounted on a wall or back plate.

Alarms

Two alarms are supplied as standard which can be configured as high or low programmable alarms.



Cleaning Facility

Light Source

The light source is monitored continuously for correct operation and the design of the system is such that a life expectancy of 10 years can be anticipated.

Auto-Cleaning

Optical cleaning is a key feature, ensuring optimum performance with the minimum of manual intervention. The cleaning interval is programmable to accommodate varying sample conditions.

Adding Demineralized Water for Calibration

Specification

Range

7330/100 operating ranges
0 to 100mg/l as NO_3^-
0 to 10mg/l as N

Maximum current output scale expansion
Minimum range – 0 to 20mg/l as NO_3^-
Minimum range – 0 to 4mg/l as N

Display resolution
0.1mg/l as NO_3^-
0.01mg/l as N

Accuracy
±2mg/l as NO_3^-
±0.5mg/l as N

Reproducibility
±1mg/l as NO_3^-
±0.25mg/l as NO_3^-

Response time
Normally 3 minutes for 90% step change, depending on signal damping factor

Sample flow rate
0.5 to 5l/minute (free of air bubbles)
A higher minimum flow rate is required at high turbidity levels when using the high range sensor

Sample temperature
0 to 40°C (32 to 104°F)

Sample pressure
3 bar max.

Lamp life
Up to 10 years

Display
Measured value – 4-digit backlit l.c.d.
Information – 2 x 16-character dot matrix, backlit l.c.d.

Current output
Isolated 0 to 10mA, 0 to 20mA and
4 to 20mA, programmable.
Maximum load resistance – 750Ω
Accuracy ±0.25% of FSD or ±0.5% of reading

Diagnostics
Out of sample
Lamp disabled
Loss of signal
Electronic failure

Set points and relays

No. of set points
Two, programmable over the instrument range

Relay contacts
Single pole changeover
Rating 5A 250V max. non-inductive

Diagnostic relays
Out of service relay single pole single throw
Rating 5A 250V max. non-inductive

Internal wiper cleaning system
Programmable operation frequency 15, 30, 45 & 60mins. 2, 4, 6, 12 & 24 hours

Power supply voltage
100 to 130V and 200 to 260V 50/60Hz

Power consumption
Less than 15W

Environmental Data

Operating temperature
0 to 40°C (32 to 104°F)

Storage temperature
0 to 55°C (32 to 131°F)

Protection
IP65

Operating humidity
Up to 95% RH non-condensing

Max. distance transmitter to sensor
200mm to 750mm

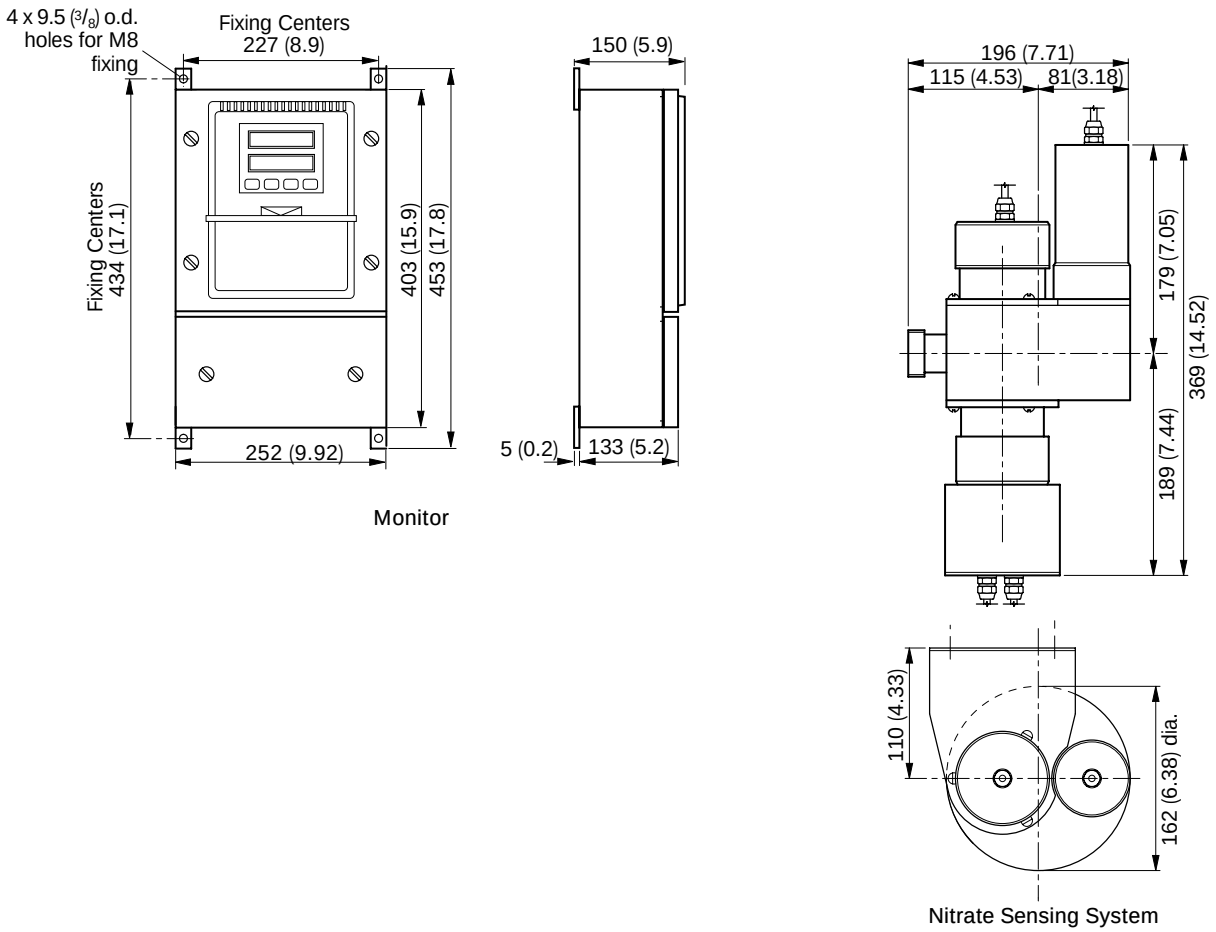
Weight
Transmitter 11kg (24.2lb)
Sensor 6kg (13.2lb)

Ordering Information

UV Nitrate Analyzer	Model 7330/	1 0 0
Range 0 to 100mg/l as NO_3 (min. range 0 to 20mg/l as NO_3) Range 0 to 20mg/l as N (min. range 0 to 4mg/l as N) Complete with two programmable alarms and choice of 0 to 10, 0 to 20 and 4 to 20mA isolated output Power supply 110V/240V a.c.		

Overall Dimensions

Dimensions in mm (in.)



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