



ENVIRONMENT
AGENCY

PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

Turbi-Tech 2000LS Sensor & 7200 Monitor Continuous Turbidity Monitoring System

manufactured by:

Partech Instruments

*Charlestown
St Austell
Cornwall
PL25 3NN
UK*

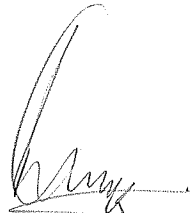
has been assessed by Sira Certification Service
and for the conditions stated on this certificate complies with:

MCERTS Performance Standards for Continuous Water Monitoring Systems, Version 2.1 (July 2006)

Certification Ranges :

Turbidity 0 to 50 FTU/NTU
 0 to 500 FTU/NTU

Project No: 674/0158
Certificate No: Sira MC 060083/00
Initial Certification: 18 October 2006
This Certificate Issued 18 October 2006
Renewal Date: 17 October 2011



Technical Director

MCERTS is operated on behalf of the Environment Agency by

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Sira Certification Service

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Approved Site Application

On the basis of the assessment this instrument is considered suitable for use on treated wastewater and receiving water applications.

Any potential user should ensure, in consultation with the manufacturer, that the water monitoring system is suitable for the process on which it will be installed.

Basis of Certification

This certification is based on the following Test Report(s) and on Sira's assessment and ongoing surveillance of the product and the manufacturing process:

Environment Agency Warrington Report Ref: EA-MCERTS-004 V2 dated September 2006
Environment Agency Warrington Report Ref: EA-MCERTS-005 V1 dated September 2006

Product Certified

The Turbidity Monitoring system consists of the following parts:

- Turbi-Tech 2000LS Sensor
- 7200 Monitor

This certificate applies to all Turbi-tech 2000LS Sensors fitted with software version 1.10 onwards (serial number 1508 onwards). This certificate applies to all 7200 Monitors fitted with software version 1.31 onwards (serial number 1241 onwards).

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Certified Performance

The instrument was evaluated for use under the following conditions:
Ambient Temperature Range: +0°C to +50°C

Results are expressed as expanded uncertainties as a percentage of the certification range 0 to 50FTU, unless otherwise stated.

Test	Results expressed as expanded uncertainties as a percentage of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<4		
Combined performance characteristic, U_c			2.0			<2%
Mean error x		0.99				<2%
Mean error x (0 to 500FTU range)		-0.58				<2%
Linearity, X_L	0.45					<1%
Linearity, X_L (0 to 500FTU range)			2.38		Note 1	<2%
Repeatability, U_r	0.37					<1%
Repeatability, U_r (0 to 500FTU range)		0.96				<1%
Drift, X_D	<1					<1%
Response time in the lab (0 to 50FTU range)						To be reported
Analogue output signal impedance, X_{OP}	0.10					<0.5%
Power supply, X_v	0.12					<0.5%
Loss of supply					Pass	To be reported
Sample flow rate, X_{SQ}					Note 2	<1%
Sample pressure, X_{SP}					Note 3	<1%
Sample temperature, X_{ST}		0.86				<1%
Ambient temperature, X_T		0.82				<1%
Relative humidity, X_{RH}		1.02				<1%

Note 1: The maximum deviation due to linearity was within the measurement uncertainty.

Note 2: Test not applicable.

Note 3: Test not applicable.

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Test	Results expressed as expanded uncertainties as a percentage of the certification range				Other results	MCERTS* specification
	<0.5	<1	<2	<4		
Incident light	0.16	0.86				<1%
Up-time					99.9%	To be reported
Response time in the field :						
Initial at average reading of 10 NTU (start of field test)					13.3 s	To be reported
Final at average reading of 10 NTU (end of field test)					15 s	To be reported
Response time in the field:						
Initial at average reading of 40 NTU (start of field test)					10 s	To be reported
Final at average reading of 40 NTU (end of field test)					10 s	To be reported
Field test error					90.3%	To be reported

Field test: The Turbi-Tech 2000 Sensor & 7200 Monitor was assessed on the basis of a three month field trial installed on an urban river application.

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Description:

The Turbidity Monitoring System consists of the 7200 Monitor, which manages the functions of the Turbi-Tech 2000LS sensor, provides the user interface, local display and telemetry output signals. The system monitors turbidity levels in the ranges 0-50 FTU/NTU to 0-500 FTU/NTU. The system can also be configured to measure extended ranges and Suspended solids where dictated by the application.

The Turbi-Tech 2000LS Sensor is enclosed in IP68 housing and comprises of an 860nm infrared light source operating on the industry standard 90° light-scatter principle. The optical part of the sensor uses two precision Pyrex glass tubes and incorporates a fully automatic self-cleaning function.

The Turbidity Monitoring System is calibrated by placing the Turbi-Tech 200LS Sensor in a standard Formazin reference solution. During the calibration procedure the level of light scattered by the Formazin solution is recorded by the 7200 Monitor and is converted into engineering units for display and transmission via the system telemetry signals. Calibration of the system is required during commissioning and then at regular intervals during operation.

General Notes

1. This certificate is based upon the equipment tested. The Manufacturer is responsible for ensuring that on-going production complies with the standard(s) and performance criteria defined in this Certificate. The Manufacturer is required to maintain an approved quality management system controlling the manufacture of the certified product. Both the product and the quality management system shall be subject to regular surveillance according to 'Regulations Applicable to the Holders of Sira Certificates'. The design of the product certified is defined in the Sira Design Schedule for certificate No. Sira MC 060083/00.
2. If certified product is found not to comply, Sira Certification Service should be notified immediately at the address shown on this certificate.
3. The Certification Marks that can be applied to the product or used in publicity material are defined in 'Regulations Applicable to the Holders of Sira Certificates'.
4. This document remains the property of Sira and shall be returned when requested by the company.

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