



On-line Water Turbidity Measuring
Turb4000 Series

Turbidity Measurement

Ref: TurbIntE

___IEEE1451.2 STIM Compatible, 1451.1 NCAP Network support. Analog and Digital Signals Output. Remote Setup and Operate.

- Continuous analysis. Direct measurement in sample
- Accurate and reliable, low-maintenance
- Self diagnostic, professional intelligent, Menu-driven digital user interface
- Auto diagnostic and alarm, optional purge or flush and bubble sucker accessories
- Easy maintenance __ on time clear or replace of sensor *in situ*
- Data log of measurements for day/month/year
- One-year warranty



Application:

- Industrial Process Water
- Boiler/Cooling Water Flow Application
- Ultrapure Water Application
- Wastewater Treatment Application
- Drinking Water Treatment
- Boiler/Cooling Generation Flow Application
- Agriculture and Aquaculture Water

Feature

- Auto temperature compensation
- User calibration at field to get high accuracy application
- One sample or on-line sample correction function available
- Experiences low power design, maybe driven by battery or solar battery in remote area.

Electronics of STIM Transducer

Linear analog signal output, 0/4 to 20 mA select. default status is 0 to 20 mA
RS232 serial port always available, RS485 attached as to BD5xB upper configuration.

Power supply: DC 9 to 24 V; consumption<100mAx5V

Intrinsic safe design

Alarm drive output available

ADC resolution: 16bit

For more details, please refer to : BD4&5IntE

Specifications Table for Different Design

MODEL	Specifications
Turb.1t 4110 Turbidimeter Transparent photometer	For Pure and ultra pure water. Range: 0-200 NTU Resolution: 0.01NTU Accuracy: 0-20 ±2%R ; 20-2,00 ±5%R Repeatability: 1%FS Temperature: 0-60°C Pressure:<10 kgf/cm ² . Insert Depth: 120mm Connect: NPT1", or ZG1"
Turb.2t 4120 Turbidimeter Double Wave Length Photometer Only for complex background Applicatoin	Range: 0-2;0-20;0-200;0-2000 NTU ; Accuracy: ±2%FS/ low; ±5%FS/High Repeatability: <±1% FS Resolution: 0.05%FS Linearity: <±1% FS Response: 10s-2mins Flow:100-1000ml/min Temperature: 0-60°C Pressure:<10 kgf/cm ² . Dip Size: D177*312mm CLA Size:
Turb.2r 4230 Turbidimeter 3Sensor Disperse (MLSS, high suspended or floating materials application)	Range: MLSS: 0-50,5000mg/L Accuracy:±2-5% FS Repeatability: ±1% FS; Resolution: 0.1%FS; Flow: 100-1000ml/min Temperature: 0-60°C Pressure:<10kgf/cm ² . Insert Depth: 120mm Connect: NPT1", or ZG1"
Turb.90d 4210_640 Turbidimeter 90° dispersive Turb.90d 4210_640 for USEPA 180.1 Turb.90d 4210_880 for ISO 7027 / EN 27027	Pure, drinking water, and any common fields. Range: 0-100 NPT, Max 100g/L Accuracy: ±2-5% FS Repeatability: <±1%R Resolution: 0.01NTU Temperature: 0-50°C Pressure:<10 kgf/cm ² . Insert Depth: 120mm Connect: NPT1", or ZG1"



Turb.90d 4210_640 Turbidimeter

The most popular turbidity technology

	Feature	Application
Turb4210D	<p>Benefits at a glance</p> <ul style="list-style-type: none"> •Measuring range from 0.01 FNU to 100 g/l – from completely clear to completely black •Scratch-proof sapphire windows •Compact shock-proof design •Integrated temperature measurement •Inclined flat sensor surface uses medium flow to increase self-cleaning effect and repels water bubbles •Sapphire measuring window •Flow assembly option available for gas bubble removal •Measurement under pressure to avoid degassing •For direct installation in water pipes, •For installations in pipes or basins •Simple commissioning •3-point calibration and 1-point adjustment •7 calibration data records according to customer specifications can be stored •Wiper cleaning integrated or retrofitted •Flat sensor surface uses medium flow to increase self-cleaning effect 	<p>Areas of application</p> <p>Optical solids content measurement is indispensable as a regulating variable</p> <p>for operation in following areas:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Sewage treatment plants <ul style="list-style-type: none"> – Primary sludge – Activated sludge – Returned sludge – Putrefied sludge <input type="checkbox"/> Outlet <input type="checkbox"/> Paper <ul style="list-style-type: none"> – Monitoring of sieve water – Water processing <input type="checkbox"/> Concrete <ul style="list-style-type: none"> – Measurement of soiling <input type="checkbox"/> Production <ul style="list-style-type: none"> – Water processing – Water monitoring
Turb4210DU	<p>Range: 0.01-2000 FNUL</p> <p>Using one cap to avoid any interface from wall and other light sources</p> <p>Special for open vessel, lake, other otherwise exposed to sunshine</p>	The same
Turb4210DTU	<p>Range: 0.001- FNUL</p> <p>Special for low limit detect</p>	Pure water Boiler water
SPM4210MLSS	0-100g/L	MLSS

Application Note for turbidity measurement

Problem	Solution
Bubble	Use BulbleSuck, or Ultra sonic bubble driver
Color	The best way is to use Turb.2t 4120 Turbidimeter Or choose 860nm or 680nm to reduce the influence
Temperature	Self corrected in our products

Installation and Sampling Accessory

CPA1	G 1" or 1"NPT insertion installation	
CPA2	Dip accessory, extend CS1 with 1" pipe	
CPA3	Sinking accessory, CS1with extending pipe, frame, and clearing system	
CPA4	By flow installation, CS1with one 1" cross	
BubbleSuck	Flow throw type, fitting to CS1 insertion directly	1/4" inlet and outlet

Order information

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More Information for Water Transducers

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Electrochemical transducer: <http://www.fullsense.com/Products/BD3000/CPT3200/CPT3200IntE.htm>

Electrochemical sensor: http://www.fullsense.com/Products/BD3000/CPelectrodeList_E.htm

Conductivity transducer: <http://www.fullsense.com/Products/Liquid/Water/SCT/SCTIntE.htm>

Turbidity transducer: <http://www.fullsense.com/Products/Liquid/Water/Turbidity/TurbIntE.htm>

Mud concentration transducer: <http://www.fullsense.com/Products/Liquid/Water/Mud/MudIntE.htm>

TDO(TOC/COD/BOD) transducer: <http://www.fullsense.com/Products/Liquid/Water/TDO/UV4120TDOIntE.htm>

Multi-parameters transducer: <http://www.fullsense.com/Products/Liquid/Water/wm10/wm10IntE.htm>

Water transducer application: <examples>

BD4Controller & BD5 STIM

<http://www.fullsense.com/Meters/>

BD4&5Introduction: http://www.fullsense.com/Meters/BD4_IntE.htm

BD4&5 Functions: http://www.fullsense.com/Meters/BD4_TB_E.htm

BD4&5 Selection: http://www.fullsense.com/Meters/BD4_Sel_E.htm

BD4_5Configuration: http://www.fullsense.com/MetersBD4_Cfg_E.htm

BD4Application: http://www.fullsense.com/Meters/BD4_AG_E.htm

Related Technical References:

<http://www.fullsense.com/Network/>

Scom Protocol

STIMcom Protocol

IEEE1451.1 NCAP Protocol

IEEE1451.2 STIM Protocol