Process Turbidity and Suspended Solids Analyzer

- ***Dual-beam infrared/scattered light photometer measuring method***
- ***Large size customized LCD display & back light***
- ***Isolated 4-20mA & Communication port output***
- ***Self-cleaning wiper assembly***
- ***Optional Data Logging & Download***

---- Controller ----

Model : WZ-TDS400

----- Sensors -----

Model : TDS-100 Series

Introduction

WATERZOnE® series is a industrial local type Turbidity or Suspended Solids analyzers it is a kind of water quality analyzer-it measure Turbidity or Suspended Solids density and display and transmitted analog signal. It is designed and programmed to meet the customer desire for the industrial process, which requested continuous measuring (on line) of Turbidity or Suspended Solids.

WATERZOnE® series model WZ-TDS400 is possible to 2"(50A) pipe mounting and panel and wall mounting.

And it have many function and feature like adopt micro processor, custom LCD (backlit), Front operation lamp, self diagnosis, temp compensation, data storage functions and display can show measuring values, temp, output bar-graph and other image I-con and message.

It also support the isolated 4~20ma analog signal and communication port and, hi low relay alarm function as optional.

Model WZ- TDS400 have automatic wiper cleaning and data logging function. so it increase the reliability of products function.

Main function and features

- Microprocessor control type
- Large size customized (LCD) display (110x84mm)
- Easy check of error by operation lamp
- Auto lamp on/off control by solar detector
- Auto buffer recognition and auto./manual calibration
- 4-Beam-Pulsed-light Measurement Technique
  (2 Near-Infrared (880nm) Emitting Diode,
  2-Silicon Photo detectors)
- 360° automatic wiper cleaning
- 2"pipe, panel and wall mounting
  (Confer specification sheet or order code)
- Optional –Data Logger : 32,700 Point data save.
  Save Period : 1~30 Minute Selectable
  1Minute is 22Day
  30Minute is 680Day
  Download to PC : RS-485 & Viewer Program

Applications

- Water & Wastewater Treatment
- Power plant control and
  production line water quality measurement
- Products process line and plating treatment facility
  water quality measurement
- Purification, waste water treatment plant water quality
  measurement
- Water cultivation and
  Fish Farm Water Quality Measurement
- Other water quality measurement and control field

■ Standard Specifications

General and Technical Data

▶ CONTROLLER -- (Microprocessor based transmitter)

● Products name	Turbidity and Suspended Solids Analyzer
● Model	WZ-TDS400
● Measuring Method	4 Beam Infrared/Scattered light Photometer (2 Near-Infrared, 2-Silicon Photo Detectors)
● Measuring Range	0 ~ 4,000 NTU, ppm, mg/l, % & User's Selectable
● Display	* Large size customized (LCD) display (110x84mm) * Auto backlight on/off by solar detector sensor * Easy check of the error by front operation lamp * Output values ,output bar graph, relay operation , * Temp compensation message and other image icon
● Power Supply	AC 110/220V 50/60Hz 3Watt
● Outputs	Two Isolated 4~20mA DC (750 ohms Max. Load)
● Communications	RS-485 or RS-232C
● Relay Output	High, Low (5A @ 250VAC Max.)
● Operation Temp / Humidity	Operating Temperature : -30 to 80℃ Relative Humidity : 0 to 95%, None-Condensing
● Accuracy	+/- 1 % of Full Scale
● Repeatability	+/- 1 % of Full Scale
● Responds time	50sec (90% Saturation)
● Enclosure Material	Enclosure : Aluminum daicast / Front cover : Glass Key pad (enclosure inside) : Membrane 6-key
● Dimensions	170 (W) X 190 (H) X 79 (D)mm
● Protection Class	NEMA 4X / IP 65
● Inlet Connection	1/2" PT(NPT) X 3EA
● Installation	2" pipe, panel and wall mounting
● Weight	About 2.0kg

▶ Submersion Type Sensor

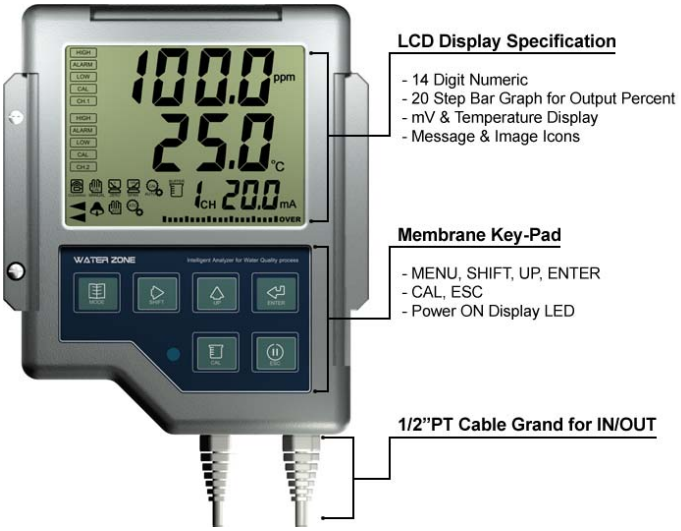
● Model	TDS-100	TDS-200
● Product Description	Turbidity Sensor (Submersion type)	Suspended Solids Sensor (Submersion type)
● Measuring Method	4 Beam Infrared/Scattered light Photometer (2 Near-Infrared, 2-Silicon Photo Detectors)	
● Ambient Conditions	Operating temperature – 60℃ (Max.) Operating pressure – 3 bar (Max.)	
● Cleaning Method	Wiper (360° Move rotary)	
● Holder Length	1000, 2000mm & Optional	
● Material Construction	Body – STS304, POM	
● Cable length	5M & Optional	
● Mounting	`L` Rack & 2"(50A) pipe	

■ 각부 명칭 및 기능 (Component Part)

■ **Display : Customized LCD display**
numeric 14digit and I-con
20 step bar graphic display and
message display

■ **Key pad : Mode change and calibration,**
setting values change mode, shift,
up, enter, cal, esc key

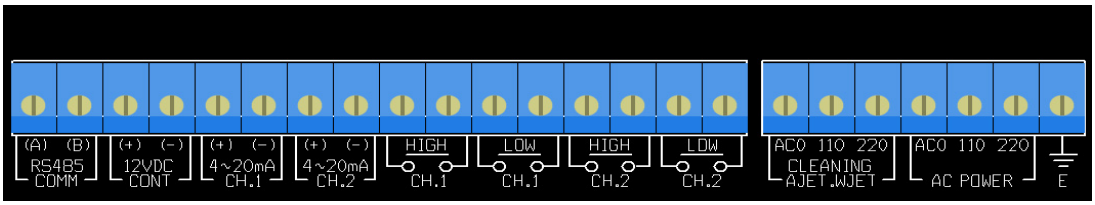
■ **Connector : 1/2”PT connection X 3ea**
(sensor cable, signal cable, power cable)



● Confer manual for more detail about key operate and function

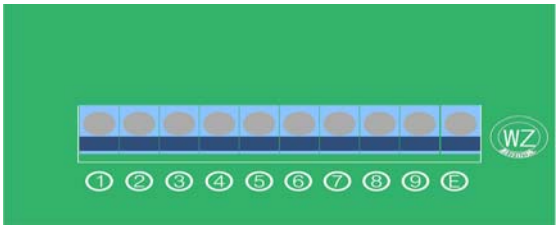
☞ **MODE**	**Hi / low alarm relay. hysterisis band. current output range. manual ATC temp. measuring damping air-jet cleaning cycle setting. current test function**
☞ **SHIFT. UP**	**Setting Values change and function key**
☞ **ENTER**	**Setting values storage and parameter setting**
☞ **CAL**	**Auto/manual calibration mode operation key**
☞ **ESCAPE**	**Setting values change cancel and move to measuring mode**
☞ **Program Run Lamp**	**Show the programming process during measuring**

■ 결선도 (Inside Terminal View)



① ② ③ ④ ⑤ ⑥

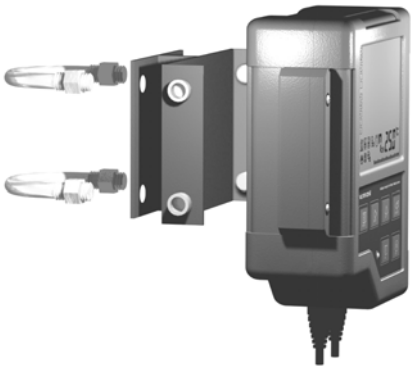
① Standard rs-485communication port terminal (or RS-232C),optional specification.
② Our air-jet cleaning control terminal, It generate 12vdc each channel when it auto/manual cleaning
③ In case of 1channal type, Ch.1 (+)(-) transmit 4~20mA DC proportional for measuring value and
Ch.2 (+)(-) transmit 4~20maA DC proportional for temp(0 ~ 100℃).
In case of 2channal type, Ch.1 (+)(-) transmit 4~20mA DC proportional for measuring value channel 1.
Ch.2 (+)(-) transmit 4~20mA DC proportional for measuring value channel 2.
④ Hi / Low alarm relay output, in case of 1 channel, the ch.2 alarm dose not supply
⑤ When it use air jet and water jet cleaner, it generate AC220V for operate air compressor and Solenoid control
(Even in case of meter power supply AC110V, use AC220V solenoid valve)
⑥ Connect meter power and earthling



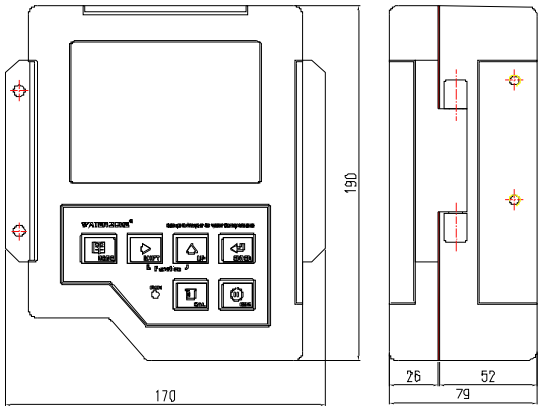
● **Sensor input connection**

(1) Input card locate upper inside of main terminal,
Sensor connect with ① ~ ⑨ terminal.

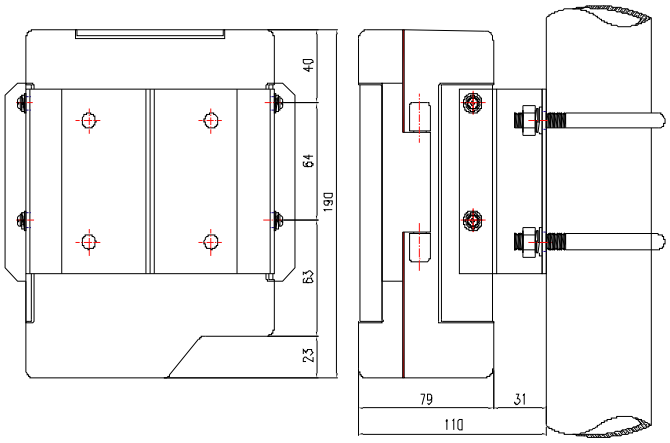
Installation

		
2 inch Pipe Mounting	**Wall or Surface Mounting**	**Submersion - 2 inch Pipe**

Dimensions



Wall or Surface Mounting



2 inch Pipe Mounting

■ Ordering Information – Controller

WZ-	Microprocessor control function and 2”(50A) pipe, panel and wall mounting type Controller

Model Number
TDS400 ➧ Turbidity and Suspended Solids Controller

Measuring Range --- NTU, %, ppm, mg/l
A. 0 ~ 1000 B. 0 ~ 2000 C. 0 ~ 3000 D. 0 ~ 4000
U. Optional ( )

Signal Outputs
1. Analog 4 ~ 20mA DC X 1 ea
2. Analog 4 ~ 20mA DC X 2 ea
U. Optional ( )

Communication Output
N. None A. RS-485 D. Data logger access
U. Optional ( )

Mounting Method
1. 50A Pipe Mounting
2. Wall Mounting

WZ-	TDS400	D	1	D	2	Order code example

▪ Please read order code carefully when you place order sheet.

■ Ordering Information - Sensors

TDS-	Turbidity and Suspended Solids Sensors

Model Number
100 ➧ Turbidity Sensor for Submersion in open tanks
200 ➧ Suspended Sensor for Submersion in open tanks

Submersion Holder Material
N. None 1. STS 304 2. STS 316
U. Optional ( )

Submersion Length
N. None 1. 100 2. 500 3. 1000
U. Optional ( )

Cleaning Type
N. None 1. Wiper
U. Optional ( )

Mounting Method
L. `L` Rack type (Standard) P. 50A pipe type
F. Flange type C. Chain type
U. Optional ( )

Cable Length
1. 10M 2. 15M 3. 20M
U. Optional ( )

TDS-	100	1	N	K	3	1	Order code example

▪ Please read order code carefully when you place order sheet.