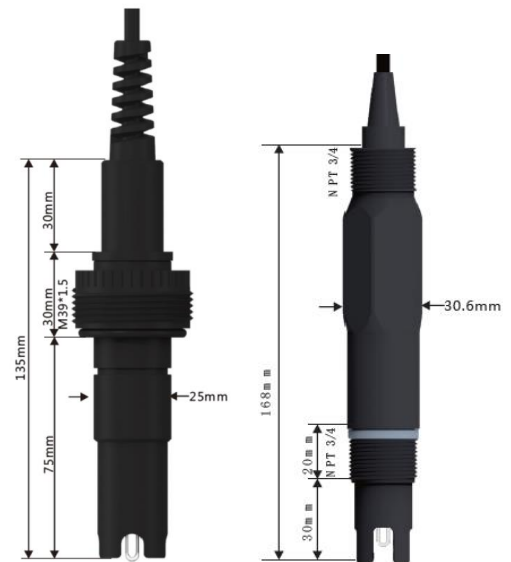


Water Quality Analysis Total Dissolved Solid Sensor

WS102-TDS

WS102-TDS is a smart water quality analysis Total Dissolved Solid sensor, which can be used to detect and distinguish pure water, mountain spring water, mineralized water, purified water, tap water, sewage, etc.

At the same time built-in temperature detection, measuring range 0 ~ 60 °C. The sensor supports analog 4-20mA and RS-485 (ModBus RTU) for user application , and 2 types of thread for different installation.



Features & Benefits

System Parameter	
Power supply	DC10-30V(Recommend 12V)
Pressure range	0~400KPa (0~4 Bar)
Shell material	PC, PBT Anti-Corrosion
Cable length	5 Meters, or customize length by request
Protection grade	IP-68
Weight	0.5kg (Without packaging)
Install Thread	WS102-TDS-M: M39 x 1.5 ; WS102-TDS-N: NPT 3/4
Inspection Parameter	
TDS Range	0~1000 ppm ≈ 0 ~ 2000μS/cm
TDS Resolution	0.01μS/cm
TDS Accuracy	≤± 3% Full Scale
Temperature Range	0~60 °C
Temperature Resolution	0.1°C
Temperature Accuracy	±1 °C Full Scale
Temperature Compensation	Automatic
Output	RS-485A/B 2-Wires (Modbus RTU); 4~20mA, 1% Full Scale Accuracy
Communication Protocol Basic Parameter	
Protocol	Modbus RTU
Data bits	8 bits



Features & Benefits

Parity bit	No
Stop bit	1
Error Detecting Code	CRC
Baud Rate	9600bps(Default)

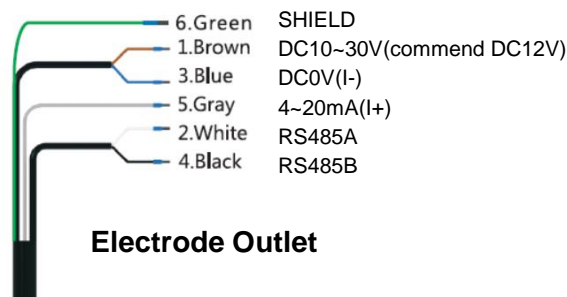
Address Description

Name	Register Addr.	PLC Addr.	Data Type	Length	R/W	Description
Temperature	0x 00 04	40005	Float	2	R	Storage location for measured temperature
TDS	0x 00 06	40006	Float	2	R	Storage location for measured value
Current output	0x 00 20	40033	Float	2	R	Output current based on TDS measurements
Band Rate	0x 00 12	40019	Float	2	R	2400 , 4800 , 9600(Default) 19200 , 38400
Slave ID	0x 00 14	40021	Float	2	R	Default Value:1;1~254
Band Rate	0x 00 12	40019	Signed	1	W	2400 , 4800 , 9600(Default) 19200 , 38400
Slave ID	0x 00 14	40021	Signed	1	W	Default Value:1;1~254
Restore factory	0x 00 64	40101	Signed	1	W	

Note: More Detail Information, Check QIG.

✓ Electrode wiring

- Please follow the instructions carefully , the wrong wiring will damage the product completely.
- Please carefully check all the wiring in the system and confirm that the wiring is complete right before switch on the power.
- **Note: RS485A line and RS485B line are strictly forbidden to contact with the power supply line, otherwise the communication of the electrode will be permanently damaged.**



Ordering Information

Model	Description
WS102-TDS-M-k1	Total Dissolved Solid Sensor, 0~1000ppm, TEMP. MEASURING RANGE: 0~60°C, 5 METER CABLE, RS485 MODBUS, 10-30V POWER, M39x1.5 Thread, k=1
WS102-TDS-N-k1	Total Dissolved Solid Sensor, 0~1000ppm, TEMP. MEASURING RANGE: 0~60°C, 5 METER CABLE, RS485 MODBUS, 10-30V POWER, NPT ¼ Thread, k=1
Package List	
	1 x Product Unit
	1 x QIG