Conductivity TDS Resistivity Salinity Temperature Analyzer

Online – Panel & Field Mounted

MS CT 9



FEATURE

- Advanced Embedded Microcontroller Based Design
- Multivariable Display for Process Value, Relay Status, Temperature & 4 to 20 mA output
- Easy front key five Point calibration
- Auto / Manual Temperature Compensation
- Password can be set
- LCD display with Backlit
- Panel / Field / Wall Mounting
- 4 to 20 mA DC and RS 485 Modbus Output
- Weatherproof IP 65 protection

DESCRIPTION

Conductivity of water allows measuring ionic constituents of all types of water including surface water, process water in water supply and treatment plants.

PRINCIPLE

Conductivity is the ability of a solution, a metal or a gas - in brief all materials to pass an electric current. In solutions the current is carried by cations and anions whereas in metals it is carried by electrons. How well a solution conducts electricity depends on a number of factors

• Concentration of ions

• Mobility of ions

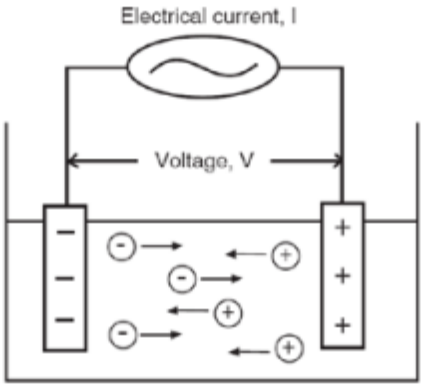
• Valence of ions

• Temperature All substances possess some degree of conductivity.

In aqueous solutions the level of ionic strength varies from the low conductivity of ultrapure water to the high conductivity of concentrated chemical samples. Conductivity may be measured by applying an alternating electrical current (I) to two electrodes immersed in a solution and measuring the resulting voltage (U). During this process, the cations migrate to the negative

Electrode, the anions to the positive electrode and the solution acts as an electrical conductor.

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The resistance of the solution (R) can be calculated using Ohm's law as shown below. The resistance unit is [Ohms] or [Ω].
R= U/I
Where:
U = voltage [V]
I = current [A]
R = resistance of the solution [Ω]
The conductance (G) is defined as the reciprocal of the electrical resistance (R) of a solution between two electrodes. It is measured in Siemens [S] which equals [Ω^{-1}].

TECHNICAL SPECIFICATION

Principle	: Two Electrode & Four Electrode
Display Range:	
Conductivity	: 0.00 to 500 mS/cm
Resistivity	: 0.00Ω.cm to 18.00MΩ.cm
TDS	: 0.00 to 250 g/L
Salinity	: 700 ppt
Temp	: -10 to 150°C
Resolution	: Conductivity: 0.01μS/cm; 0.01mS/cm Resistivity: 0.01MΩ.cm TDS: 0.01mg/L Salinity: 0.01 ppt Temp: 0.1°C
Accuracy	: Conductivity: ±0.5%F.S; Temp: ±0.3°C
Stability	: ＜2%F.S
Temp Compensation	: Automatic or manual (NTC 2.25KΩ, NTC 10KΩ, Pt100, Pt 1000)
Relay Output	: Two SPST relays, 3A 250VAC, 3A 30VDC
Communication	: RS 485 MODBUS RTU
Signal Output	: 0/4 to 20mA current
Configuration	: Power failure protection, indefinite retention of Parameters
Display	: 128 x 64 3.2-inch large graphic dot matrix LCD
Protection Grade	: IP65
Enclosure Material	: Enhanced ABS
Dimension	: 98 x 98 x 130mm (Panel Cutout size 92x92mm)

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Work Temperature	: 0 to 60°C, RH<95%, non-condensing
Storage Temperature	: -10 to 60°C, RH<55%, non-condensing
Electrical Interface	: Reserve three M12 x 1.5 gland
Mounting	: Panel & Field (both accessories included)
Power Supply	: 85 to 265VAC, 9 to 36VDC(Optional)
Weight	: 0.6 kg
Power Consumption	: < 3W

APPLICATION

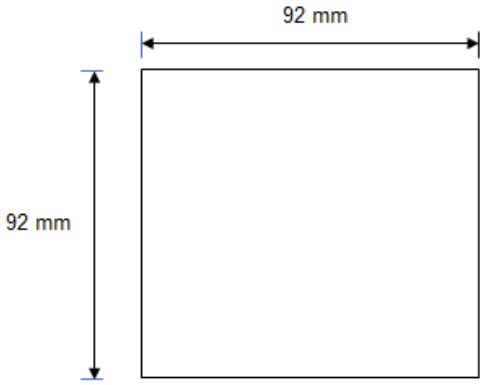
Water Treatment Plant (WTP)	Wastewater Treatment Plant (WWTP)
Effluent Treatment Plant (ETP)	Sewage Treatment Plant (STP)
RO Water Plant	Power Plant
Hydroponics	Chemical Industry
Textile Industry	Paper & Pulp
Beverages / Food Industry	Pharma Industry
Scrubber Application	Pigment Industry
Steel Industry	Aqua Culture

DIMENSION

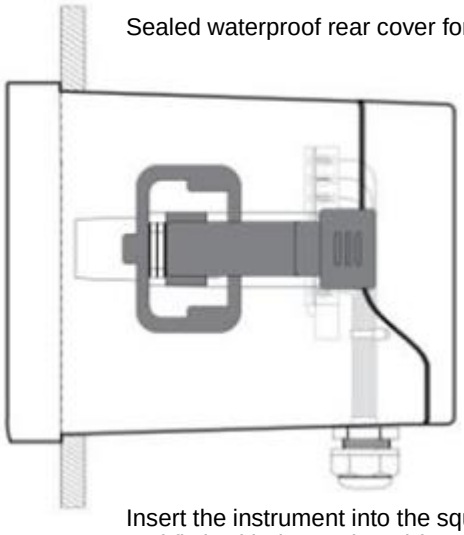


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PANEL MOUNTING INSTALLATION

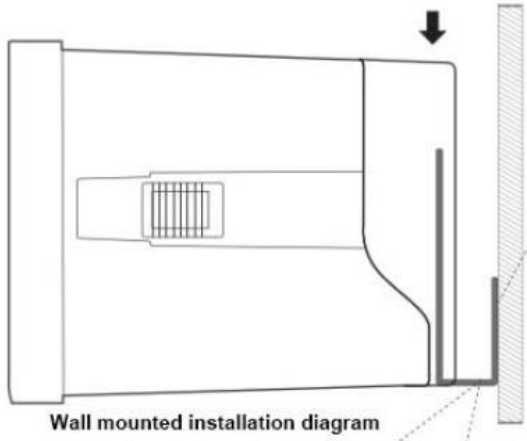


Sealed waterproof rear cover for installation



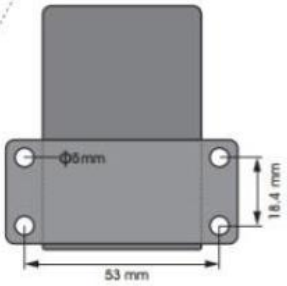
Insert the instrument into the square hole and fix it with the equipped fasteners

FIELD MOUNTING INSTALLATION

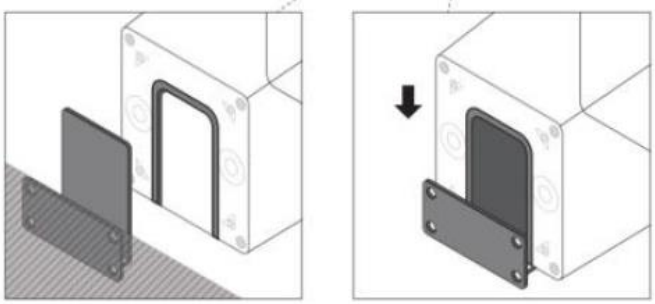


Wall mounted installation diagram

a.First install the fixing bracket, with M4 screw on the wall.
b.Clip the instrument into the mounting bracket along the notch.



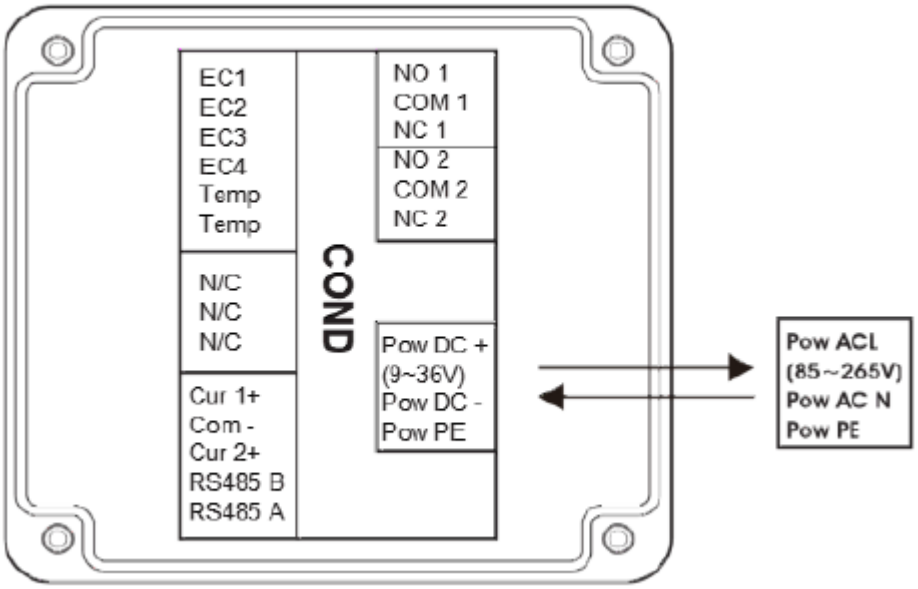
Fixed frame dimension drawing



a. First install the fixing bracket (M4 screw) on the wall.
b.Clip the instrument into the mounting bracket along the notch.

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TERMINAL DETAILS



Note : Due to continuous improvement in product, specifications & looks may vary