

AquaDuo Set B

AquaDuo Set B is a solution that will simplify water quality measurement. and more efficiently can be used in the food, beverage, and agricultural production industries. By monitoring pH (positive potential of the hydrogen ions) and EC (Electrical Conductivity) values from IoT devices through a dashboard on the software platform in real time. and notification system via LINE Notify.



Key Features



Ability

There is a software platform that can monitor the operation of the device in real time, such as measuring pH, electrical conductivity, temperature and relative humidity.



Easy installation and compatibility

The solution has been developed in a plug and play format. allowing easy connection to other devices or sensors, such as in the food, beverage, and agricultural production industries.



Easy to use

User manuals and display screens of the platform software have been prepared to be easy to understand and in Thai language.



Strength and durability

The cabinet material is made of steel. Has a cover and roof for dustproof and waterproof protection.



Customization and flexibility

Supports customization or additions according to specific requirements such as a Airlar solution, dissolved oxygen sensor, weather station sensor, measure the amount of rain, Chlorine sensor, Nitrate sensor, Phosphorus Sensor, and Potassium sensor.



Data Security

It has an industrial-grade Industrial IoT eSIM (MFF2) chip designed to operate in industrial environments. and can connect to the internet with service provider networks in Thailand It also has an encrypted hardware chip. (CryptoAuthentication) makes data transmission using IoT technology extremely secure and reliable.



Microchip ATECC608A



Micro SD card



USB type C port

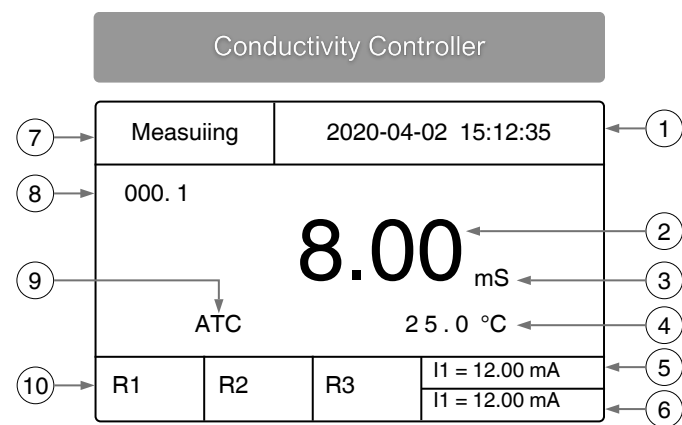
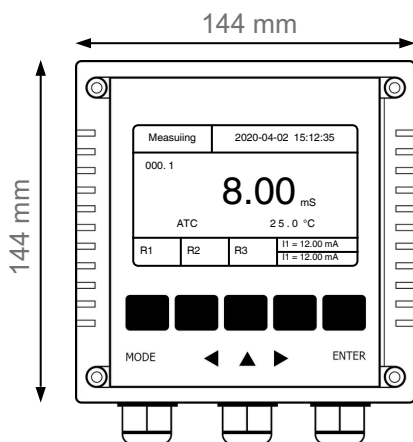
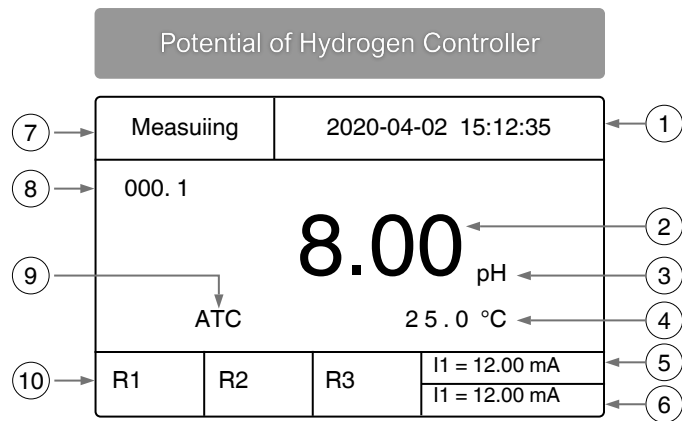
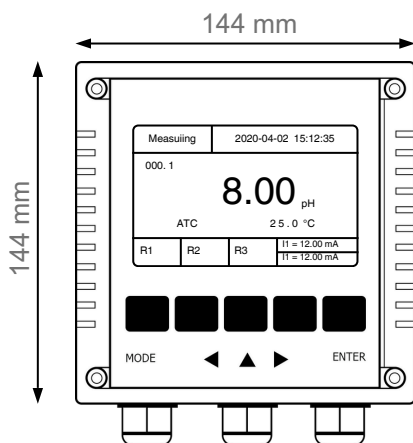
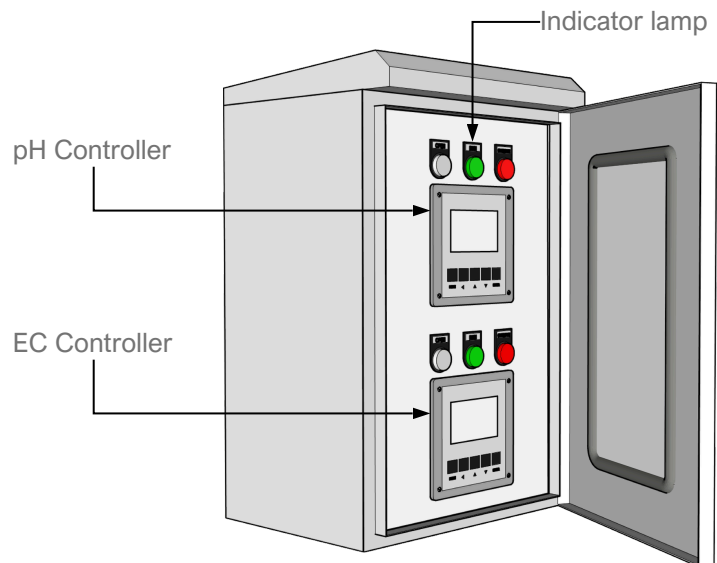
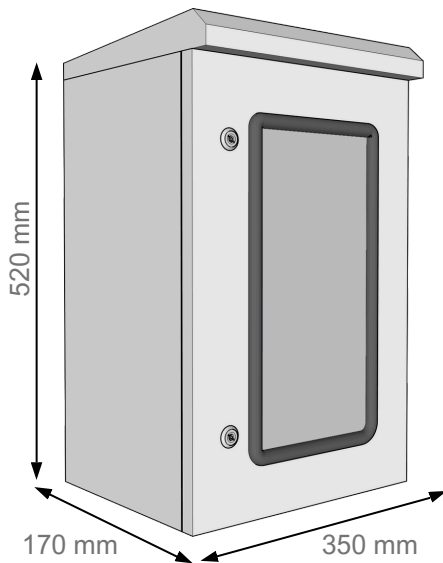


ARM Cortex-M 32-bit



RS485 / RS232

Overview



1. Date and time

2. Main display

3. Unit

4. Temperature and unit

5. First current output

6. Second current output

7. Measurement status and Error indicator

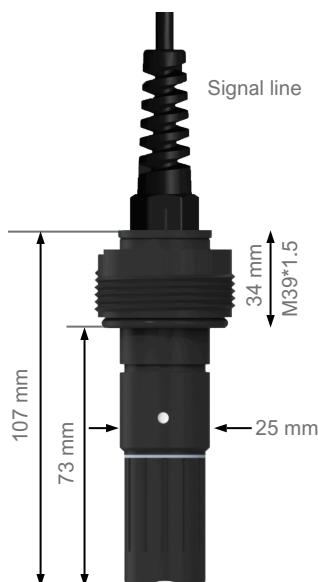
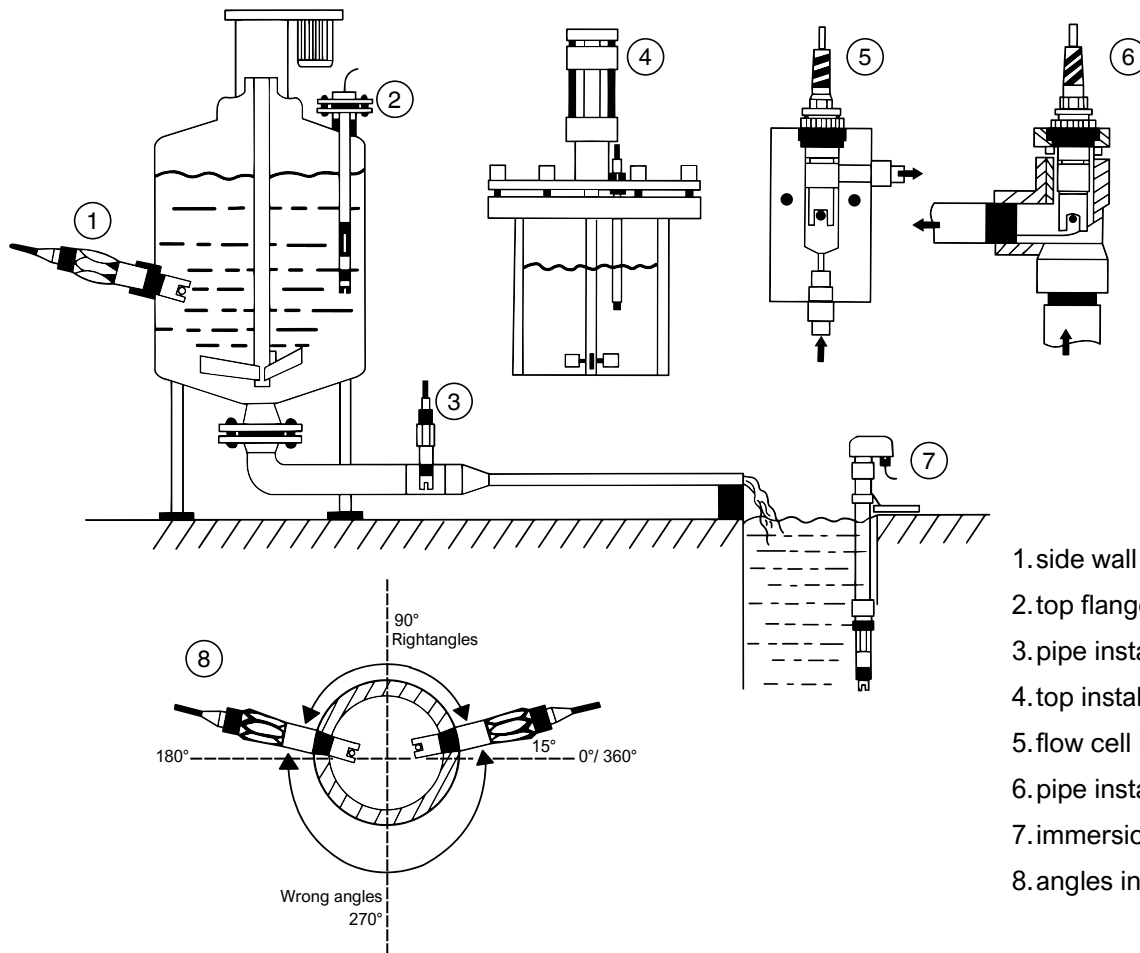
8. Count down timer

9. Temp. compensation: auto(ATC) or manual(MTC)

10. Relay indicator

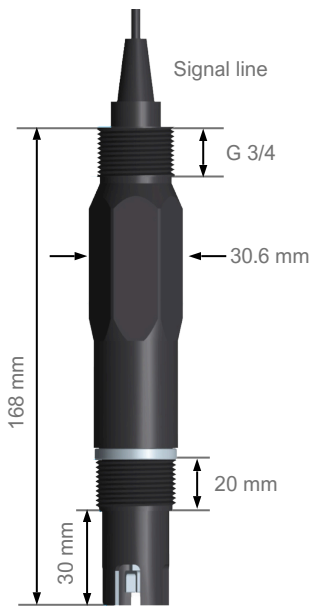
Overview

Electrode Installation



Potential of Hydrogen Sensor (pH)

Suitable for pH measurement of various substances in medicine, agriculture, wastewater treatment, water quality control in various production processes such as food, beverages, medicine, etc.



Conductivity Sensor (EC)

Suitable for water conductivity measurement such as water treatment, measuring nutrient concentration in soil solution, checking water quality in aquaculture, controlling drinking water production quality, etc.

Product Description

MCU	ARM Cortex-M 32- bit RISC ARM Processor cores
Interface port	RS485 or RS232 isolation with auto-direction (Software mode selection) RS485 or I2C with auto - direction
Indicator lamp	LED Open LED Run LED Overdue
Power supply	24 Vdc
Display	LCD
USB type C port	Program Upload
Case	Aluminium
pH sensor	<p>Technical data</p> <ul style="list-style-type: none"> • PH range : 0 - 14pH (Resolution : 0.01 pH, Accuracy : ± 0.01 pH) • PH balance : 7.00 ± 0.25 • Temperature range : 0.0 - 60°C (Resolution : 0.1°C Accuracy : ± 0.3 °C) • Temperature compensation : Automatic • Output : RS485;4 - 20mA • Power supply : DC9-30V(Recommend 12V) • Pressure range : 0 - 3bar • Shell material : PPS, ABS • Liquid junction : PTFE • Pipe thread : 3/4, M39* 1.5 • Cable length : 5m or customized • Protection grade : IP68

Product Description

pH Controller	<p>Specifications</p> <ul style="list-style-type: none"> Measuring range : 0.00 - 20.00/0.00 - 2.00 $\mu\text{S/cm}$ Resolution : 0.01/0.001 $\mu\text{S/cm}$ Accuracy : $\pm 0.01\text{ppm}$ / $\pm 0.001 \mu\text{S/cm}$ Temp. compensation : -10.0 - 130.0°C Temp. range : -10.0 - 130.0°C Temp. compensation range : -10.0 - 130.0°C Storage temp : -20 - 70°C Display : Back light, dot matrix LCD display Current output accuracy : $\pm 0.05 \text{ mA}$ Baud rate : 9600/19200/38400 Relay delay: 0 - 120 seconds Data logging capacity : 500,000 Waterproof grade : IP65
EC sensor	<p>Technical data</p> <ul style="list-style-type: none"> Support measuring : Conductivity / TDS / Salinity Measuring range : 0..2000$\mu\text{S/cm}$ Accuracy : <2% Resolution : $\pm 1 \mu\text{S/cm}$ Temp. measure range : 0.0 - 60.0 °C Temp. compensation : Automatic/Manual Output signal : RS485;4 - 20mA Power supply : DC9 - 30 VDC Recommend 24 VDC Shell material : PPS, ABS Pipe thread : M39* 1.5, 3/4 Cable length : 5m or customized Protection grade : IP68
EC Controller	<p>Specifications</p> <ul style="list-style-type: none"> Measuring range : 0.00 - 20.00/0.00 - 2.00 $\mu\text{S/cm}$ Resolution : 0.01/0.001 $\mu\text{S/cm}$ Accuracy : $\pm 0.01\text{ppm}$ / $\pm 0.001 \mu\text{S/cm}$ Temp. compensation : -10.0 - 130.0°C Temp. range : -10.0 - 130.0°C Temp. compensation range : -10.0 - 130.0°C Storage temp : -20 - 70°C Display : Back light, dot matrix LCD display Current output accuracy : $\pm 0.05 \text{ mA}$ Baud rate : 9600/19200/38400 Relay delay: 0 - 120 seconds Data logging capacity : 500,000 Waterproof grade : IP65
Enclosure size	H: 500 x W: 350 x D: 280 mm
Weight	20 kg.