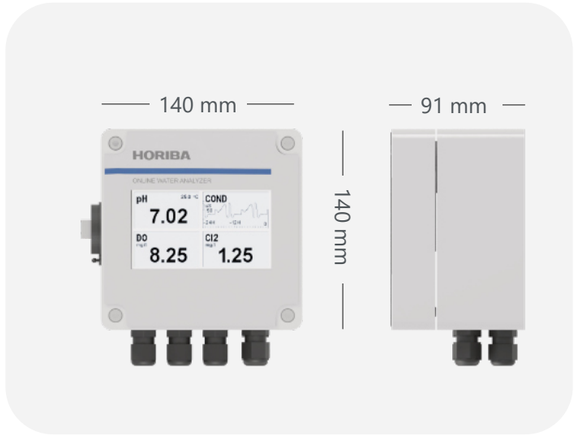
EL200

Mono & Muti-Channel Water Controller

The EL200 is a configurable water controller that can adapt to many different probes and configurations, mono or multi-channel, among pH, ORP, UV254, Ammonia, dissolved oxygen, conductivity, chlorine, turbidity, total suspended solids (TSS) and temperature.

It includes by default:

- one pH/ORP input
- two 4-20 mA inputs for analogic probes (chlorine, turbidity)
- one RS485 port for up to 4 digital probes (dissolved oxygen, turbidity, UV254, Ammonia, TSS).
- two 4-20 mA outputs
- four relays contacts for high/low alarms, multiplexing or probe default
- one RS232 port for Modbus communication or web server with an Ethernet or Wi-Fi interface
- one RS485 port for Modbus communication



>Technical specifications

Inputs	1x pH/ORP connector 2x 4-20 mA RS485 for 4 probes
Outputs	2x 4-20 mA active output, 2-wire or 4-wire (15V DC galvanically isolated source 1x 12 VDC 2x free sockets for optional modules among : 4-20 mA I/O, Relays, pH, ORP, conductivity*
Relays	4x electromechanial SPDT (form C) contact 5A
Measuring mode	Continuous
Memory	288 lines of measurements (up to 7 channels) with date and time.
Power supply	100 - 240 VAC ±10% 50/60Hz 20 VA max 24 V DC 0.5A max
Touch Screen	Colour TFT LCD 480x272 pixels with LED backlight
Communication	RS232 / RS485 with MODBUS protocol, USB
EMC & Safety Standard	CE, EN61010-1, EN61326
Mounting	Wall mounting
Enclosure	Aluminium with Epoxy coating, IP65
Weight	2 kg approx.

** Optional module*

>Parameters available

> Probes and sensors

pH	Potentiometric	**ORP**	Potentiometric
Conductivity	Conductimetry	**Chlorine**	Amperometry
Dissolved Oxygen	Fluorescence	**UV254**	UV Absorbance
Turbidity	Nephelometry	**COD**	UV254 correlation
Total Suspended Solids	Absorbance	**BOD**	UV254 correlation
Ammonia	Ion Selective Electrode	**TOC**	UV254 correlation
Nitrate Nitrogen	Ion Selective Electrode		

>Key Features

- Multichannel : Up to 7 probes connected in single EL200
- A user-friendly interface can display all the values as well as graphs of the recorded measurements over the last 24 hours.
- A USB port allows to transfer the recorded measurements that may be imported to Excel for treatments or graphs. The USB port can also be used to save the configuration or to update the internal software.
- The EL200 controller is designed to be used outside if necessary, thanks to an aluminium casted enclosure.
- Special protection against lightning are installed on each probe inputs as well as on the power input and communication ports.
- The touch screen is protected by an acid resistant protection film to ensure an efficient long term protection .

>Options

IN4-20-500	***Isolated 4-20 mA input module*** *Input resistance :100 ohm*
OUT4-20-500	***Isolated 4-20 mA output module*** *Active output, max load 500 ohm*
LOGIC500	***Double logical inputs module*** *Input no 1: external pulse command for measurment* *Input no 2: measurements inhibition* *Isolated 0 - 48 VDC inputs* *Impedance: > 10 Kohm*
RELAY500	***Relay module*** *Contact rating : 2 A/220 V* *Maximum 6 relays modules allowed*
COND500	***Conductivity module*** *Range: 0 – 100 µS/cm to 0 – 100 mS/cm* *ATC input for platinum RTD 100 Ohm*
PH500	***pH/ORP module*** *pH range: 0 – 14* *ORP range: -2000 mV to +2000 mV* *ATC input for platinum RTD 100 Ohm*

IMS HORIBA Group is certified Quality Management System ISO9001, Environmental Management System ISO14001, and Occupational Health and Safety Management System ISO45001 and operate as Integrated Management System (IMS).

⚠ Please read the operation manual before using this product to assure safe and proper handling of the product.

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HORIBA

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NH4-N

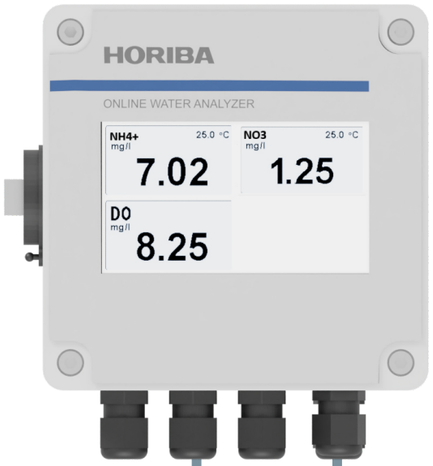
NO3-N

EL200

Ammonia/Nitrate Nitrogen Meter

Explore the future HORIBA

Ammonia Nitrogen and Nitrate Nitrogen concentrations are Measured Simultaneously with Stability and Durability



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Mono & Muti-Channel Water Controller

NH_4-N NO_3-N

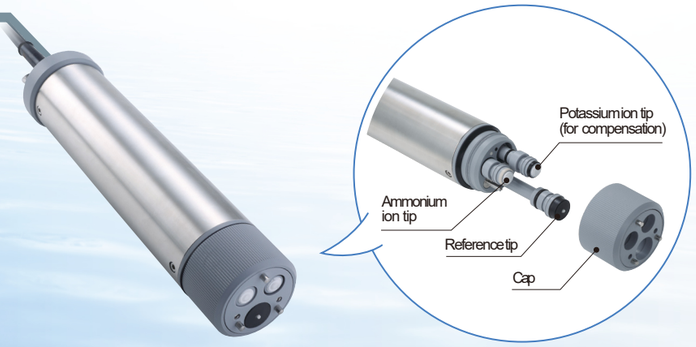
Key Points

- Replaceable tip without the need for tools
- Unique tip internal solution enables stable measurement
- Sample adjustment function
- No measurement reagent necessary

Ammonia nitrogen sensor AM-2000-A

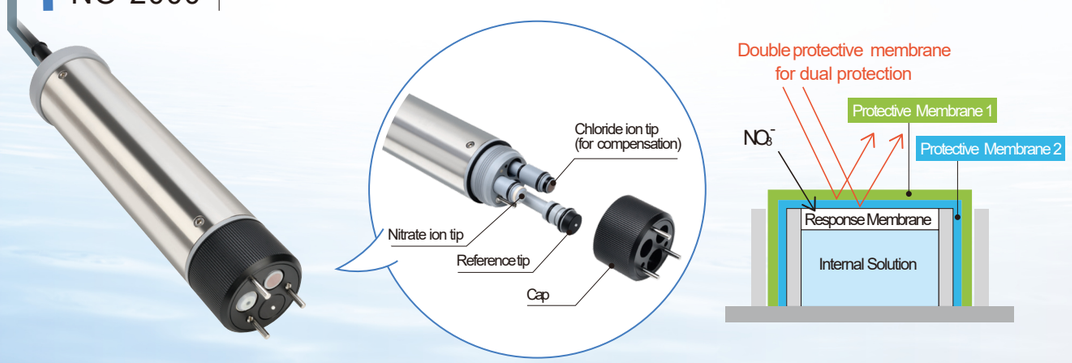
Flat sensor surface[*1] prevents bubbles and stain accumulation. Sensor degradation diagnosis[*1*2] during measurement reduces the risk of sudden shutdowns.

*1 Patent applied with the Tokyo Metropolitan Government Bureau of Sewerage.
*2 Compatible with ammonia nitrogen sensors only.



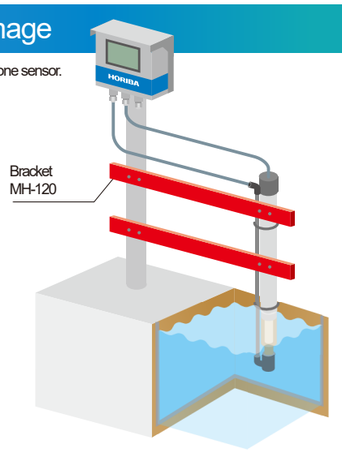
Nitrate nitrogen sensor NO-2000

Uses HORIBA's unique double protective structure.
The double protective membrane makes it dirt-resistant and highly durable.



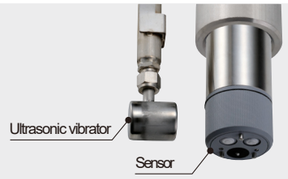
Installation Image

*Image shows installation of one sensor.



Using the ultrasonic cleaner UH-16A* prevents dirt buildup and reduces maintenance burden.

*Optional



1 month later

With ultrasonic cleaner　　Without ultrasonic cleaner

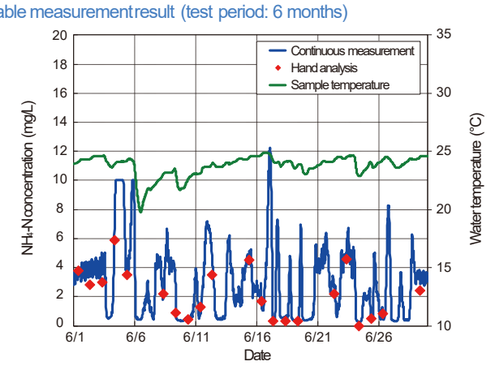
Field Test Data

Confirmed correlation with hand analysis in field tests. Good correlation was evident for both ammonia nitrogen and nitrate nitrogen.

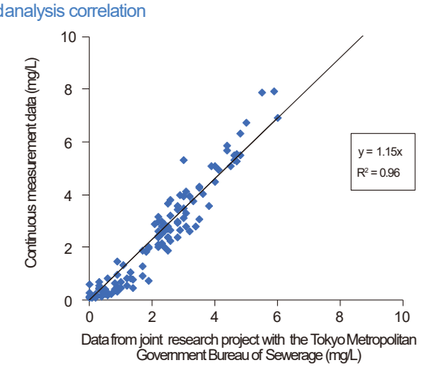
Ammonia nitrogen

Data from joint research with the Tokyo Metropolitan Government Bureau of Sewerage

Stable measurement result (test period: 6 months)



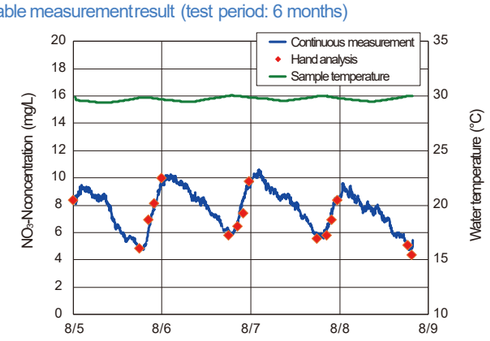
Hand analysis correlation



Nitrate nitrogen

HORIBA evaluation data

Stable measurement result (test period: 6 months)



Hand analysis correlation