

Real-time control of chlorine concentration in wash water at food manufacturing facilities

Residual Chlorine Concentration Monitor

UP-400CL

Automatic sample-taking and data output functions allow the consolidated data managing operation.

The UP-400CL supports food manufacturing safety controls where there is the need to check food processing and wash water conditions.



Our unique measurement sequence realizes accurate and stable chlorine concentration analysis for vegetable washing process.*1

- This patented technology enables stable analysis as it prevents effects from the vegetable lye.
- This system's consecutive measurement performs equivalent to the colorimetric analysis.

*1 Patent pending

Diamond electrodes*2 are used for a longer product life.*3

*2 Boron-infused conductive diamonds. Being studied as a highly sensitive and highly durable sensor. Based on the results of joint research with Professor Yasuaki Einaga of Keio University. <http://chem.keio.ac.jp/einaga-lab/researchj.html>

*3 May vary depending on the customer's usage conditions.

Simple and easy maintenance saves time and reduces labor costs.

- No reagents required.
- Unlike the conventional polarographic method, there is no need for bead polishing of the sensor during measurements.

Residual Chlorine Concentration Monitor UP-400CL

Specifications

Item	Details
Substance to be measured	Free residual chlorine
Equipment size	W125 mm × H100 mm × D125 mm (Excluding protruding parts) (Analog communication model comes with a separate communication unit (W125 mm × H60 mm × D125 mm))
Sample consumption	Approx. 12 mL/min (sample self-feeding with built-in pump)
Sample pH range	pH 4.5 to pH 9.5
Measurable range	Acidic neutral solutions such as slightly acidic electrolyzed water: 0 mg/L to 200 mg/L Alkaline solutions such as NaClO solution: 0 mg/L to 300 mg/L
Measurement repeatability	Within ±5% of full scale (when temperature, pH and conductivity are constant)
Measurement sequence	Approx. 15 seconds (in redox measuring mode)
Sample temperature range	1°C to 40°C
Inlet, outlet shape	Flexible tube OD 6.4 mm × ID 3.2 mm
Calibration method	Two-point calibration of tap water (zero) and solution to be measured (span)
Waterproof	Equivalent to protection class IP×4 (except DC jack and AC adapter)
Power	DC 24 V ±10%, rated 12 W Models without communication come with AC adapter (100 V to 240 V AC, 50 Hz to 60 Hz)

Specifications are subject to change without notice.

Instrument Configuration

The UP-400CL has three types of configurations as follows:

- (i) Standard model: The main unit is installed alone without communication.
- (ii) Digital communication model: Used by connecting the main unit to a PC or PLC with a dedicated cable.
- (iii) Analog communication model: Used by connecting the main unit to a PLC through the communication unit.

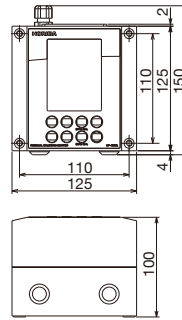
	(i) Standard model UP-400CL-0	(ii) Digital communication model UP-400CL-1-0-**	(iii) Analog communication model UP-400CL-1-1-***
Save data in the SD memory card	✓	✓	✓
Digital communication	—	✓	✓
Analog output	—	—	✓
I/O input/output	—	—	✓
Cable length	2 m (To the DC jack)	Select among from 1 m, 5 m, 10 m	Select among from none, 1 m, 5 m, 10 m (Extension cable length to the communication unit)
Accessories	AC adapter	—	Communication unit

Replacement Parts Filter and tube fitting are included in the standard accessories of the main unit.

Optional Parts

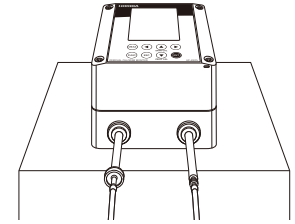
Part name	Model/Details	Item code
External mounting foot (4 pieces)	Mounting foot SFL-1-UP	3200959125
Rubber foot	Rubber foot SF11-3	3200959138
Pole mounting metal fittings	Pole mounting metal fittings	3200959698
Pole mounting metal fittings (Pole mounting screw)	Stainless steel screw set	3200959699
Pole mounting metal fittings (Pole mounting belts)	Pole fixing belts	3200959700
Inline strainer unit (for φ3 mm, mesh 80)	UP-40-ILS-3	3200959844
Tube (Silicone tube φ3 mm x φ6 mm, 10 m)	Silicone tube φ3 mm x φ6 mm, 10 m	3200959696
AC adapter	AKA-24016	3200940165
Stainless punching filter	Contact us	—

Dimensional Outline (Unit: mm)

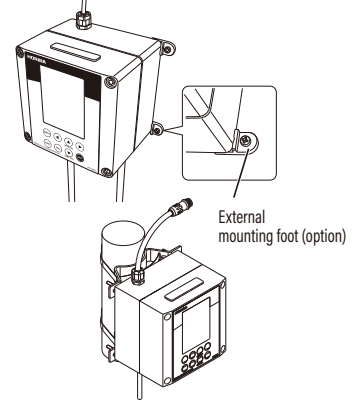


Installation Image

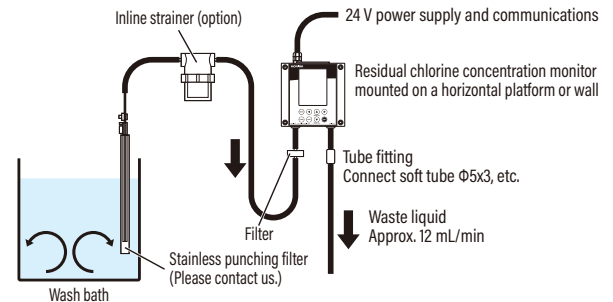
• Install horizontally on the plate so that the screen faces upward.



• Install vertically on the wall so that the pipes face downward.



Example of Piping



Replacement Parts

Part name	Model/Details	Item code
Pump unit	UP-40-PUM	3200959111
Sensor unit	UP-40-SEN	3200959119
Filter	ILF-3-100-UP	3200959137
Tube fitting (3 mm type bamboo shoot tube fitting)	Tube fitting MCI-2-CN-UP	3200959126



The HORIBA Group adopts IMS (Integrated Management System) which integrates Quality Management System ISO9001, Environmental Management System ISO14001, and Occupational Health and Safety Management System ISO45001. We have now integrated Business Continuity Management System ISO22301 in order to provide our products and services in a stable manner, even in emergencies.



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

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