

Optimum measurement system for all types of application
Industrial Water Quality Measuring Instruments

Field-installation type

H-1 Series

4-Wire Transmitter 2-Wire Transmitter



Panel mount type

SLIM48/96 Series

4-Wire Transmitter



Measurement item



Total support for all types of application from purified water



HORIBA H-1 and SLIM48/96 series of industrial water quality measuring instruments include a total array of measurement points for the broad applications required controlling of water quality. With sensors, cleaners, and various accessories, these water quality measuring instruments are applicable to all kinds of water treatment and reduce the maintenance load.

Series Lineup of Industrial Water Quality Instruments

Series	Installation Location	Type	Power Supply	pH	ORP	Resistivity	Conductivity		Residual Chlorine	DO	NH ₄ -N	F	MLSS	Turbidity	Color
H-1	Field installation type	2-Wire Transmitter	24 V DC	HP-300	HO-300	HE-300R	HE-300C	—	—	HD-300	—	HC-300F	—	—	—
		2-Wire Multi-Parameter	24 V DC	HQ-300	HQ-300	HQ-300	HQ-300	—	—	HQ-300	—	HQ-300	—	—	—
		4-Wire Transmitter	90 to 264 V AC	HP-200	HO-200	HE-200R	HE-200C	HE-200H	HR-200	HD-200 HD-200FL	HC-200NH	HC-200F	HU-200SS	HU-200TB-W HU-200TB-H HU-200TB-EH HU-200TB-IM	HU-200CL
SLIM 48/96	Panel mount type	4-Wire Transmitter	90 to 264 V AC	HP-480 HP-960FTP	HO-480	HE-480R HE-960RW	HE-480C HE-960CW	HE-480H HE-960HI	HR-480P	HD-480	—	—	—	—	—

monitoring to waste water monitoring



Field-installation Type

H-1 Series

The Field installation type H-1 series Transmitters offer a rainproof structure. This has been newly developed under the concepts of “durability”, “functionality”, and “maintainability” in order to stand the severe environmental conditions of on-site processes. This series of units comprehensively can use all kinds of water treatment from purified water monitoring to waste water monitoring.

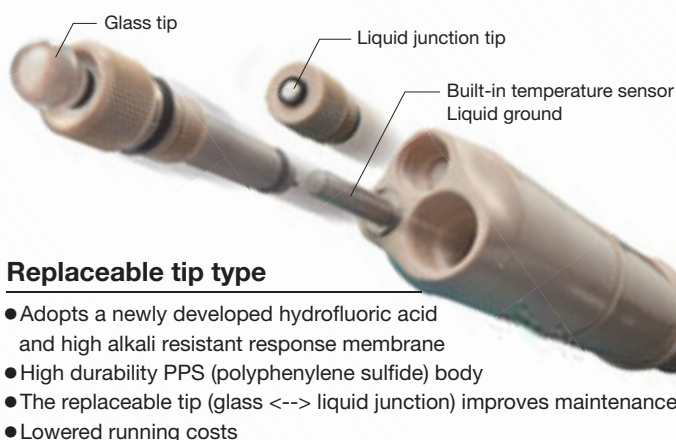


Panel mount type

SLIM48/96 Series

The panel mount type SLIM48/96 series instruments are the optimum Analyzers for incorporation in an instrumentation system. Their compact design means minimal space requirements for systems that combine multi-item measurement instruments. We recommend this series for automatic all-purpose monitoring of sewerage, factory effluent, factory processes, etc.

Industrial pH electrode



Longer life
Almost
double
(compared with other HORIBA products)

Maintenance
cost and load
1/2
(compared with other HORIBA products)

Replaceable tip type

- Adopts a newly developed hydrofluoric acid and high alkali resistant response membrane
- High durability PPS (polyphenylene sulfide) body
- The replaceable tip (glass <--> liquid junction) improves maintenance cost.
- Lowered running costs

Liquid junction: Porous ceramic; Temperature: -10 to 60°C; Pressure: 0 to 0.03 MPa (through internal liquid pressurization)
Liquid contact material: glass, ceramic, fluorine rubber, polyphenylene sulfide resin, and titanium (for hydrofluoric acid resistance: Nickel chrome alloy)

pH electrode HF

Combination with replaceable tip
Model: 6171-50B



Resistant to the waste fluids of semiconductor processes and strong acids, including hydrofluoric acid.

pH electrode Alkali

Combination with replaceable tip
Model: 6172-50B



Resistant to the water used in brine electrolysis processes and high alkali waste fluids.

pH electrode Oil

Combination with replaceable tip
Model: 6173-50B



Resistant to oil contamination in petroleum refinery processes and boiler circulation water that includes petroleum.

Standard electrode

Dome-shaped tough electrode

Integrated combination
Model: 6108-50B



Fixed sleeve tough electrode

Integrated combination
Model: 6109-50B



Hydrofluoric-acid resistant

Integrated combination
Model: 6151-50B



High-alkali resistant

Integrated combination
Model: 6152-50B



pH electrode standard

Combination with replaceable tip
Model: 6174-50B



MLSS (Mixed Liquor Suspended Solid)

HU-200SS

(4-Wire Transmitter)



HU-200SS Specifications

Measuring method	Light transmission method
Measurable range	Activated sludge (MLSS): 0 to 20000 mg/L Resolution: 1 mg/L (0 to 10000 mg/L) Kaolin: 0 to 10000 mg/L 10 mg/L (10000 to 22000 mg/L) Clay (inorganic mud): 0 to 20000 mg/L
Repeatability	Within a reading value $\pm 3\%$ or ± 10 mg/L, whichever is larger. (sensor connecting sludge measured value)
Transmission output	One point 4 to 20 mA DC Input/output isolated type Maximum load resistance 900 Ω
Transmission output range	Free range
Contact output	Three points Output type: No-voltage contact output Relay contact, SPDT Contact capability R1, R2: Selectable from upper limit alarm, lower limit alarm, transmission output Hold, and cleaning output FAIL: Error warning
Cleaning output	One point Active voltage contact output (connected supply voltage output) Contact capability: Solenoid valve drive for cleaning
Contact input	One point Contact type: No-voltage a contact for open collector Contact function: Cleaning operation external input.
Communication function	RS-485 Two-wire input/output isolated type (not isolated from transmission output)
Ambient temperature	-20 to 55°C
Calibration method	<ul style="list-style-type: none"> Zero calibration: With clean water Span calibration: Concentration conversion method using coefficient input Working curve selection: (selection of activated sludge and inorganic mud) There is a feature that allows you to match an instrument indicated value to a hand analyzed value of sludge (by the Mass method).
Self-diagnosis	Sensor check error, Transmitter error
Power supply	100 to 240 V AC, 50/60 Hz 35 VA (max.) when an automatic cleaner is connected.
Structure	Outdoor installation type: IP65 Protection class Installation method: 50 A pole-mounted or wall-mounted Material of case: Aluminium alloy (coated with epoxy modified melamine resin) Material of mounting brackets: SUS304
Weight	Approx. 4.5 kg
Regulatory certification	CE marking, FCC rules

Sensor

Specifications

Model	SS-90
Measuring method	Light transmission method
Light source	LED, 880 nm,
Detector	Silicon photo diode
Cell length	Approx. 7 mm
Self-check	Water immersion detection
Operating temperature range	5°C to 50°C (without freezing)
Measured liquid pressure	0 MPa to 0.2 MPa
Material of wetted part	PPO SUS316 PFA FKM EPDM PVC
Cable length	10 m (standard), maximum extension: 50 m (overall length: 60 m)
Power supply	12 V DC supplied from the HU-200SS Transmitter
External dimensions	48 mm in diameter x 250 mm in length (excluding the cable)
Weight	Approx. 0.8 kg (excluding the cable)



Holder and Cleaner

- **Immersion type holder**
DH-101 series (insertion type)
NH-10 series (drop-in type)
- **Immersion type jet cleaner**
JDH series
- **Immersion type jet cleaner**
JH-100 series (Submersible type)



Accessories

MLSS Sensor extension cable

•CT-7E









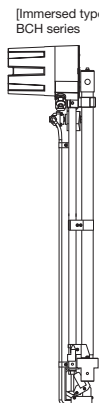



Relay box

•CT-50SS



Caution: The selection of equipment will differ based on various conditions, including the installation site, usage environment, measurement samples, and any special characteristics. Contact your sales representative for details.

Lineup of Cleaners

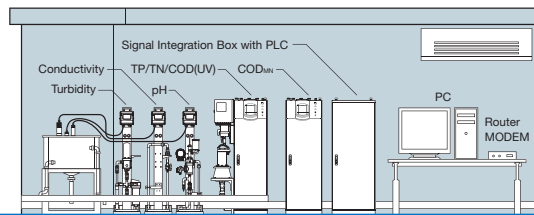
Ultrasonic Cleaner UCH-1X1 UCF-3X1	Jet Cleaner JCH-1X1 JCF-3X1	Jet Driven Brush Cleaner BH-1X1	Brush Cleaner BCH-1X1	Brush/Jet Cleaner BCH-1X1J	Chemical Cleaner CCH-1X1	Chemical Brush Cleaner CBCH-1X1	pH Meter with Auto Calibration Function AH-151
The use of original burst oscillation method enables continuous cleaning, as measurement values are not affected during cleaning.	Cleans with water or air jet. Effective physical cleaning to remove adhered substances.	Cleaner with a brush rotated by water or air jet. Can be used in an explosion-proof area, as power supply is not required as long as jet source is available.	Motor-driven brush cleaner. Effective physical cleaning to remove adhered substances.	Composite type cleaner, combining a motor-driven brush cleaner and a jet cleaner.	Chemical cleaner using dilute hydrochloric acid. Optimum for removing coating materials such as calcium.	Composite type cleaner, combining a chemical cleaner using dilute hydrochloric acid and a motor-driven brush cleaner.	pH meter with automatic functions to clean electrodes with chemicals and calibrate standard solutions and to measure pH, which significantly reduces man-hours required for maintenance. Regular cleaning and calibration enable stable and reliable pH measurement.
 [Immersed type] UCH series  [Circulation type] UCF series	 [Immersed type] JCH series  [Circulation type] JCF series						

Comparison Table of Automatic Cleaners

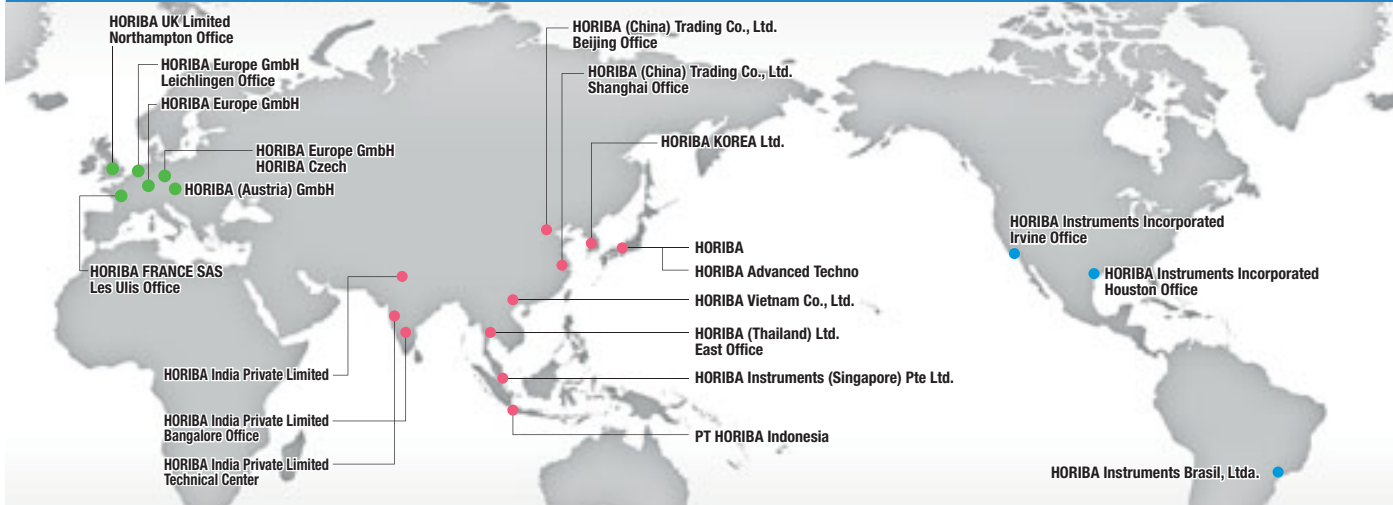
	Ultrasonic Cleaner	Jet Cleaner	Jet Driven Brush Cleaner	Brush Cleaner	Brush/Jet Cleaner	Chemical Cleaner	Chemical Brush Cleaner	pH Meter Auto Calibration Function
pH	○	○	○	○	○	○	○	○
ORP	○	○	○	○	○	○	○	×
DO(Polarography)	×	○	×	×	×	×	×	×
DO (Optical)	○	○	×	×	×	×	×	×
NH ₄ -N	○	○	×	×	×	×	×	×
F	×	○	×	×	×	○	×	×
MLSS	×	○	×	×	×	×	×	×

Water Quality Monitoring System

As the item to watch water quality, we offer the following automatic analytical instruments.



HORIBA Global Network



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 OHSAS18001. 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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