HORIBA
Process & Environmental

Beyond Water with You

Optimum measurement system for all types of application

Industrial Water Quality Measuring Instruments

Measurement item

pH | ORP | RESIST | COND | RC | DO | NH_4-N | F | MLSS | TURB | COLOR

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 controling 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 (Low Conductivity Solutions)	Conductivity (High Conductivity Solutions)	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

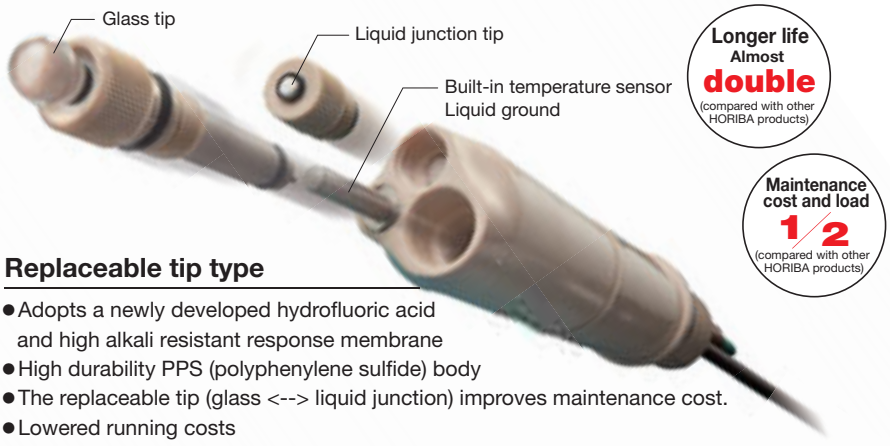
The Field installation type H-1 series Transmitters offer a rainproof structure. This has been newly developed under the concepts of “durability”,“functionality”, and “maintainability”
in order to stand the severe environmental conditions of on-site processes.
This series of units comprehensively can 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
Pb Free · silver ION trap · ToupH

Fixed sleeve tough electrode
Integrated combination
Model: 6109-50B
Pb Free · silver ION trap · ToupH · Sleeve

Hydrofluoric-acid resistant
Integrated combination
Model: 6151-50B
Pb Free · silver ION trap · ToupH

High-alkali resistant
Integrated combination
Model: 6152-50B
Pb Free · silver ION trap

pH electrode standard
Combination with replaceable tip
Model: 6174-50B
Pb Free

Conductivity (Low Conductivity Solutions)

HE-200C
(4-Wire Transmitter)

HE-300C
(2-Wire Transmitter)

HE-200C Specifications

Measuring method	Two electrode method				
Measuring range	Cell constant	/cm	0.01	0.1	1.0
	Electrical conductivity	µS/cm	0.000 to 2.000 0.00 to 20.00	0.000 to 2.000 0.00 to 20.00 0.0 to 200.0 0 to 2,000*	0.0 to 200.0 0 to 2,000
		mS/m	0.0000 to 0.2000 0.000 to 2.000	0.0000 to 0.2000 0.000 to 2.000 0.00 to 20.00 0 to 200.0*	0.00 to 20.00 0.0 to 200.0
	TDS conversion	mg/L	0.00 to 2.00 0.0 to 20.0	0.0 to 20.0 0 to 200	0 to 200 0 to 2,000
			Electrical conductivity measurement and TDS conversion measurement cannot be selected at same time.		
	Temperature	˚C	0 to 100 Resolution: 0.01˚C		
	* Range only applies to sanitary sensors.				
Repeatability	Electrical conductivity: ±0.5% full-scale or less, TDS conversion: ±1.5% full-scale or less Temperature: ±0.1˚C (for equivalent input)				
Linearity	Electrical conductivity: ±0.5% full-scale or less, TDS conversion: ±1.5% full-scale or less Temperature: ±0.5˚C (for equivalent input)				
Transmission output	Two points 4 to 20 mA DC Input/output isolated type Maximum load resistance 900 Ω				
Contact output	Three points No-voltage contact output Relay contact, SPDT (1c) Contact function: R1, R2: Selectable from upper limit alarm, lower limit alarm, USP assessment, transmission output hold operation FAIL: Malfunction alarm Alarm operation: Output details: Electrical conductivity (or TDS conversion), temperature				
Contact input	One point Contact format: Open collector no-voltage a contact Contact function: Transmission output hold external input				
Communication function	RS-485 Two wire systems, Input/output isolated type (not isolated from transmission output)				
Temperature compensation range	0 to 100˚C (but for 0˚C or less, 100˚C or more, extend and perform calculation)				
Ambient temperature	-20 to 55˚C				
Temperature compensation element	Pt 1000 (0˚C)				
Calibration function	Electrical conductivity: Based on input of cell constant correction coefficient (parameter input) TDS conversion: Conversion based on specified coefficient (0.30 to 1.00) Temperature: One point calibration compared with reference temperature gauge				
Self-diagnosis function	Sensor diagnosis error, Analyzer malfunction				
Power supply	100 to 240 V AC 50/60 Hz Power consumption 15 VA (max.)				
Construction	Outdoor installation type: IP65 protection level Mounting method: 50 A pole or wall mounted Case: Aluminum alloy Mount fitting/hood: SUS304				
Weight	Approx. 4.5 kg				
Regulatory certification	CE marking, FCC rules				

HE-300C Specifications

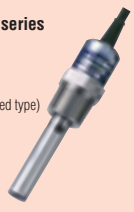
Measuring method	Two electrode method				
Measuring range	Cell constant	/cm	0.01	0.1	1.0
	Electrical conductivity	µS/cm	0.000 to 2.000 0.00 to 10.00	0.000 to 2.000 0.00 to 20.00 0.0 to 100.0	0.0 to 200.0 0 to 1,000
		mS/m	0.0000 to 0.2000 0.000 to 1.000	0.0000 to 0.2000 0.000 to 2.000 0.00 to 10.00	0.00 to 20.00 0.0 to 100.0
	TDS conversion	mg/L	0.00 to 2.00 0.0 to 10.0	0.0 to 20.0 0 to 100	0 to 200 0 to 1,000
			Electrical conductivity measurement and TDS conversion measurement cannot be selected at same time.		
	Temperature	˚C	0 to 100 Resolution: 0.01˚C		
Repeatability	Electrical conductivity: ±0.5% full-scale or less TDS conversion: ±1.5% full-scale or less Temperature: ±0.1˚C (for equivalent input)				
Linearity	Electrical conductivity: ±0.5% full-scale or less TDS conversion: ±1.5% full-scale or less Temperature: ±0.5˚C (for equivalent input)				
Transmission output	4 to 20 mA DC Input/output isolated type Maximum load resistance 600 Ω				
Contact input	One point Contact format: No-voltage a contact Contact function: Transmission output is held for closed contact input.				
Temperature compensation range	0 to 100˚C (but for 0˚C or less, 100˚C or more, extend and perform calculation)				
Ambient temperature	-20 to 60˚C				
Temperature compensation element	Pt 1000 (0˚C)				
Calibration function	Electrical conductivity: Based on input of cell constant correction coefficient (parameter input) TDS conversion: Conversion based on specified coefficient (0.30 to 1.00) Temperature: One point calibration compared with reference temperature gauge				
Self-diagnosis function	Sensor diagnosis error, Transmitter malfunction				
Power supply	24 V DC (operational voltage range: 21 to 32 V DC) 0.6 W (max.)				
Construction	Outdoor installation type: IP65 protection level Mounting method: 50 A pole or wall mounted Case: Aluminum alloy Mount fitting/hood: SUS304				
Compatible sensor	ESH series electrical conductivity sensor (cell constant 0.01/cm, 0.1/cm, 1.0/cm)				
Weight	Approx. 4 kg				
Regulatory certification	CE marking, FCC rules				

Sensor

General use **Two Electrode Electrical Conductivity Sensor**

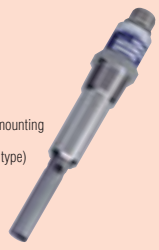
Screw in type

•ESH-001/01/1 series



ESH-01
(Cable-attached type)

ESH-01
(Connector type)



For flange mounting
ESH-01
(Connector type)

Specifications

Model		ESH-001	ESH-01	ESH-1
Cell constant		Approx. 0.01/cm	Approx. 0.1/cm	Approx. 1.0/cm
Solution contact material	Electrode	Selectable from SUS316 or titanium		
	Body	PVDF		
	Packing	FKM		
Measurement solution pressure		0 to 0.5 MPa		
Measurement solution temperature		0 to 100˚C		
Cable length		Cable-attached type: 10 m, Y terminal (standard) Max. extendable distance: 100 m Connector type: 10 m (CK-10M), 20 m (CK-20M), 30 m (CK-30M)		
Attachment		Screw in type Thread aperture: R(PT) 3/4		
Combined holder		Flow type holder: EFA-30, EFA-30P, EFA-30S		

HE-480C
(4-Wire Transmitter)

HE-480C Specifications

Measuring method	Two electrode method				
Sensor input	One channel (cell constant: 0.01/cm, 0.1/cm, 1.0/cm)				
Measuring range	Cell constant	/cm	0.01	0.1	1.0
	Conductivity	µS/cm	2.000 to 20.00	20.00 to 200.0	200.0 to 2000
		mS/m	0.2000 to 2.000	2.000 to 20.00	20.00 to 200.0
	TDS conversion	mg/L	2.00 to 20.0	20.0 to 200	200 to 2000
	Temperature: 0 to 100˚C (The displayed decimal place is selectable among 0, 1 and 2)				
Repeatability	±0.5% full-scale or less (but TDS is ±1.5% full-scale or less)				
Transmission output	No. of outputs: One point 4 to 20 mA DC Input/output isolated type Maximum load resistance 900 Ω				
Contact output	No. of outputs: Two points (R1, R2) Contact format: Relay contact SPDT (1c) Contact capacity: 240 V AC 3 A, 30 V DC 3 A (resistance load) Contact function: Selectable from upper, lower limit operation (ON/OFF control), USP assessment, malfunction alarm, maintenance operation				
Calibration function	Conductivity: Input of cell constant correction coefficient (parameter input) Temperature: Calibration compared with reference temperature gauge TDS: Conversion based on specified coefficient (0.30 to 1.00)				
Power supply	100 to 240 V AC 50/60 Hz Power consumption 10 VA (max.)				
Temperature compensation	· Temperature characteristics of ultra-pure water (reference temperature 25˚C) · Reference temperature and temperature coefficient specified settings (reference temperature: 5 to 95˚C temperature coefficient: ±5%/˚C) · NaCl temperature characteristics · No temperature compensation				
Ambient temperature	-5 to 45˚C				
Temperature compensation element	Pt 1000 (0˚C)				
Compatible sensor	ESH, FS series conductivity sensor (Cell constant: 0.01/cm, 0.1/cm, 1.0/cm)				
Weight	Approx. 400g				
Regulatory certification	CE marking, FCC rules				

HE-960CW
(4-Wire Transmitter)

HE-960CW Specifications

Measuring method	Two electrode method				
Sensor input	Two channel (cell constant: 0.01/cm, 0.1/cm, 1.0/cm)				
Measuring range	Cell constant	/cm	0.01	0.1	1.0
	Conductivity	µS/cm	2.000 to 20.00	20.00 to 200.0	200.0 to 2000
		mS/m	0.2000 to 2.000	2.000 to 20.00	20.00 to 200.0
	TDS conversion	mg/L	2.00 to 20.0	20.0 to 200	200 to 2000
	Temperature: 0 to 100°C (The displayed decimal place is selectable among 0, 1 and 2)				
Repeatability	Within ±0.5% of the full scale (TDS: within ±1.5% of the full-scale)				
Transmission output	No. of outputs: Two points 4 to 20 mA DC isolated I/O type Maximum load resistance 900 Ω				
Contact output	No. of outputs: Four points (R1, R2, R3 and R4) Contact type: Relay contacts R1 to R3: SPST (1a); R4: SPDT (1c) Contact rating: 240 V AC 3 A, 30 V DC 3 A (resistance load) Contact function: Select between upper/lower limit operation (ON/OFF control), USP determination, Error alarm, and Maintenance (R1 and R2, R3 and R4 are for common use, respectively)				
Calibration function	Conductivity: Based on the specified compensation coefficient for the cell constant (parameter input) Temperature: Calibrated by comparing with the reference thermometer TDS: Conversion using a user-defined coefficient value (0.30 to 1.00)				
Power supply	100 to 240 V AC 50/60 Hz 15 VA (max.)				
Temperature compensation	· Based on the temperature characteristics of ultra-pure water (reference temperature 25°C) · Based on the reference temperature and user-defined temperature coefficient (reference temperature: 5 to 95°C temperature coefficient: ±5%/°C) · Based on the temperature characteristics of NaCl · No temperature compensation				
Ambient temperature	-5 to 45˚C				
Temperature compensation element	Pt 1000 (0˚C)				
Compatible sensor	ESH and FS series conductivity sensor (cell constant: 0.01/cm, 0.1/cm or 1.0/cm)				
Weight	Approx. 550g				
Regulatory certification	CE marking, FCC rules				

Holder

Flow type holder

•EFA-30 series

EFA-30 (PVC)

EFA-30S (SUS 316)

Specifications

Model	EFA-30	EFA-30P	EFA-30S
Solution contact material	PVC	PVDF	SUS 316
Measurement solution temperature	0 to 50˚C	0 to 100˚C	0 to 100˚C
Measurement solution pressure	0 to 0.1 MPa	0 to 0.1 MPa	0 to 0.5 MPa
Measurement solution flow rate	0 to 10 L/min		
Connection pipe aperture	Inlet: Rc (PT) 3/4, Outlet: Rc (PT) 3/4		

Accessories

Relay box

•CT-50EC

Specialized extension cable

•C-5C

Connector cable

•CK-10M/20M/30M

This cable is for joining a connector type sensor and analyzer or transmitter.

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.

Conductivity (High Conductivity Solutions)

HE-200H
(4-Wire Transmitter)

Rain-Proof Type | 4-wire

HE-480H
(4-Wire Transmitter)

Panel mount Type | 4-wire

HE-200H Specifications

Measuring method	Four electrode method			
Measuring range	Electrical conductivity: 0.0 to 200.0 mS/cm* 0.00 to 20.00 S/m* (Switchable between fixed range (decimal point) and automatic range) * With conditions under which temperature compensation is not performed, it is possible to display 0 to 2,000 mS/cm (0 to 200 S/m). Temperature: 0 to 100˚C Resolution: 0.01˚C			
Salinity conversion function	Seawater: 0.00 to 4.00% NaCl: 0.0 to 20.0%			
Concentration conversion function	NaOH: 0.00 to 5.00%, HNO3: 0.00 to 5.00%, H3PO4: 0.00 to 5.00 Specified 1 to 4: 0.00 to 100.00%			
Repeatability linearity	Electrical conductivity	Cell constant	0.1/cm	1.0/cm
		0 to 20.00 mS/cm	±0.5% full-scale or less	±0.5% full-scale or less
		20.0 to 200.0 mS/cm	±1.0% full-scale or less	±0.5% full-scale or less
		Condition	For equivalent input	
	Temperature	Repeatability: ±0.1˚C, Linearity: ±0.5˚C		
Transmission output	Two points 4 to 20 mA DC Input/output isolated type Maximum load resistance 900 Ω			
Contact output	Three points No-voltage contact output Relay contact, SPDT (1c) Contact function: R1, R2: Selectable from upper limit alarm, lower limit alarm, transmission output hold operation FAIL: Malfunction alarm Alarm operation: Output details: Electrical conductivity (or conversion value), temperature Note: Range only applies to sanitary sensors.			
Contact input	Two points Contact format: Open collector no-voltage a contact Contact function: Transmission output range switching, transmission output hold external input Function selectable from "Transmission 4 range selection" or "Transmission 2 range selection + hold" Linking to selected transmission range also allows automatic switching of display			
Communication function	RS-485 Two wire systems, Input/output isolated type (not isolated from transmission output)			
Temperature compensation range	0 to 100˚C (but for 0˚C or less, 100˚C or more, extend and perform calculation)			
Ambient temperature	-20 to 55˚C			
Temperature compensation element	Pt 1000 (0˚C)			
Calibration function	Electrical conductivity: Based on input of cell constant correction coefficient (parameter input) Temperature: One point calibration compared with reference thermometer			
Self-diagnosis function	Sensor diagnosis error, Analyzer malfunction			
Power supply	100 to 240 V AC 50/60 Hz Power consumption 15 VA (max.)			
Construction	Outdoor installation type: IP65 protection level Mounting method: 50 A pole or wall mounted Case: Aluminum alloy Mount fitting/hood: SUS304			
Weight	Approx. 4.5 kg			
Regulatory certification	CE marking, FCC rules			

HE-480H Specifications

Measuring method	Four electrode method			
Sensor input	One channel (cell constant: 1.0/cm)			
Temperature sensor specifications	Measurement temperature resistor element 1,000 Ω/0˚C			
Measuring range	Conductivity (mS/cm)	0.00 to 20.00	0.0 to 200.0	0.0 to 500.0
	(S/m)	0.000 to 2.000	0.00 to 20.00	0.00 to 50.00
	Note: In the 200.0 mS/cm, 20.00 S/m range, with a reference temperature of 25˚C, measurement is possible for a freely settable temperature coefficient of up to ±3.5%/˚C. Note: In the 500.0 mS/cm, 50.00 S/m range, measurement is possible without temperature compensation.			
	Seawater salinity conversion: 0.00 to 4.00%			
	NaCl salinity conversion: 0.0 to 20.0%			
	Temperature: 0 to 100˚C (no places after decimal point, 1 digit, 2 digit selectable display)			
Repeatability	±0.5% full-scale or less (salinity conversion and 500 mS/cm range: ±1.0%)			
Transmission output	No. of outputs: One point 4 to 20 mA DC Input/output isolated type Maximum load resistance 900 Ω			
Contact output	No. of outputs: Two points (R1, R2) Contact format: Relay contact SPDT (1c) Contact capacity: 240 V AC 3 A, 30 V DC 3 A (resistance load) Contact function: Selectable from upper, lower limit operation (ON/OFF control) and malfunction alarm, maintenance operation			
Calibration function	Conductivity: Input of cell constant correction coefficient (parameter input) Temperature: Calibration compared with reference temperature gauge			
Power supply	100 to 240 V AC 50/60 Hz 10 VA (max.)			
Ambient temperature	-5 to 45˚C			
Temperature compensation	· NaCl temperature characteristics · Reference temperature and temperature coefficient specified settings (reference temperature: 5 to 95˚C temperature coefficient: ±5%/˚C) · No temperature compensation			
Compatible sensor	FES series conductivity sensor (Cell constant: 1.0/cm) Note: The measurable range differs according to the sensor model.			
Weight	Approx. 400 g			
Regulatory certification	CE marking, FCC rules			

Sensor

General use **Four Electrode Conductivity Sensor**

Immersion type / Screw in type

•FES-100 series

Specifications

Model		FES-125F	FES-126F
Cell constant		Approx. 1.0/cm	
Solution contact material	Electrode	Titanium	
	Body	PVC	PPS
	Packing	FKM	
Measurement solution pressure		0 to 0.5 MPa	
Measurement solution temperature		0 to 50˚C	0 to 120˚C*
Cable length		10 m, Y terminal (standard) When extending more than this, use CT-20EC relay box. Max. extendable distance: 50 m	
Attachment		1. Immersion type 2. Screw in type Use EA-20 screw in adapter.	1. Immersion type 2. Screw in type Use EA-40 screw in adapter.
Combined holder		Flow type holder: EF-20, EF-20P, EF-20 S	

* When used with immersion type, condition changes to 0 to 50˚C.

Holder

Flow type holder

•EF-20 series

Specifications

Model	EF-20	EF-20P	EF-20S
Solution contact material	PVC	PVDF	SUS 316
Measurement solution temperature	0 to 50˚C	0 to 100˚C	0 to 100˚C
Measurement solution pressure	0 to 0.1 MPa	0 to 0.1 MPa	0 to 0.5 MPa
Measurement solution flow rate	0 to 10 L/min		
Connection pipe aperture	Inlet: Rc (PT) 1/2, Outlet: Rc (PT) 1/2		

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.

HE-960HI

(4-Wire Transmitter)

HE-960HI Specifications

Measuring method	Four electrode method		
Measuring range	Conductivity	0 to 200 mS/cm (measuring range of conductivity before temperature compensation: 0 to 500 mS/cm)	
	Temperature	0.0 to 100.0°C	
Repeatability	0.000 to 2.000 mS/cm	±0.5% full scale	Using equivalent input
	0.00 to 20.00 mS/cm	±0.5% full scale	
	0.0 to 200.0 mS/cm	±0.5% full scale	
	0 to 500 mS/cm	±1.0% full scale	
	0.0 to 100.0°C	±0.2°C	
Transmission output	Number of output: Four points 4 to 20 mA DC input/output isolated type Maximum load resistance: 900Ω		
Transmission output range	Free setting within the measurement range (Negative terminals of each transmission output channel are connected inside and thus have the same electrical potential.)		
Contact output	Number of relay: Five ALARM contact R1, R2, R3 and R4 Contact type: relay contact, SPST(1a) Contact rating: 240VAC, 1A or 30VDC, 1A (resistance load) Contact function: Upper or lower ON/OFF alarm on each measurement items, conductivity, concentration, temperature, including delay time and hysteresis. Contact action: Closed when status is in the event. Opened when status is normal or power is down. R1, R2 and R3 share a common terminal. Self diagnosis contact RF Contact type: relay contact, SPDT(1c) Contact rating: 240VAC, 1A or 30VDC, 1A (resistance load) C-NO contact action: Closed when status is normal. Opened when any erroneous status is detected or power is down. R4 and RF share a common terminal.		
Calibration function	Conductivity: Cell constant input in the parameter input menu. Temperature: By comparing with the reference thermometer.		
Power supply	100 to 240 V AC, 50/60 Hz, 20 VA (max.)		
Temperature compensation	0 to 100°C (However, it is calculated by extending 0°C or less, 100°C or more)		
Ambient temperature	-5 to 55°C		
Compatible sensor	Submersible FES-210, FES-220, FES-230, FES-240 series sanitary four-electrode conductivity sensor Flow-through FES-310 series sanitary four-electrode conductivity sensor		
Weight	Approx. 550 g		
Regulatory certification	CE marking, FCC rules		

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

The use of original burst oscillation method enables continuous cleaning, as measurement values are not affected during cleaning.

[Immersed type] UCH series

[Circulation type] UCF series

Jet Cleaner JCH-1X1 JCF-3X1

Cleans with water or air jet. Effective physical cleaning to remove adhered substances.

[Immersed type] JCH series

[Circulation type] JCF series

Jet Driven Brush Cleaner BH-1X1

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.

[Immersed type] BH series

Brush Cleaner BCH-1X1

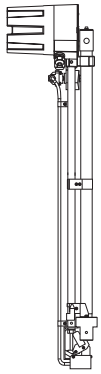
Motor-driven brush cleaner. Effective physical cleaning to remove adhered substances.

[Immersed type] BCH series

Brush/Jet Cleaner BCH-1X1J

Composite type cleaner, combining a motor-driven brush cleaner and a jet cleaner.

[Immersed type] BCH series



Chemical Cleaner CCH-1X1

Chemical cleaner using dilute hydrochloric acid. Optimum for removing coating materials such as calcium.

[Immersed type] CCH series

Chemical Brush Cleaner CBCH-1X1

Composite type cleaner, combining a chemical cleaner using dilute hydrochloric acid and a motor-driven brush cleaner.

[Immersed type] CBCH series

pH Meter with Auto Calibration Function AH-151

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.

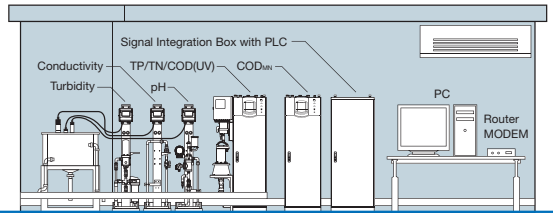
[Immersed type] AH-151-CH

Comparison Table of Automatic Cleaners

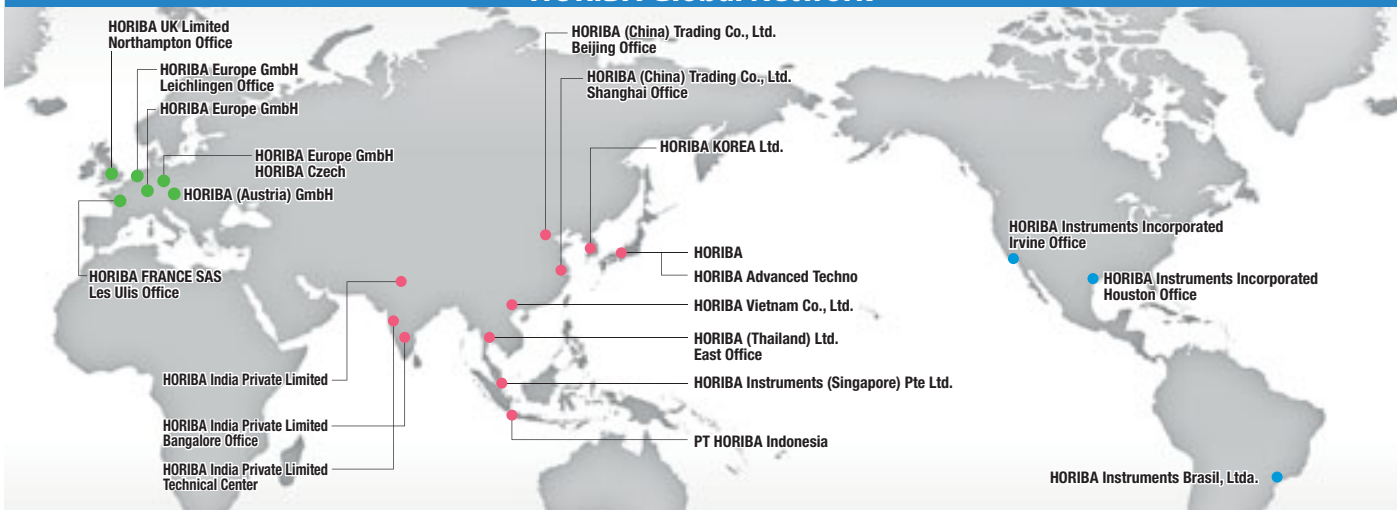
	Ultrasonic Cleaner	Jet Cleaner	Jet Driven Brush Cleaner	Brush Cleaner	Brush/Jet Cleaner	Chemical Cleaner	Chemical Brush Cleaner	pH Meter Auto Calibration Function
pH	○	○	○	○	○	○	○	○
ORP	○	○	○	○	○	○	○	×
DO(Polarography)	×	○	×	×	×	×	×	×
DO（Optical）	○	○	×	×	×	×	×	×
NH_4-N	○	○	×	×	×	×	×	×
F	×	○	×	×	×	○	×	×
MLSS	×	○	×	×	×	×	×	×

Water Quality Monitoring System

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



HORIBA Global Network



IMS 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.

- The specifications, appearance or other aspects of products in this catalog are subject to change without notice.
- Please contact us with enquiries concerning further details on the products in this catalog.
- The color of the actual products may differ from the color pictured in this catalog due to printing limitations.
- It is strictly forbidden to copy the content of this catalog in part or in full.
- The screen displays shown on products in this catalog have been inserted into the photographs through compositing.
- All brand names, product names and service names in this catalog are trademarks or registered trademarks of their respective companies.

HORIBA

Head Office
2 Miyanohigashi, Kisshoin Minami-ku, Kyoto, Japan
Phone: 81 (75) 313-8123 Fax: 81 (75) 321-5725
http://www.horiba.com e-mail: info@horiba.co.jp

Manufactured by
HORIBA Advanced Techno

HORIBA (China) Trading Co., Ltd. — China
Unit D, 1F, Building A, Synnex International Park, 1068 West Tianshan Road, Shanghai, 200335, China
Phone: 86 (21) 6289-6060 Fax: 86 (21) 6289-5553
Beijing Office
12F, Metropolis Tower, No.2, Haidian Dong 3 Street, Beijing, 100080, China
Phone: 86 (10) 8567-9966 Fax: 86 (10) 8567-9066

HORIBA (Thailand) Limited — Thailand
East Office
850 / 7 Soi Lat Krabang 30 / 5, Lat Krabang Road, Lat Krabang, Bangkok 10520, Thailand
Phone: 66 (0) 2734 4434 Fax: 66 (0) 2734 4438

HORIBA Instruments (Singapore) Pte Ltd. — Singapore
3 Changi Business Park Vista #01-01 Akzonobel House, Singapore 486051
Phone: 65 (6) 745-8300 Fax: 65 (6) 745-8155

HORIBA Vietnam Co., Ltd. — Vietnam
Unit 6, 10 Floor, CMC Tower, Duy Tan Street, Dich Vong Hau Ward, Cau Giay District, Hanoi, Vietnam
Phone: 84 (24) 3795-8552 Fax: 84 (24) 3795-8553

PT HORIBA Indonesia — Indonesia
Jl. Jalur Sutera Blok 20A, No.16-17, Kel. Kunciran, Kec. Pinang Tangerang-15144, Indonesia
Phone: 62 (21) 3044-8525 Fax: 62 (21) 3044-8521

HORIBA KOREA Ltd. — Korea
Seoul Branch
10, Dogok-Ro, 6-Gil, Gangnam-Gu, Seoul-Si, 06259, Korea
Phone: 82 (2) 753-7911 Fax: 82 (2) 756-4972

HORIBA India Private Limited — India
246, Okhla Industrial Estate, Phase 3 New Delhi-110020, India
Phone: 91 (11) 4646-5000 Fax: 91 (11) 4646-5020
Technical Center
D-255, Chakan MIDC Phase-II, Bhamboli Village, Pune-410501, India
Phone: 91 (21) 3567-6000
Bangalore Office
No.55, 12th Main, Behind BDA Complex, 6th sector, HSR Layout, Bangalore South, Bangalore-560102, India
Phone: 91 (80) 4127-3637

HORIBA Instruments Incorporated — USA
9755 Research Drive, Irvine, CA 92618, U.S.A.
Phone: 1 (949) 250-4811 Fax: 1 (949) 250-0924
Houston Office
5390 Bay Oaks Drive, Pasadena, TX 77505
Phone: 1 (281) 482- 4334 Fax: 1 (281) 674-6058

HORIBA Instruments Brazil, Ltda. — Brazil
Rua:Presbitero Plinio Alves de Souza, 645, Loteamento Polo Multivias Barirro Medeiros-Jundiai Sao Paulo
CEP 13.212-181 Brazil
Phone: 55 (11) 2923-5400 Fax: 55 (11) 2923-5490

HORIBA FRANCE SAS — France
Les Ulis Office
12. Av des Tropiques Hightec Sud, F-91955 Les Ulis, France
Phone: 33 (1) 69-29-96-23 Fax: 33 (1) 69-29-95-77

HORIBA UK Limited — UK
Northampton Office
Kyoto Close Moulton Park, Northampton NN3 6FL, UK
Phone: 44 (1604) 542-500 Fax: 44 (1604) 542-699

HORIBA Europe GmbH — Germany
Hans-Mess-Str.6 D-61440 Oberursel Germany
Phone: 49 (6172) 1396-0 Fax: 49 (6172) 1373-85
Leichlingen Office
Julius-kronenberg Str.9 D-42799 Leichlingen Germany
Phone: 49 (2175) 8978-0 Fax: 49 (2175) 8978-50

HORIBA Czech — Czech
Prague Office
Prumyslova 1306 / 7, CZ-10200, Praha 10, Czech Republic
Phone: 420 (2) 460-392-65

HORIBA (Austria) GmbH — Austria
Kaplanstrasse 5 A-3430 Tulln, Austria
Phone: 43 (2272) 65225 Fax: 43 (2272) 65230

Bulletin:HAE-S0160C

Printed in Japan 1708SK53