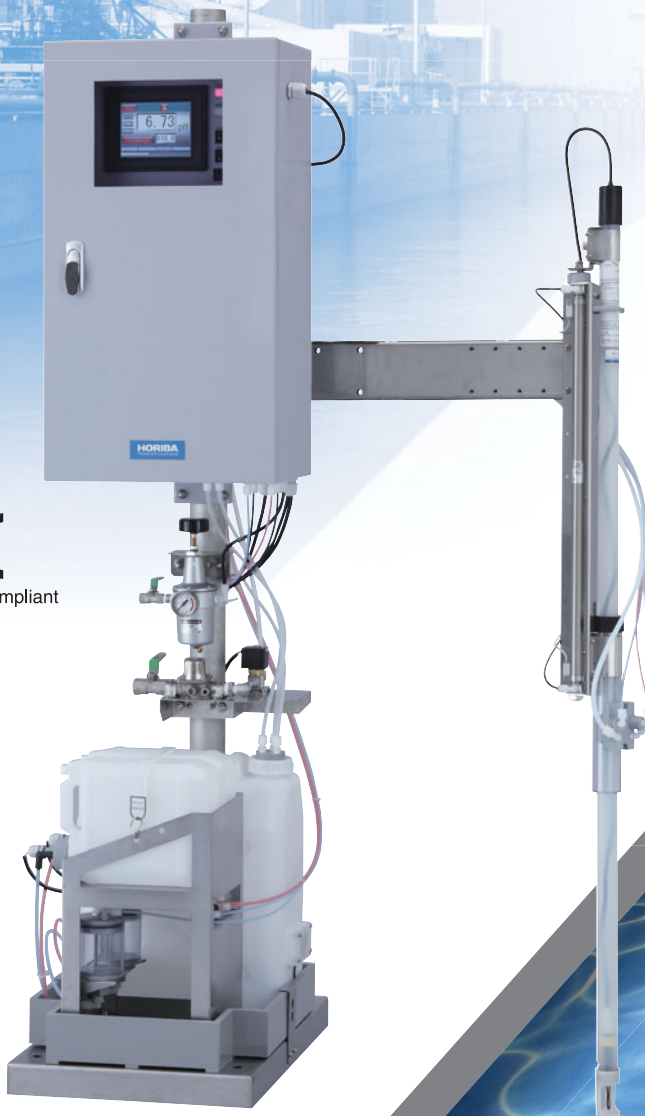


Automatic calibration function

pH meter AH-151

Cleaning of pH electrode with cleaning solution and calibration with standard solution is automated, making it possible to drastically reduce maintenance work.



CE marking compliant

The appearance of the product may differ according to the specifications.

The consumption of calibration solution is 1/5 or less as compared with our existing products*, which contributes to a reduction in running costs.

*When pH electrode is new

The pH meter AH-151 with automatic calibration function performs pH measurement by automatically cleaning the electrode with cleaning solution and performing calibration with standard solution, making it possible to drastically reduce maintenance work. In addition, by spraying the calibration solution, the consumption of calibration solution has been reduced. The spray amount of the cleaning solution can also be adjusted according to the condition of contamination, which contributes to cost reductions. With periodic cleaning and calibration, stable and highly reliable pH measurements are possible.

► Simple Operation with Color Touch Panel LCD

Use of a 5.7 inch touch panel has improved visibility and operability. Electrode characteristics during automatic calibration are automatically graphed, which makes it easy to judge the lifetime of the electrode.



► Easy Installation with Delivery in Units

The pH meter can be easily installed, as all components are unitized except for metal fittings and lifting unit.

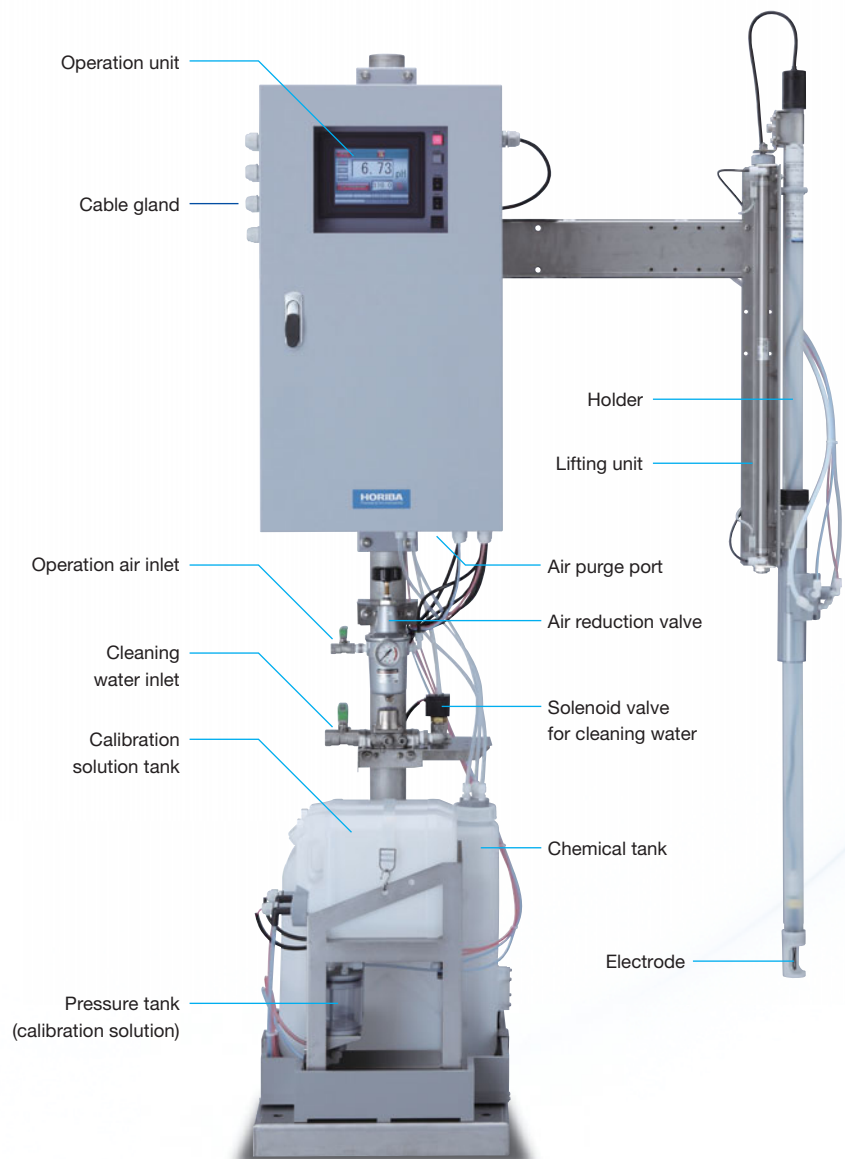
► Reduction in Running Costs

- By spraying calibration solution, the consumption of calibration solution has been reduced.
- The spray amount of cleaning solution for each cleaning can be selected from 50 mL, 75 mL and 100 mL according to the condition of contamination (adjusted to 50 mL as standard).

► Enhanced Self-check Function

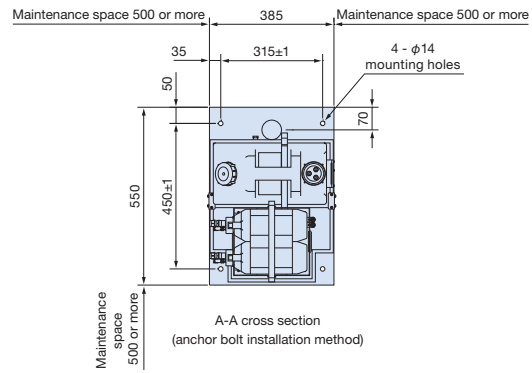
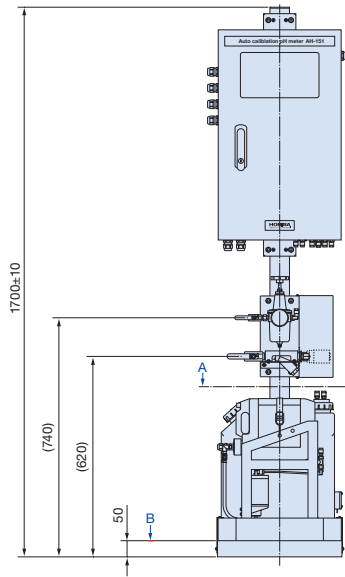
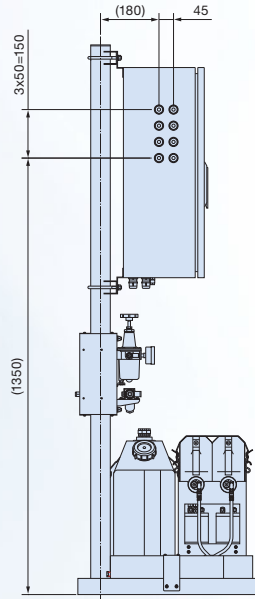
The pH meter is equipped with a standard function to self-check symptoms such as abnormal measurement values and sensor degradation, which is useful for taking quick measurements against electrode or equipment abnormalities.

■ Automatic lifting function for easy maintenance

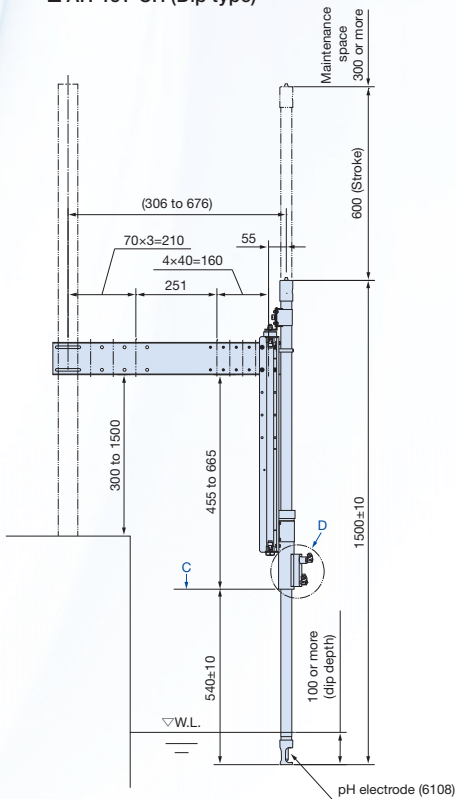


■ Outside Dimensions Drawings (unit: mm)

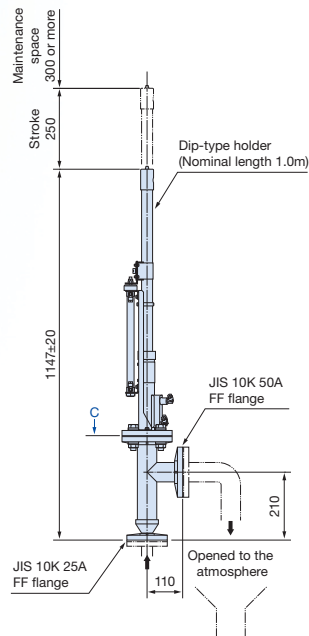
■ AH-151



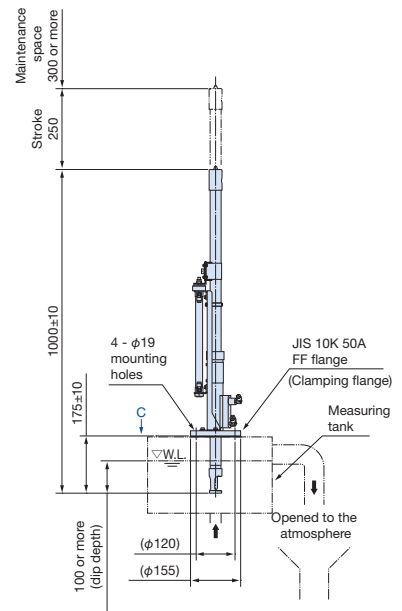
■ AH-151-CH (Dip type)



■ AH-151-CF (Flow-through type)



■ AH-151-FK (Water sampling type)



[Notes]

- (1) The B level should be within +2 m and within 1 m from the C level.
- (2) The D portion of the lifting unit should not be dipped in the solution to be measured.
- (3) Dimensions without tolerance indications should comply with the tolerance class v of JIS B0405.
- (4) The tube length between the lifting unit and the operation unit should be up to 5 m.
- (5) The exit pipe for the flow-through type holder should be opened to the atmosphere at the shortest distance so that pressure will not be applied to the inside of the holder.

Specifications

Product name	pH meter with automatic calibration function
Type	AH-151-CH (dip type), -CF (flow-through type), -FK (water sampling type)
Measuring method	Glass electrode method
Measuring range	pH: 0 to 14 Resolution: 0.01 pH Temperature: 0 to 100°C Resolution: 0.1 degree C
Display unit	Touch panel (TFT color LCD)
Repeatability	pH: within ±0.02 pH, Temperature: ±0.3°C (Equivalent input)
Linearity	pH: within ±0.03 pH, Temperature: ±0.3°C (Equivalent input)
Transmission output	Number of output points: 2, Output form: 4 to 20 mA DC input/output insulation type, Load resistance: Maximum 900 Ω Output range 1: pH: Can be arbitrarily set within the measuring range Output range 2: Temperature: Can be arbitrarily set within the range of -10 to 110°C Hold function: Can be arbitrarily set by selecting from "last value hold," "any value hold," and "without hold"
Contact output	Number of output points: 9 and 1 (abnormality alarm), Output form: No-voltage contact output, Alarm details: Calibration errors (asymmetric potential abnormality, sensitivity abnormality, response time abnormality), electrode abnormalities (glass response membrane crack, short circuiting of temperature sensor, disconnection of temperature sensor), abnormalities of converter (CPU abnormality, ADC abnormality, memory abnormality), shortage of cleaning solution, shortage of calibration solution
Cleaning interval	0.1 to 168.0 hours, Month, day and time of start of next cleaning can be set, Cleaning time: Approx. 2 minutes (default setting)
Calibration interval	1 to 999 hours, Month, day and time of start of next calibration can be set, Calibration time: Approx. 5 minutes (default setting when pH electrode is new)
Contact input	Number of input points: 3, Contact: No-voltage "a" contact for open collector, Contact function: External commands for cleaning performance (automatic cleaning start, automatic calibration start, stand-by commands)
Communication capability	RS-485 two-wire system, Input/output insulation type (not insulated from transmission output)
Combined electrode	Glass electrode 6108
Calibration method	Automatic calibration (lift-up type calibration with standard solution spray) or manual calibration
Cleaning method	Lift-up type cleaning with cleaning solution
Self-check	Calibration error, Electrode check, System error
Sample conditions	Pressure: Atmospheric pressure, Temperature: -5 to 80°C, Flow velocity: 2 m/sec or less, Flow rate: 10 L/min or less (only for flow-through type), Conductivity: 10 mS/m (100 µS/cm) or more
pH standard solution	Two solutions (pH7 and pH4 or pH9), Consumption: Approx. 30 to 40 mL/min (max. 200 mL/calibration), Capacity: PE tank 3 L (calibration approx. 15 to 50 times possible)
Cleaning chemical	HCl: less than 5 to 10%, Consumption: Approx. 50 mL/cleaning (approx. 75,100 mL/cleaning, adjustable) Capacity: PE tank 20 L (cleaning approx. 300 times possible, using 50 mL each time)
Water supply	Water quality: Tap water equivalent (industrial water possible), Pressure: 0.2 to 0.75 MPa, Consumption: 10 to 20 L/cleaning, calibration one time (in case of default setting for cleaning time)
Air supply	Air quality: Instrument air, Pressure: 0.3 to 0.7 MPa, Consumption: 10 to 15 L/min
Inlet	Supply water: Rc1/2, Air: Rc1/4
Cable gland	8 cable glands for φ7 to φ12 (without cable gland, φ21.5 hole)
Operating temperature range	0 to 50°C (no condensation)
Power supply	Voltage range: 100 to 240V AC ±10%, 50/60 Hz, Power consumption: 100W AC, approx. 20 W during steady state and approx. 35 W during auto-calibration
Structure	Outdoor setting type: JIS C0920 explosion/splash-proof type (IP54 equivalent), Material of control unit case: SPCC (coated with melamine-based epoxy resin), Metal fittings: SUS304, Stand: SUS304
Mass	Operation unit & pole stand: Approx. 60 kg, Metal fittings: Approx. 3 kg, Lifting unit (dip type): Approx. 1.5 kg (except for dip-type holder)

Note: Although a surge arrester (discharge starting voltage: 400V) is installed for transmission output, contact input and communications, please install an appropriate surge absorber on the connecting line, according to the surrounding environment, equipment installation condition, peripheral equipment, etc.



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.



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