HORIBA

Self-cleaning* pH Electrode

NEW

Gel-filled Self-Cleaning pH Electrode 6122 series

Troubled by the manual and frequent cleaning of electrodes?
Look no further...
HORIBA has developed a new Gel-filled Self-Cleaning pH Electrode to liberate you from your heavy maintenance burdens.
Prolonged cleaning, calibration cycle and reduced on-site workload are no longer a pipedream.

JP Patent No.5121012
JP Patent No.4824609
JP Patent No.4876123
JP Patent No.6603135
JP Patent No.4857281
JP Patent No.7014652

*The effect varies depending on the customer's usage environment. Effective against organic stains.

Specifications

product name		Gel-filled Self-Cleaning pH Electrode	
Format		6122S (Immersion holder type/ Flow through type/ Drop-in holder type)	6122SA (Direct screw-in thread)
Measurement range		0 – 14 pH ※1	
Measuring solution condition	Temperature range	0 – 40 ℃ ※2	
	Pressure range	0 – 0.1 MPa	
	Electric conductivity range	500 μS/cm or more	
Electrode structure		GRT composite electrode	
Liquid junction structure		Open pore	
Reference electrode internal liquid		Water-insoluble polymer gel Potassium chloride supersaturated	
Wetted material		Glass, TiO_2	
Cable length		5 m / 10 m Please contact us for other cable length.	
Terminal agreement		Square destination opening crimp terminals (4 mm) G, S, R, T, T, E, LED+, LED-	
Temperature compensation element		Pt 1000 Ω (at 0 ℃)	
Standard accessories		· Instruction manual · Spacer · Electrode packing · Holder cap	· Instruction manual · O-ring
Adaptive transmitter		HP-200/ HP-300/ HP-480 series / HP-960FTP	
Relay box		CT-302	
Compatible holder/ adapter		· CH-101 series (Immersion type) · CF-251 series (Flow through type) · NH-10 series (Drop-in) ※3	· Direct screw-in thread (S-R3/4-SUS-6122SA, S-NPT3/4-SUS-6122SA) ※4

· 6122S and 6122SA electrodes are resistant against organic foulants. Inorganic foulants may not be effective.
· Even an organic foulants may not be effective for clean water where algae is likely to grow, or for samples containing solid oils and fats. Also, fine particles of alumina or zirconia may scrape the photocatalyst, the antifouling may not be possible.
· When using this electrode, a relay box with a constant current source (CT-302) and a relay cable (C-5A) are required separately.

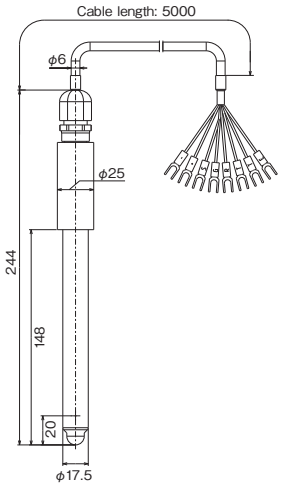
product name	Relay box with constant-current souce
Model	CT-302
Operating temperature range	-20℃ to 55℃ (Do not freeze)
Operating humidity range	Relative humidity 5% to 90% (Do not freeze)
Storage temperature	-25℃ to 65℃
Storage temperature	100 V to 240 V AC±10% (50/60 Hz)
Power consumption	8.0 VA (Max)
Structure	Outdoor installation type: IP65 ※5 Mounting method: 50 A pole or wall mounting Case: Aluminum alloy Mounting bracket: SUS304
Mass	3.0 kg (Does not include U-bolt)
LED current output (switched by SW)	0 mA, 50 mA, 100 mA, 150 mA, 200 mA (Initial value: 100 mA)
External dimensions	180 (W) ×234 (H) ×170 (D) mm (Does not include U-bolt)
Compatible electrode	6122 series

※1 Composite type pH electrode 6108 is recommended when a high accuracy is required for strong acid and strong alkaline aqueous solutions.
※2 At sample temperatures above 30 ℃, the electrode life will be shortened.
※3 An adapter is required when using the 6122S as a drop-in type.
※4 A direct screw-in thread adapter is required when using the 6122SA as a direct insertion type.
※5 About protection class (IP rating)
IP65: Dust-proof and waterproof protection from water jets only apply when all the cable glands are tightly screwed, and the cables/seal pins are tightened.

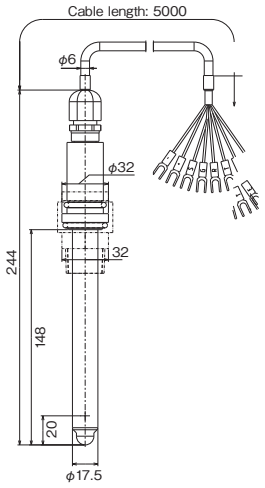
External Dimensions

(unit: mm)

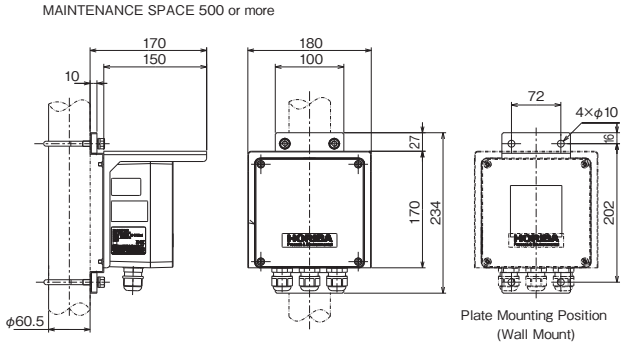
6122S



6122SA



CT-302



Self-cleaning Mechanism

The pH-responsive glass membrane is coated with porous TiO_2 and irradiated with UV light from within the electrode. This process activates the TiO_2 coating, resulting in photocatalytic hydrophilicity and the formation of a water film (hydrophilic layer) on the surface, effectively preventing the adhesion of organic contaminants. Furthermore, the activated TiO_2 facilitates the radicalization of water (H_2O) and oxygen, enabling the disintegration of organic contaminants adhering to the external surface of the electrode.

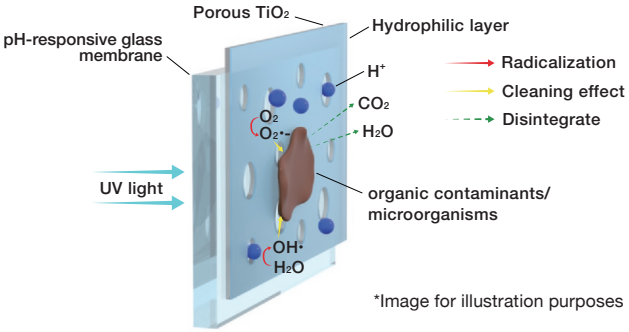
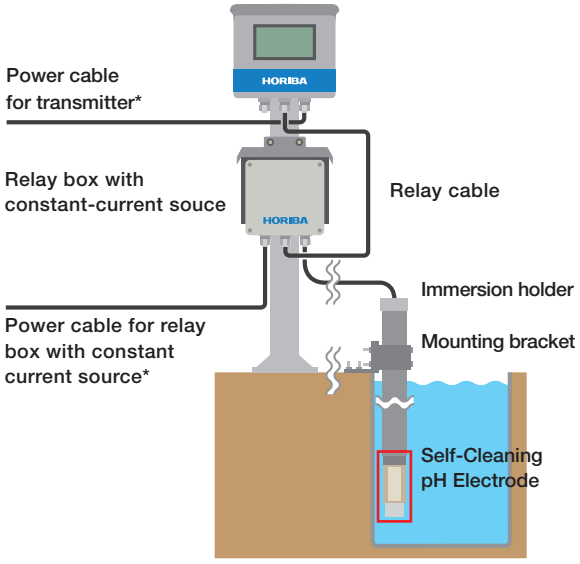


*Image for illustration purposes

Installation Image

e.g. Immersion Type



*Power cable is not provided.

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