

# SPECIFICATION SHEET



## pH DETECTOR FOR PURE WATER

HC-G65

This product is a micro-flow-rate-type pH detector suitable for measuring the pH of pure water or boiler water, etc. with low electrical conductivity (0.01mS/m or more).

The applicable pH electrode is GSS-314P with replaceable tips (glass electrode and reference electrode liquid junction).

More accurate and stable measurement is enabled by immersing the reference electrode liquid junction in the KCl reservoir of measurement cell and providing a constant and small flow of the sample water (30–200mL/min).

It is effective even for boiler water that is affected by the boiler compound (reducing agent).

The beaker stand (for standard solution calibration) is attached.

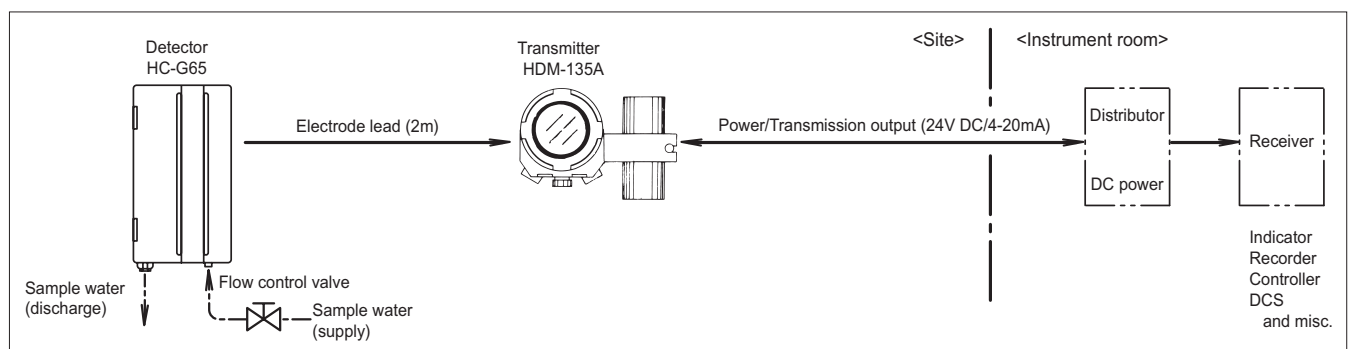


### Standard Specifications

Product name : pH detector for pure water  
 Model : HC-G65  
 Measurement range : pH 0–14  
 Applicable electrode : GSS-314P  
 Sample water conditions : Electrical conductivity ... 0.01mS/m (0.1μS/cm) or more  
 Temperature... 0–50°C  
 Flow rate ... Constant flow rate within a range of 30–200mL/min  
 Pressure... Inlet pressure; 50kPa or less  
 Outlet pressure; Air open (no back pressure)  
 Connecting port : Rc1/4 (for both inlet and outlet of sample water)

KCl tank capacity : 100mL  
 Ambient temperature : 0–50°C, 90%RH or less / humidity  
 Weight : Approx. 4.5kg  
 Dimensions : 221(W) x 110(D) x 400(H)mm  
 Mounting : Rack or wall mount  
 50A pole mount (option)  
 Materials : Case... Acid proof painting on SPCC  
 Measurement cell... Acrylic resin  
 Piping tube... Polyethylene  
 Construction : Simplified rainproof type (for indoor installation)  
 Color : Metallic silver

### Configuration <Example of 2-wire pH measurement system>



**Note 1:**

Provide sample water with a constant flow within a range of 30–200mL/min.

**Note 2:**

The applicable transmitter is HDM-135A/136A or HBM-100A/160.

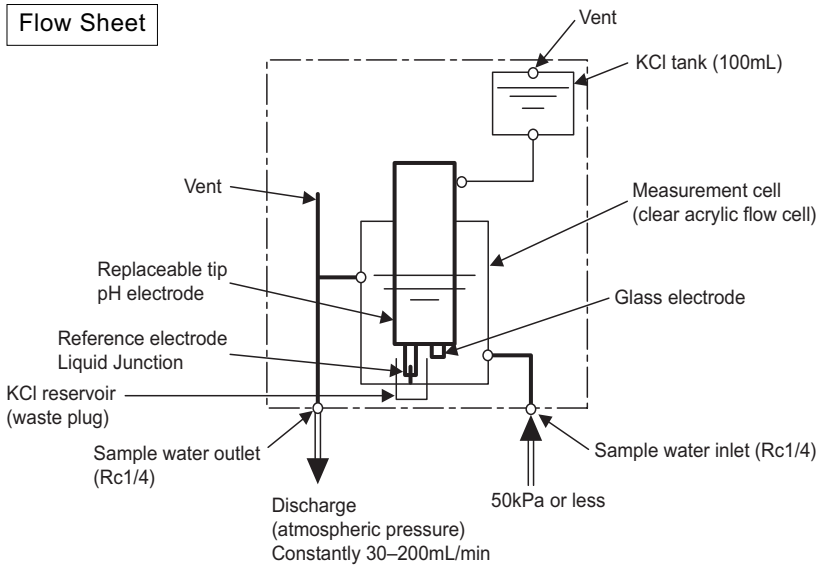
The pH temperature characteristics of pure water or boiler water can be automatically compensated.

(Temperature coefficient setting range : -0.100– +0.100pH/°C)

**Standard included accessories**

- Instruction manual (one copy)
- Filling solution KCI-3.3NC 500mL, with crane neck Code No. RE-4C

**Flow Sheet**

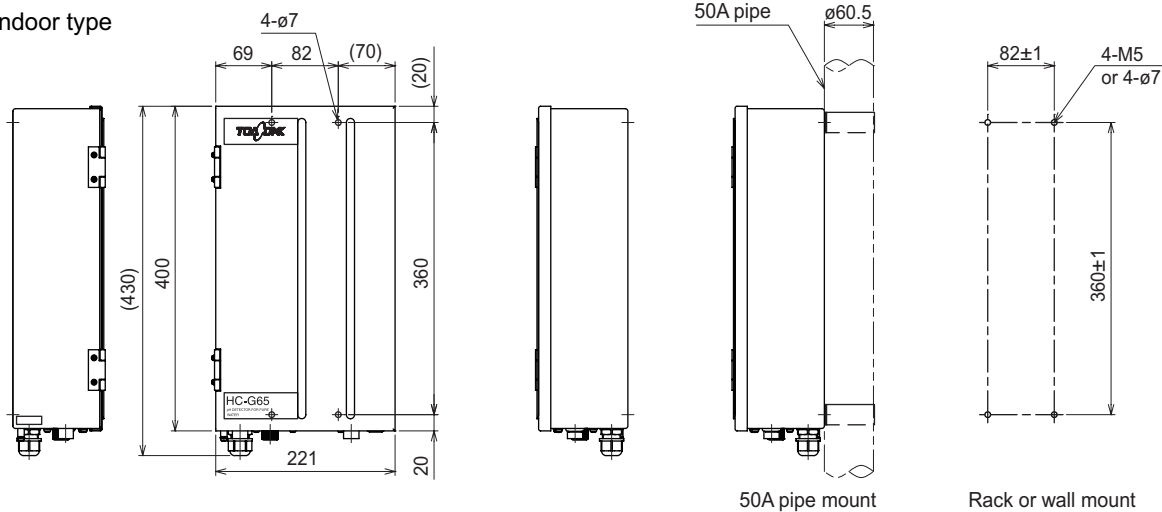


<In standard solution calibration>

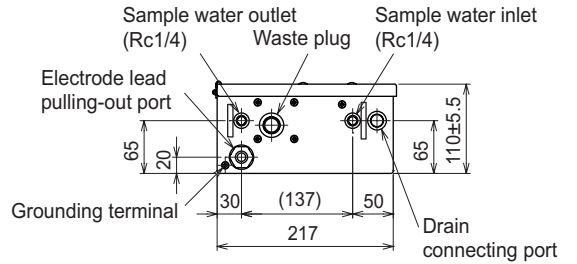
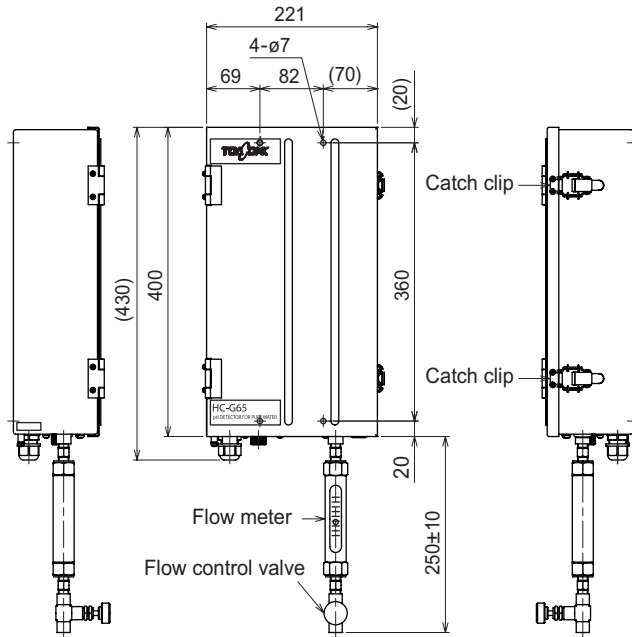
**Dimensions**

Unit : mm

● Indoor type



- Outdoor type, equipped with a flow meter and flow control valve... full option specifications



Product code

|          |   |   |   |   |   |
|----------|---|---|---|---|---|
| HCG65-0- | □ | □ | □ | □ |   |
|          | A | B | Z | 0 | 1 |
|          |   |   |   | 0 | 1 |
|          |   |   |   | 0 | 1 |
|          |   |   |   | A | B |
|          |   |   |   |   |   |
|          |   |   |   | 0 | 1 |
|          |   |   |   | 0 | 1 |
|          |   |   |   | 0 | 1 |

- Enclosure protection
- For indoor installation (standard)
- For outdoor installation, rainproof/dust-proof type (equivalent to IP54)\*1
- Custom spec.
- Sample water flow meter\*2
- Not attached
- Attached (200ml/min FS)
- Custom spec.
- Sample water flow control valve\*3
- Not attached
- Attached (made with SUS316)
- Custom spec.
- Mounting:
- Rack or wall mount
- Pole mount (with saddle for 50A pole)
- Custom spec.
- Marking
- Japanese (standard)
- English
- Custom spec.

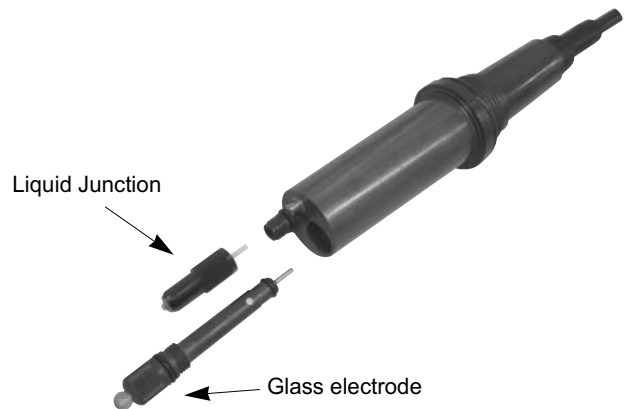
\*1. With the case and door closed using a rubber packing seal, the door can then be opened and closed by setting or removing the stainless-steel catch clip.

\*2. The compact flow meter (set to 100mL/min) is attached to the sample water port on the bottom of case. The sample water port is connected to the IN side (Rc1/4) of the flow meter.

\*3. The stainless-steel needle valve is attached to the sample water port on the bottom of the case or to the IN side of the compact flow meter if it is set. The sample water port is connected to the IN side (Rc1/4) of the needle valve.

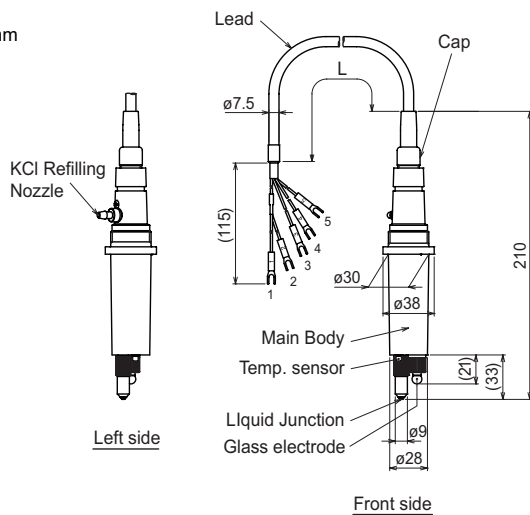
## ■ Replaceable Tip pH Electrode: GSS-314P

Measurement range : pH0-14  
 Wetted part materials : Glass, ceramics, titanium, PPS resin, epoxy resin, fluororubber  
 Lead : Material... Heat-resistant PVC  
 Outside diameter...  $\phi 7.5$   
 Length... 2m or 5m  
 Internal electrode : Silver / silver chloride (Ag / AgCl)  
 Temperature measuring element : Pt1000  
 Weight : Approx. 570g (lead 2m)  
 Filling solution : 3.3 mole KCl solution



### Dimensions

Unit : mm



<Number of lead wire>

- 1: Glass electrode
- 2: Reference electrode
- 3/4: Temperature compensation electrode
- 5: Shield wire grounding

### Glass Electrode and Consumable

| Product name           | Model   |
|------------------------|---------|
| Glass electrode        | HGS-300 |
| Liquid Junction        | JC-300P |
| Filling solution 500mL | RE-4C   |


### pH calibration kit


- For pure water measurement: Code No. 7420750K


| Item No. | Code No. | Part name                           | Quantity | Remarks                       |
|----------|----------|-------------------------------------|----------|-------------------------------|
| 1        | 136C035  | Beaker (made with PE)               | 3P       | For 500mL                     |
| 2        | 143F191  | pH4.01 standard solution            | 1P       | 500mL                         |
| 3        | 143F192  | pH6.86 standard solution            | 1P       | 500mL                         |
| 4        | 143F193  | pH9.18 standard solution            | 1P       | 500mL                         |
| 5        | 143F060  | Powder for pH4.01 standard solution | 1P       | 5 bags (one bag is for 500mL) |
| 6        | 143F061  | Powder for pH6.86 standard solution | 1P       | 5 bags (one bag is for 500mL) |
| 7        | 143F062  | Powder for pH9.18 standard solution | 1P       | 5 bags (one bag is for 500mL) |


- For boiler water measurement: pH calibration 7-9 kit  
Code No. 6531690K

## ■ Applicable pH analyzer/transmitter

|   |
|---|
| <p>On-site installation type (2-wire system)<br/>HDM-135A</p>   |
|    |
| <ul style="list-style-type: none"> <li>● 2-wire system equipped with a microcomputer, rainproof structure, an on-site installation type</li> <li>● Free setting of transmission output range (4–20mA DC)</li> <li>● Transmission output value held during maintenance</li> <li>● Power supply: 2-wire system, 24V DC</li> <li>● Automatic judgment of the normality of electrode properties</li> <li>● Measurement range: pH -1–14</li> </ul> |

|   |
|---|
| <p>On-site installation type (4-wire system)<br/>HDM-136A</p>   |
|    |
| <ul style="list-style-type: none"> <li>● 4-wire system equipped with a microcomputer, rainproof structure, an on-site installation type</li> <li>● Free setting of transmission output range (4–20mA DC)</li> <li>● Transmission output value held during maintenance</li> <li>● Power supply: 100–120V AC or 200–240V AC automatic voltage regulation</li> <li>● Automatic judgment of the normality of electrode properties</li> <li>● Measurement range: pH -1–14</li> </ul> |

|  |
|--|
| <p>On-site installation type (4-wire system)<br/>HBM-160</p>   |
|   |
| <ul style="list-style-type: none"> <li>● Practical functions incorporated in a robust die-cast aluminum enclosure</li> <li>● Two circuits (pH/ORP, liquid temperature) transmission output (4–20mA)</li> <li>● Free setting of transmission output range (4–20mA DC)</li> <li>● Equipped with upper-limit and lower-limit alarm contact (4 alarm points possible)</li> <li>● RS-232 installable (option)</li> <li>● Power supply: 100–240V AC automatic voltage regulation</li> <li>● Measurement range: pH -1–15</li> </ul> |

|  |
|--|
| <p>Panel-mount type<br/>HBM-100A</p>   |
|   |
| <ul style="list-style-type: none"> <li>● Compact DIN96 size</li> <li>● Free setting of transmission output range (4–20mA DC)</li> <li>● Equipped with upper-limit and lower-limit alarm contact (4 alarm points possible)</li> <li>● RS-232 installable (option)</li> <li>● Power supply: 100–240V AC automatic voltage regulation</li> <li>● Measurement range: pH -1–15</li> </ul> |



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## CAUTION

Please read the operation manual carefully  
before using products.

<http://www.toadkk.co.jp/english>

Information and specifications are subject to change without notice.

Issued on 1/10/2015