

순수용pH측정장치

pH ANALYZER FOR PURE WATER

OUTLINE

Presently, pure water (high purity water) is extensively used in various types of manufacturing plants and power plants.

The continuous pH measurement is used in the control of the pure water. However, the pH measurement of the pure water has many constraints making its measurement very difficult. This pH analyzer with high functions developed on our long experience equips the following features.

FEATURES

- The calibration of pH standard solution is automatically performed without settings of kinds of pH standard solution and a reference value, and the diagnosis of electrode characteristic deterioration can be performed from calibration data.
- Various kinds of event outputs including an alarm output and self-diagnostic abnormality output are equipped.
- By building SH5800 type digital pH analyzer in, this unit has many functions including solution temp compensation, a liquid temperature display and a shifting function.
- Any scaling of the analog output is enabled in 1pH increments for the span of 4pH.
- The flow chamber exclusively developed offers easy calibration of the standard solution. (Its lower portion is easily detachable.)
- Through the adoption of a low membrane resistance glass electrode and a constant flow rate device, stable measurements resisting being disturbed can be performed.
- Long-term maintenance free is offered by using a diffusion type reference electrode with a special structure liquid contact portion.

SPECIFICATIONS

• Detector

Liquid contact material:

Flow chamber; Transparent acrylonitrile resin
Electrode; Glass, SUS304, fluorocarbon resin,
PVF resin

Applied electrodes:

GP1300 low membrane resistance glass electrode
NR3200 diffusion type reference electrode
TC6300 type temperature compensation
electrode(Pt1000)
TC5300 type temperature compensation electrode
(thermistor)

Process connection:

Rc1/2 (PT1/2 female screw), hose coupling or
NPT1/2 female screw

Sample solution temperature: 10 ~ 50°C



Sample solution flow rate:

150 ~ 400mℓ/min (Controlled to 100mℓ/min in the measuring chamber.)

Sample solution pressure:

Open to air (Atmospheric pressure at the outlet)

Sample solution conductivity:

10 ~ 10,000μS/m
(0.1 ~ 100μS/cm)

• Analyzer

Measuring range: 0.00 ~ 14.00pH

Output range: Programmable, 4pH in span min.
1pH increment

Output:

4 ~ 20mADC Isolated, 550Ω max

Display:

4-digits, 7-segments LED, dual

Contact output:

Alarm output (4 points)

Self-diagnostics abnormality output

Contact rating 250VAC 0.5A

Self-diagnostics:

Abnormal measured value (Less than 0.00pH,
more than 14.00pH)

Abnormal temperature (Less than -25°C, more
than 150°C)

Abnormal calibration (Standard, abnormal slope)

Shift function:

The shift adjustment in 0.01pH increments is
enabled for the range of -1.50 ~ +1.50pH for
the measured value and the output value.

Solution temp compensation:

Temperature coefficient setting system

Setting range 0.000 ~ 0.050pH/°C

Reference temperature: 25°C

Hold function: Programmable, at output, alarm
contact and error contact

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• Performance

Measurement accuracy:
 ± 0.1pH (After the calibration of the pH standard solution, in the pH standard solution of 25°C)
 Temperature measurement accuracy:
 ± 0.3°C
 Output accuracy:
 ± 0.4% of span or ± 0.03pH, whichever is larger
 Repeatability: ± 0.05pH
 Response time:
 About 30 seconds (90% response in the standard solution of 25°C)

• Others:

Mounting: Wall mounting
 Operation conditions:
 -10 ~ 50°C, 90%RH max.
 Power consumption: 6VA/100VAC
 Power supply voltage: 85 ~ 264VAC 45 ~ 65Hz
 Weight: About 9kg

A
B
C
D
E
F
G

MODEL CODE NUMBER

Basic model	Factory use	Structure	Output	Process connection	Contents
SA1001					pH analyzer for pure water
	B				
		1			Integral structure (With mill-sheet)
		2			Integral structure (W/o mill-sheet, standard)
		3			Separate structure (Detector only, TC6300 with mill-sheet)
		4			Separate structure (Detector only, TC6300)
		5			Separate structure (Detector only, TC5300 with mill-sheet)
		6			Separate structure (Detector only, TC5300)
		9			Special (Your detailed content is required.)
			0		None (Specify it in case of the separated type.)
			1		0 to 14pH
			2		2 to 12pH
			3		6 to 12pH
			4		6 to 14pH
			5		0 to 8pH
			9		Special (Your detailed content is required.)
				1	Rc1/2 (PT1/2 female screw) standard
				2	Hose coupling (Tube with the inner diameter of 12mm)
				3	NPT1/2 female screw
				9	Special (Your detailed content is required.)

Note 1: When 3 or 4 is selected in the structure, the indicator (SH5801R or SH7301R) is separately required.

Note 2: Specify the structure 5 or 6 for replacing P222/2.

Note 3: For the process connection 2 or 3, an adapter is added to 1 (Rc1/2 standard).

Example of model: SA1001B211

CONFIGURATION

This unit is generally configured with the following portions.

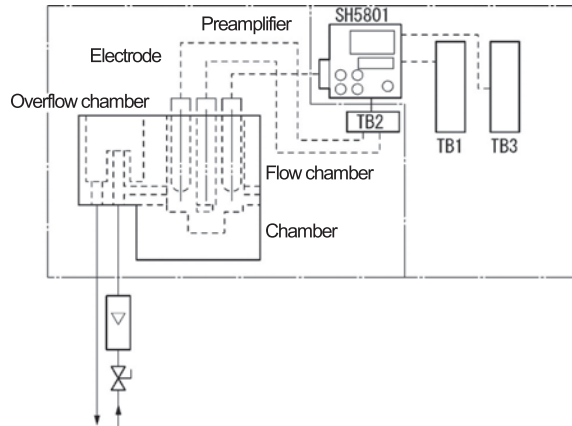
• **Detector**

Configured with the flow chamber, the overflow chamber, pipe couplings and electrodes

• **Analyzer (Integral structure only)**

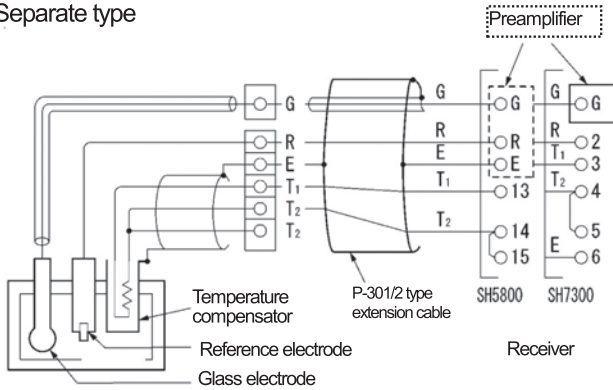
Configured with the SH5801R type digital pH analyzer, and the terminal board

• **Block diagram**



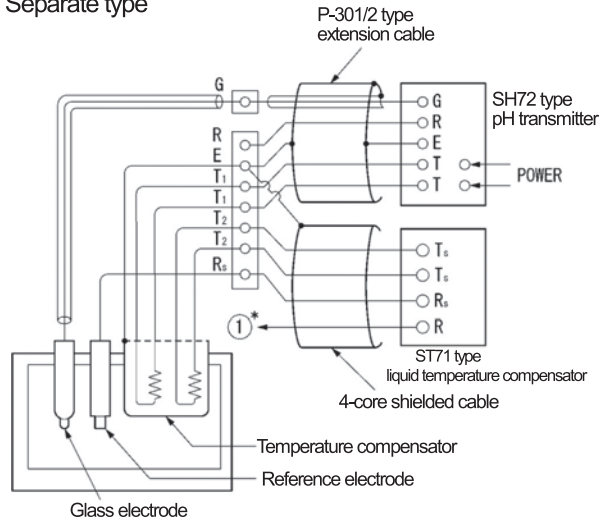
OUTSIDE CONNECTION

Separate type



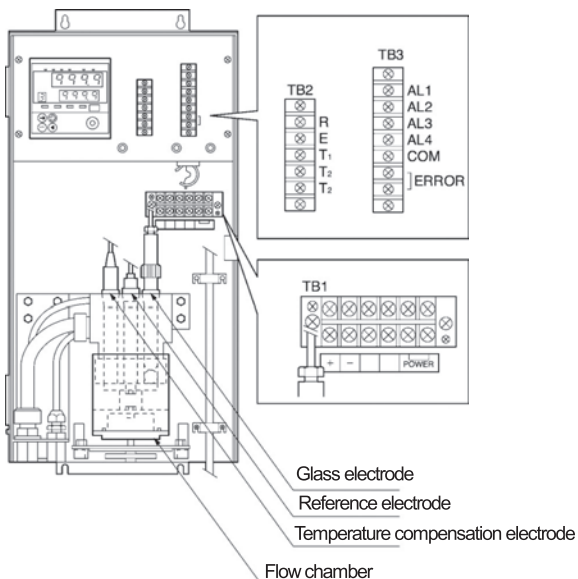
In case of SA1001B3 or 4
(In case of this SA1001B unit combined with SH5800 and SH7300)

Separate type

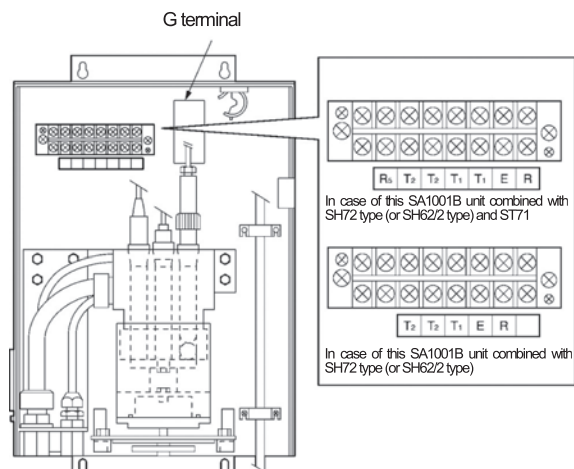


In case of SA1001B5 or 6 (for replacing P222/2)
(In case of this SA1001B unit combined with SH 272 type pH transmitter and ST71 type liquid temperature compensator)
* Connect ① to the R terminal of this SA1001B unit.

Integral type



Separate type



STANDARD ACCESSORIES

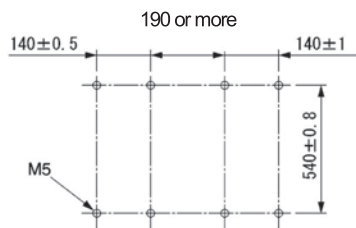
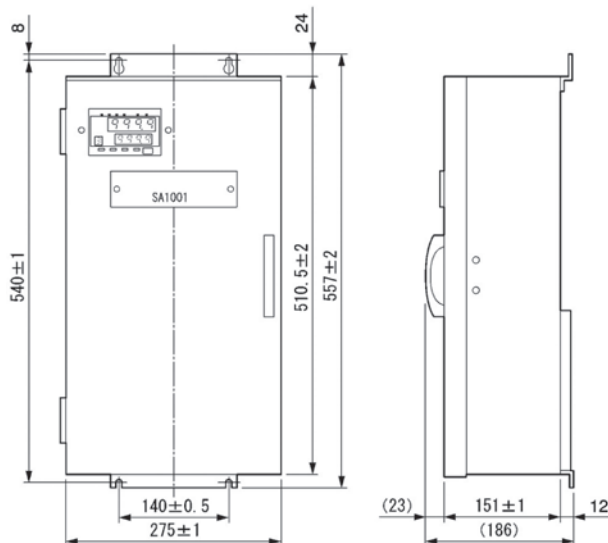
(For working)

Item	Name	Qty.	Model/drawing No.	Remarks
1	Glass electrode	1	GP1300	
2	Reference electrode	1	NR3200	With 2 spares of liquid contact portion
3	Temperature compensator	1	TC6300 or TC5300	Depended on models
4	Adapter for amplifier checking	1	H4A12877	Attached to the backside of the case door

OUTSIDE DIMENSIONS

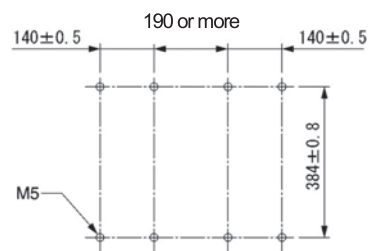
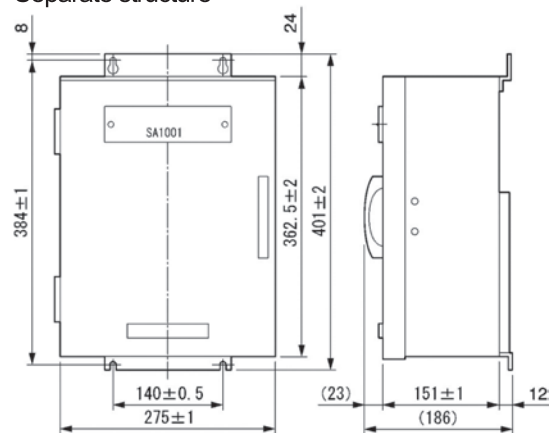
Unit: mm

Integral structure



Mounting dimensions

Separate structure



Mounting dimensions

A

B

C

D

E

F

G