

취급설명서

Laboratory pH/ORP/ION Meter

CPI - 501



SECHANG INSTRUMENTS

I. Introduction.....	2
1.	2
2.	2
3.	3
4.	3
5.	4
6.	5
II. pH	7
7.	7
8.	7
9.	12
10. pH	13
11.	14
. ORP & &	15
1. ORP(mV)	15
2.	15
3.	15
VII.	17
1. & &	17
2.	17
3.	20
4. Co-operation with PC.....	21
5. Technical DATA.....	22



I. Introduction

1.

- (CPI-501)
- pH
- (ATC Sensor)
-
- (,)

2.

CPI-501 :

;
 / ;
 1 ~ 5 pH ;
 pH ;
 가 ;
 pH ;
 & , 200 ;
 가 ;
 RS-232 가 ;
 OFF ();

3.

CPI-501 (pH) , (Oxidation Reduction Potential (mV)) , .

CPI-501 , , BNC-50 connector 가 pH
가 . Pt-1000 Chinch connector

200 ,
RS-232 PC .

Caution!

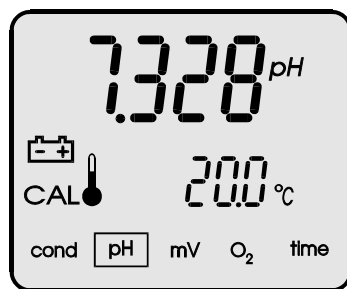
, EI-401

4.

LCD (1) :

*pH ; *mV ;
*ION (pX, g/L, M/L, ppm); *

()



1.



CAL 가



MODE



가

ON/OFF,

:

ON/OFF - , ON/OFF.

pH – pH

mV – ORP(mV)

Ion – ION

Time –

CAL – , .(CAL 가 .).

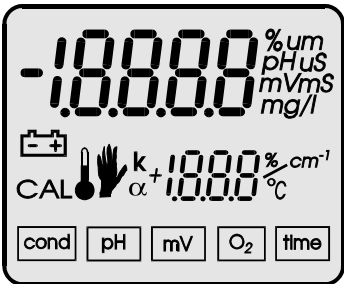
MEM/PRINT – , (Readout Mode) .

MODE –



5.

CPI-501 ON/OFF , ON 가 , 2



. 2

가 ,
 HELP 가 ,
 가 , 1.5
 , 가 .

CAL , (Standard Characteristics)

shift = 0 pH, characteristic slope = 100% for pH electrode;

가 .
 pH .

ON/OFF OFF 가 ,
 . **CPI-501** 가 .

6.

- CPI-501** :
- , ;
 - pH , ORP **BNC-50** ;
 - **Chinch** ;
 - PC , EI-401 5XX-PC
 RS-232 .
 - **ON/OFF** .

Caution! pH , .

6.1.

(ATC) (MTC) 가 ,
 , 가 .





가 .

6.2.

(Resolution) .

MODE

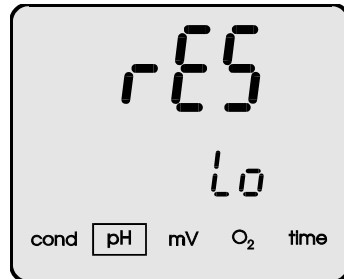
rES(resolution) 가 (. 3)



:

Lo - (low) ; (가)

Hi - (high) ; ()



. 3

*pH :

Lo - 0.01 pH;

Hi - 0.001 pH.

*ION :

pX

M/L, g/L & ppm

Lo - 0.01 pX;

Lo - 0.1%

Hi - 0.001 pX;

Hi - 0.01%



가 .

pH 1 5 가 , 2 pH 7.00 pH4.01

CPI-501 가 3 EL 1, EL2, EL3

NIST (.1.).

Temp					
	1 Oxalate	2 Phthalate	3 Phosphate	4 Di - sodium Tertraborate	5 Calcium Hydroxide
0	1.666	4.003	6.984	9.464	13.423
5	1.668	3.999	6.951	9.395	13.207
10	1.670	3.998	6.923	9.332	13.003
15	1.672	3.999	6.900	9.276	12.810
20	1.675	4.002	6.881	9.225	12.627
25	1.679	4.008	6.865	9.180	12.454
30	1.683	4.015	6.853	9.139	12.289
35	1.688	4.024	6.844	9.102	12.133
40	1.694	4.030	6.838	9.063	11.984
45	1.700	4.047	6.834	9.038	11.841
50	1.707	4.060	6.833	9.011	11.705
55	1.715	4.075	6.834	8.985	11.574
60	1.723	4.091	6.836	8.962	11.449

.1.

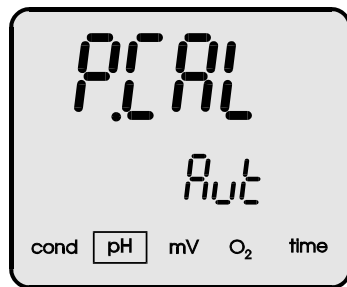
가

pH pH MODE , P.CAL
(points of calibration)가



Rut - [.1.] pH
()

USt - [.3.],



. 4

Rut , pH , "8.3 8.4 "

USt , "8.3 "

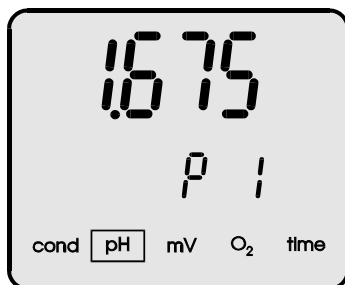
USt () , CAL

pH

PI (1)
(. 5).

가 ,

[. 3.]



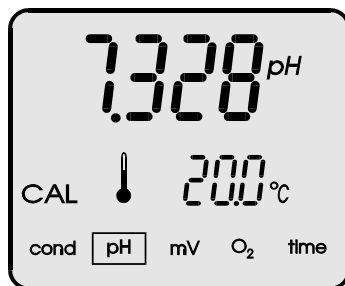
. 5.

. CAL 2 , pH가
 .
 .
 pH (Auto / USt) 가 , MODE pH
 가 .

. (EL1, EL2, EL3).

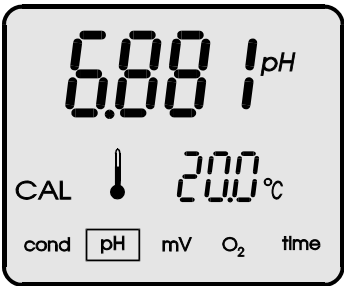
pH
 가 .
 , pH
 3 .

8.4. (with)
 pH :
 CAL CAL [. 6.] 가
 가
 pH



. 6.
 , CAL

. (7).
 Err 가 ,



7.

, pH

b.

8.5. (with)

()가



pH , 8.4

Caution!  , 20

9.

가 (EL 1, EL2, EL3)

9.1.

가 pH
MODE ,

10. pH

가 6 7 ,
(8.3).
(6.2).

10.1. (with)
CPI-501

pH 가
CPI-501 , pH

Notice!

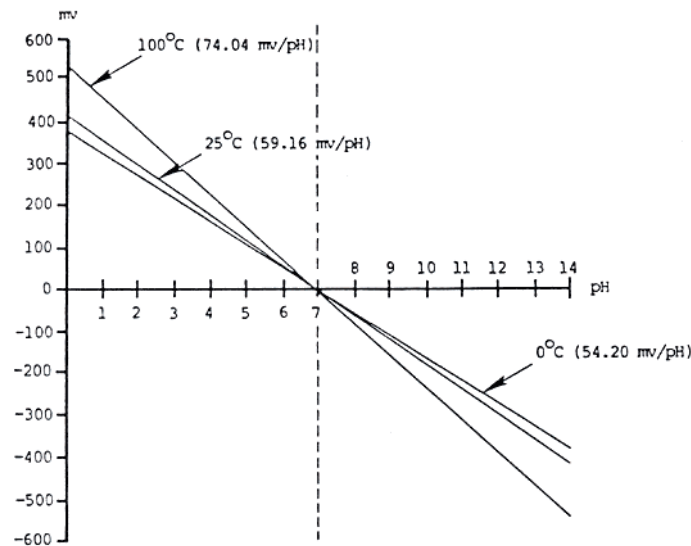
10.2. (with)
가
⚡ ⚡

10.1.

Notice! CPI-501 -50 ~ 199.9 가 0 ~ 70
가 pH

Caution! ⚡ ⚡ 20

11.



. 8

CPI-501 K

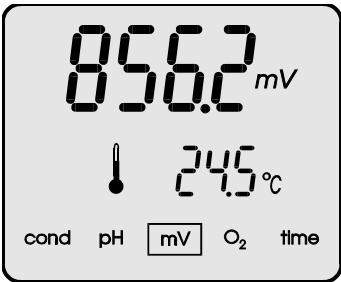
$k=0.198422\text{ T}$

KCl

. ORP& &

1. ORP(mV)

CPI-501 ORP(Oxidation Reduction Potential) .
Redox . mV ORP .
(. 9).



. 9.

2.

- .
- ON/OFF .
- .
- , .

CPI-501 PT-1000 .

⦿ : , (ATC).
✋ : , (MTC).

3. (Ex:)
1. ON/OFF .
 2. Reference(RL - 100) .
 3. pH, mV, Ion, Time Ion .
(pH Ion Ion .)
 4. MODE 3 Unit가 ppm .
가 .
 5. Unit P.CAL () CAL
Ion
(Ion 11) ,
Ion .
 6. Standard Solution 1000ppm Reference(RL - 100)
Standard Solution .
 - 7.5 (Ion 11) CAL 1.00ppt P1
P1, P2, P3, P4, P5 5 가 .(5point 5가
P1>P2>P3>P4>P5
가 P1 .
 8. 7 P1, 1ppt(1000ppm) ()
Ion (1.23ppt, 19.9 °C)
CAL 3
cal (1000ppm
1ppt) 가 .
 9. ISAB
100mg/l(sample) 2mg/l(ISAB) 10
RL - 100 .
) .

1. & &

ON/OFF , time (Time)
 . MODE ,

1.1.

/ ,
 가 .

1.2.

(Month – Day – Year).
 月 日, 年 .

1.3. &

, CAL
 , CAL
 , CAL 가 ,

2.

2.1. Or

CPI-501 200 (Readout),
 EEPROM , EI-
 401 가 , ,

2.2.

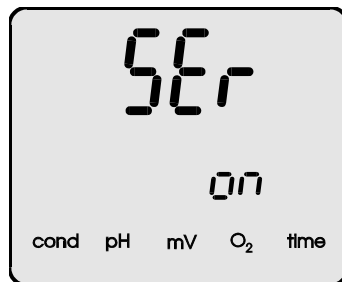
&

(Readout mode)



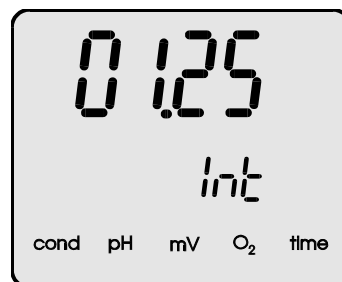
MEM/PRINT , 가 .
 , 가 , " ---
 - " 가 , , "n00X"
 가 .
MODE .

A Ser - (Series) , . **Single results**



.10
 ↶, ↷ on or off (. 10)
 on , (Series) ,
 off , **MEM/PRINT** .(Single results)

B Int - . (.11).



. 11.
 ↶, ↷ 1 60 가 .
 Ser off , .

C Prt - - Yes or No.

↶, ↷ , on , , off ,
 .

D ALL -

on - , , ,

off - ,



MEM/PRINT
가 pH

2.3.

Single Results

MEM/PRINT

, 2.6
가

MEM/PRINT , End가
가

2.4.

200

- 2.2.A
- 2.2.B
- (29.6)
- pH , pH
- MEM/PRINT (series) . (
- 가 : Print - no)

가

MEM/PRINT

200

2.5.

, 가 MEM/PRINT
가



 
 , ALL , (2.2.B)
).
 pH 가

2.6.

- :
- **MEM/PRINT**
 -  
 - **CAL** 가 , 가
 “-----” 가
 - 가 pH

3.

CPI-501

RS-232C

3.1.

- :
- - **ON**
 - (Print) on (2.2.C)
 - (2.2.D), single or serial
 (2.2.A)
 -
 - **Single** (Ser - off) , **MEM/PRINT**
 - **Series** (Ser - on) , **MEM/PRINT**

Notice! , ALL on , ,

Notice! Series , MEM/PRINT .

3.2.

- .
- .
- (2.2.D), serial or single (29.2.A)
- 가 . (2.5), ,  . MEM/PRINT

Notice!

SEr on ,
 . SEr off ,
 . ALL on , 가

4. Co-operation with PC

CPI-501

RS-232 connector

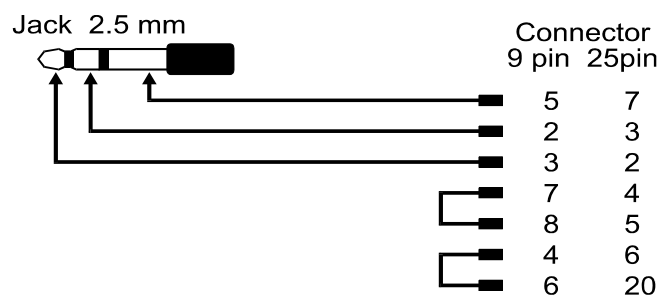
Typically COM2

9600 b/s

8 bit

1 even bit

1 stop bit



. 12.

(Print) on , MEM/PRINT

Caution!**RS232C****33. Technical DATA****pH MEASUREMENT:**

Range	Resolution	Accuracy (± 1 digit)
-2.000 ~ 16.000 pH	0.001 / 0.01 pH	± 0.002 pH

: $10^{12} \Omega$
 : manual/automatic
 : -5.0 ~ 110.0
 pH : automatic, in 1 ~ 5 points

pH

Calibration point	Range
1	0,800 ~ 2,100
2	3,900 ~ 4,100
3	6,800 ~ 7,100
4	8,900 ~ 9,400
5	11,500 ~ 14,000

mV MEASUREMENT:

Ranges	Resolution	Accuracy (± 1 digit)
-1000 ~ 1000 mV	0.1 mV	± 0.1 mV

: $10^{12} \Omega$

TEMPERATURE MEASUREMENT:

Range	Resolution	Accuracy* (± 1 digit)
- 50.0 ~ 199.9	0.1	± 0.1

* accuracy of the meter. Final accuracy of the measurement depends on the accuracy of the used PT-1000 probe

: platinum resistor Pt-1000

: 0 ÷ 100

FOR PT1000B RESISTOR: ± 0.8

FOR PT1000¹/₃B RESISTOR: ± 0.27

OTHER:

: 0 ~ 40

: Stabilised power adapter 12V/100mA

: 60 mW

: Custom LCD 55 x 45 mm

: 200 x 180 x 50 mm

: 650 g

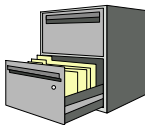
Standard:

1. (CPI-501)
2. pH
3. Pt-1000B (standard)
- 4.
- 5.



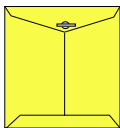
Laboratory pH Meter

CPI-501



3 : 2008 06 17

:



,



() 152-766

3 235-2

1303

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