

User's Manual

Supmea

Conductivity/Resistivity Controller

TDS210-B

Preface

-

-

-

Note

-

-

-

-

Version

STK-K-60-20-01

U-DO2.1-MYEN1

●

●

●

●

●

가

가

가



!

가



!



!



●

● 가 ,가 가

● ,



SPD



가

,가 ,

가



가

가



가



가



● 가

● , , 가 가

● , , , ,

● 가 /

● ,

● 가 ,

Contents

1.	_____	8
1.1	_____	8
1.1	_____	9
2.	_____	10
2.1	_____	10
2.2	_____	12
2.3	_____	13
3.	_____	14
4.	_____	15

1.2 /TDS

/ TDS

	2.8
	: 100 x 100 x 150mm : 92.5 x 92.5mm
	0.65 kg
IP	IP 54
	EC / TDS / Resistivity
	K=0.01 : 0.02~20.00 μ S/cm K=0.1 : 0.2~200.0 μ S/cm K=1 : 2~2000 μ S/cm K=10 : 20~20,000 μ S/cm : -10~130
	EC/TDS/Resistivity : \pm 1%FS : \pm 0.2 (5~60), \pm 2 ()
	4~20mA (750 , \pm 0.2%FS)
	MODBUS-RTU RS485
/	/ , 250Vac/3A
	220Vac \pm 10%, 50Hz/60Hz
	: 0~50 / : 10~85%RH()
	: -15~65 : 5~95%RH ()

2.

2.1

가

가

●

●

●

●

가

가가

●

가 60

●

가 85%RH

●

●

●

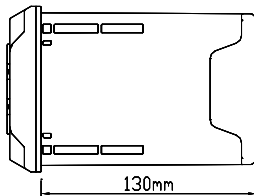
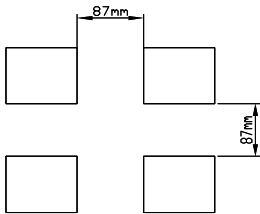
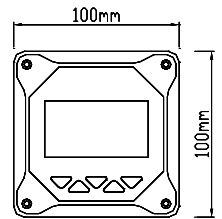
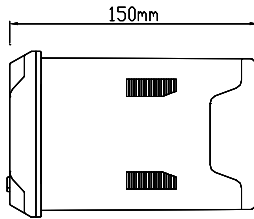
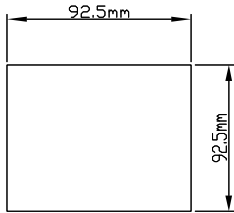
가

●

, , , , 가 가

92,5 x 92,5mm

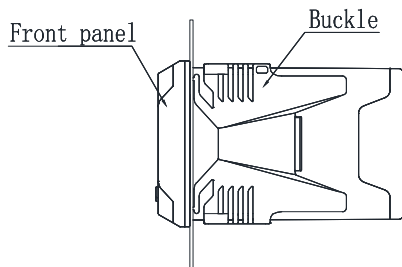
: 1.5mm ~13mm



(1)

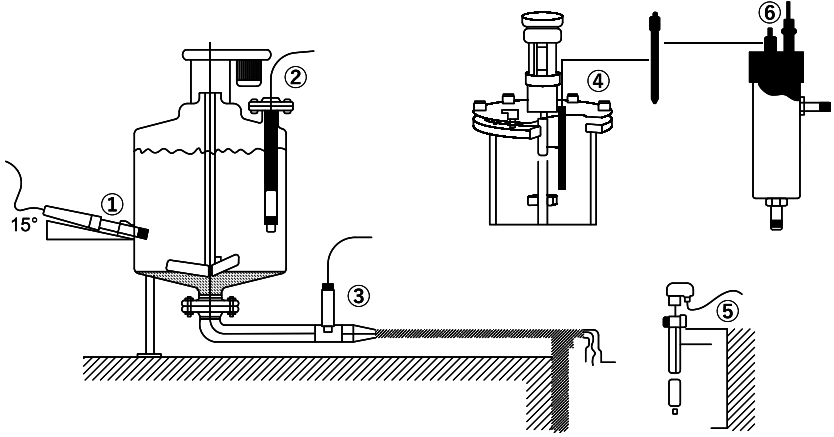
(2)

3



(3)

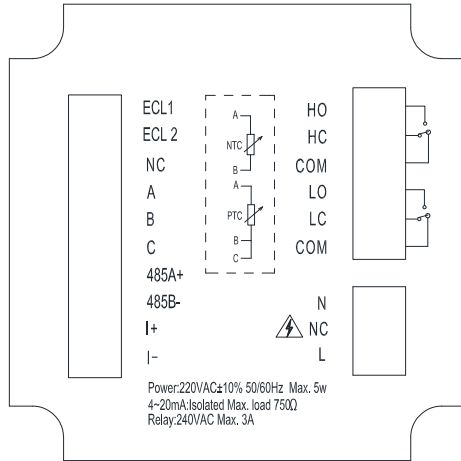
2.2



(4)

(15 °)

2.3



(5)

- ECL1 :
- ECL2 :
- A : A
- B : B
- C : C
- RS485A+ : RS485 A+
- RS485B - : RS485 B-
- I + : 4~20mA +
- I - : 4~20mA -
- HO :
- HC :
- COM : COM
- LO :
- LC :
- COM : COM
- 220V L : 220Vac Live
- NC :
- 220V N : 220Vac Neutral






-
-
-
- +12VDC AGND

가

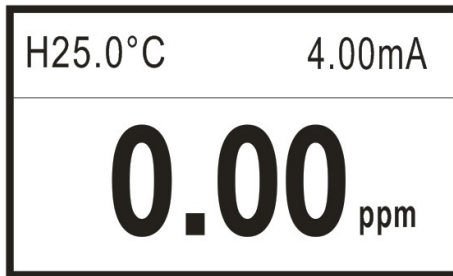
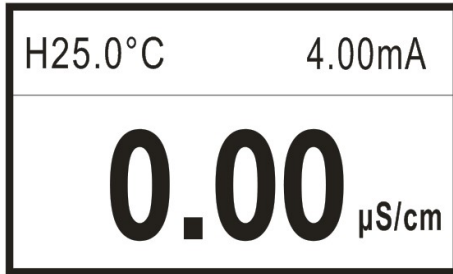
3.



(6)

Sign	Name of the key	Function description
	MENU	- MENU
	EXIT	-
	RIGHT	-
	DOWN	-
	ENTER	-

4.



TDS

(8)



"ESC"

가



----- User Password -----

Password: 0000

"0000" , .

----- Main Menu -----

- 1.System Setting
- 2.Signal Setting
- 3.Online Calibration
- 4.Remote Setting
- 5.Alarm Setting
- 6.Information Inquiry

- System Setting : , ,
- Signal Setting : /MLSS
- Online Calibration : MLSS/
- Remote Setting : 4~20mA RS485
- Alarm Setting : /
- Information Inquiry :

System Setting

----- System Setting -----

- 1.Language
- 2.Buzzer
- 3.Backlight setting
- 4.Change Password
- 5.Factory setting

- Language : (/)
- Buzzer : (On/Off)
- Backlight setting : (On/Off)
- Change Password :
- Factory setting :

Signal Setting

----- Signal Setting -----

- 1.Electrode constant
- 2.Unit switch
- 3.TDS Coefficient
- 4.Temp Switch
- 5.Temp Coefficient

- Electrode constant : (K= 0.01, 0.1, 1.0, 10.0 :)
- Unit switch : (μ S/cm) / (TDS, ppm)
- TDS coefficient : (0.5)
- Temp Switch : /
- Temp coefficient : (0.00)

Online Calibration

-----Online calibration -----

1. Temp Modification
2. EC calibration

- Temperature Modification : (± 20.0)
- EC Calibration : buffer (1413 μS/cm)
ENT

Remote Setting

-----Remote setting -----

1. RS485 setting
2. Current transmission

- RS485 Setting : RS485
- Current Transmission : 4~20mA (4mA) / (20mA)

5.

RS485

MODBUS-RTU

. (No.03)

MODBUS standard format (read and hold command from Register 03)**Command format:**

(6) Command format

Definition	Address	Function code	Register address	Data number	CRC check
Data	ADDR	0x03	M	N	CRC 16
Number of bytes	1	1	2	2	2

Return format:

(7) Return format

Definition	Address	Function code	Data size	Data	CRC check
Data	ADDR	0x03	2*N	Data	CRC 16
Number of bytes	1	1	1	2*N	2

Register address description:

Address	Data type	Data size	Function code	Description	Access authority
0x0000	unsigned long	4 bytes	0x03	Conductivity value (unit: us/cm, to be divided by 100)	Read only
0x0002	short	2 bytes	0x03	Temperature value (unit: °C, to be divided by 10)	Read only
0x0003	unsigned long	4 bytes	0x03	TDS value (unit: ppm, to be divided by 100)	Read only
0x0005	unsigned long	4 bytes	0x03	Resistivity value(unit:MΩ*cm, to be divided by 100)	Read only

)

- "00 03 00 00 00 02 C5 DA"
- "00 03 04 00 00 00 00 EA F3"

- 00 : Slave address
- 03 : function code, reading and holding register
- 04 : (4)
- 00 00 00 00 : (0.00 μ S/cm)
- (100 , 0.00~20000.00 μ S/cm)
- EA F3 : CRC 16

)

- "00 03 00 02 00 01 24 1B"
- "00 03 02 00 FA 05 C7"

- 00 : Slave address
- 03 : function code, reading and holding register
- 02 : (2)
- 00 FA : (25)
- (10 , -10.0~130.0)
- 05 C7 : CRC 16





Supmea

Supmea Automation Co.,Ltd.