

Solder Wire Pre-Heater YPH-10

Operation Manual



Thank you for purchasing the YPH-10.
Read these instructions thoroughly for proper use of this device.
Make sure to read "Safety Notes" before you use the device.
This information protects you from possible dangers during use.

Apollo Seiko Ltd.

Safety Notes

This manual includes the important information to use the device safely. This also includes useful information to prevent avoiding injury or damaging property.

Please read this manual carefully prior to connecting or operating the YPH-10

Keep this manual nearby the device all the time.

Supply only specified voltage

Do not connect to a power supply greater than the specified voltage. If not, electrical shock and /or damage to the device may occur.

Make sure that the electrical outlet is properly grounded. If the outlet is not properly grounded, electrical shock and/or damage to the device may occur.

Working ambient temperature and relative humidity

This device has been designed to use between 0~40 degree、10%~90%. Do not use this device under the condition exceeding here-in.

Handle with care

This device is designed to pre-heat the solder wire.

Please be careful not to touch the heated solder wire. It may cause burns.

Please make sure to turn off the power, when you set or replace the solder wire.

Please handle the device with care. If you drop or make a big impact/ vibration, it may cause malfunction.

If you do not use the machine for a long time

Please turn off the power, remove the power cable and keep it dry and cool place.

If you note malfunction on unit

If the device become a malfunction, turn off the power immediately and contact a dealer you purchased the device from.

Immunity from responsibility

We do take NO responsibility on a damage caused by misuse, mistake, accident, uses in abnormal condition or natural disaster such as an earthquake, a fire etc.

We do take NO responsibility on contingency loss (Business loss、Business stop) caused by device stop.

We do take NO responsibility on a loss caused by the operation not mentioning on this manual.

We do take NO responsibility on a loss caused by a wrong connection with other equipment.

If for any reason the internal circuitry is tampered with altered or repaired without written consent of Apollo Seiko, the warranty is null and void. The customer is allowed to make necessary tooling adjustment, replace solder wire and make any necessary adjustments to the temperature controller.

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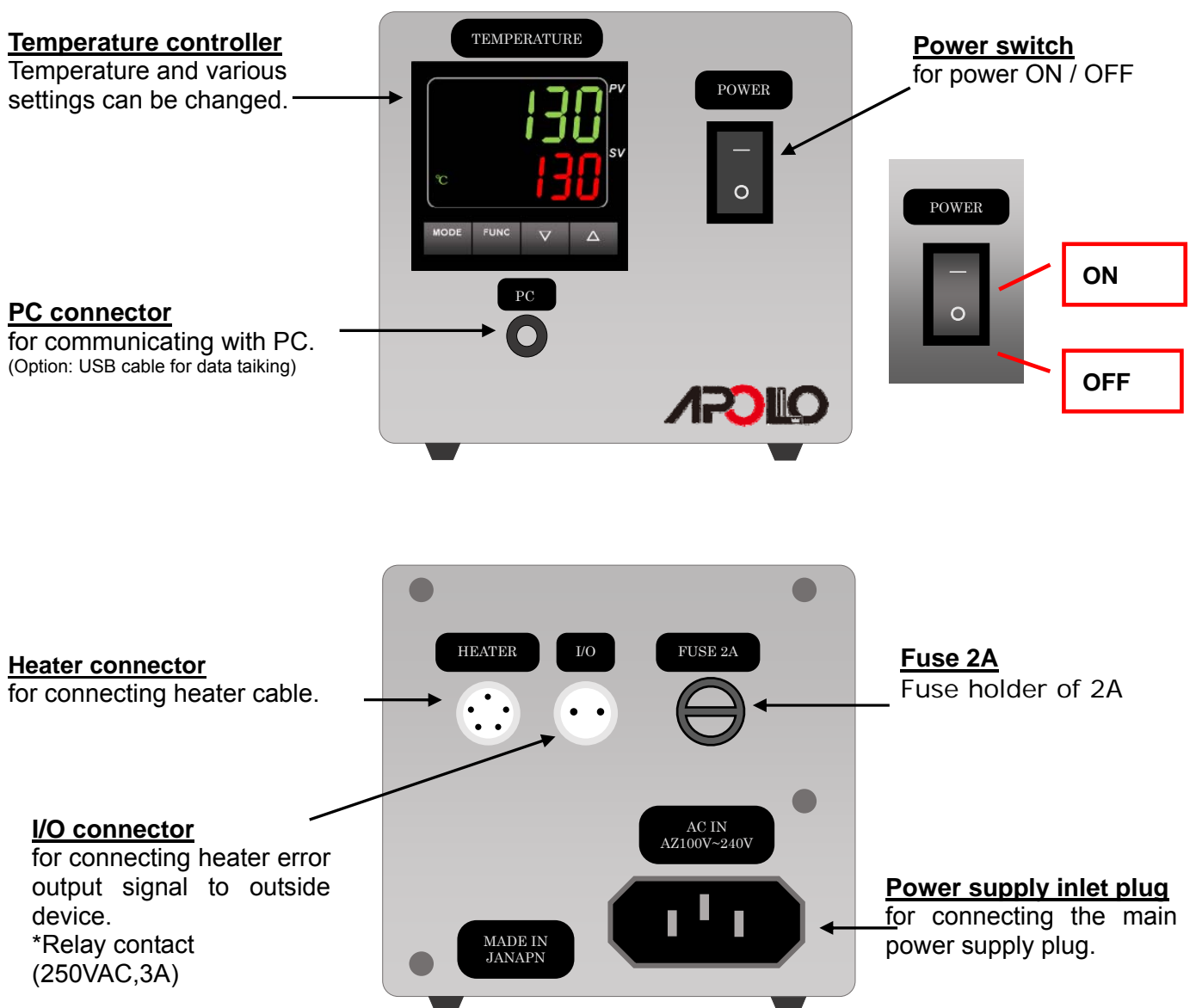
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1. Introduction

YPH-10 is the pre-heating solder wire equipment which makes larger diameter solder wire melt smoothly. The diameter of solder wire is wide range with $\Phi 1.0 \sim 1.6$ ($\Phi 0.8$ special specs). It helps to prevent solder ball spattering and reduce tact/cycle time by pre-heating the solder wire. The progressed temperature control is user-friendly. Also the compact design makes easy to mount and use. The effect of "Solder Ball Spattering Prevention" is enhanced, if ZSB feeder is also equipped. The software and USB cable for download date can be selected as options.

2. Description



3. Specification

Type	YPH-10
Dimension	110 mm(W) × 200 mm(D) × 100 mm(H)
Weight	Approx. 1.2kg
Solder wire diameter	Φ1.0~Φ1.6 (Special spec Φ0.8)
Temperature	0~150°C
Heater output	10W
Power supply	AC100V~240V Max. power consumption:1.4W or less

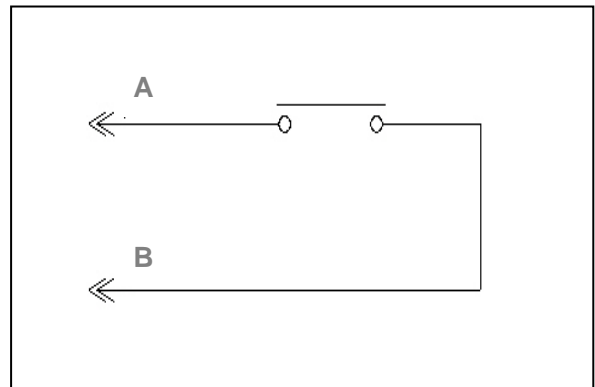
- I/O Specification

External I/O connector is shown in the right figure.

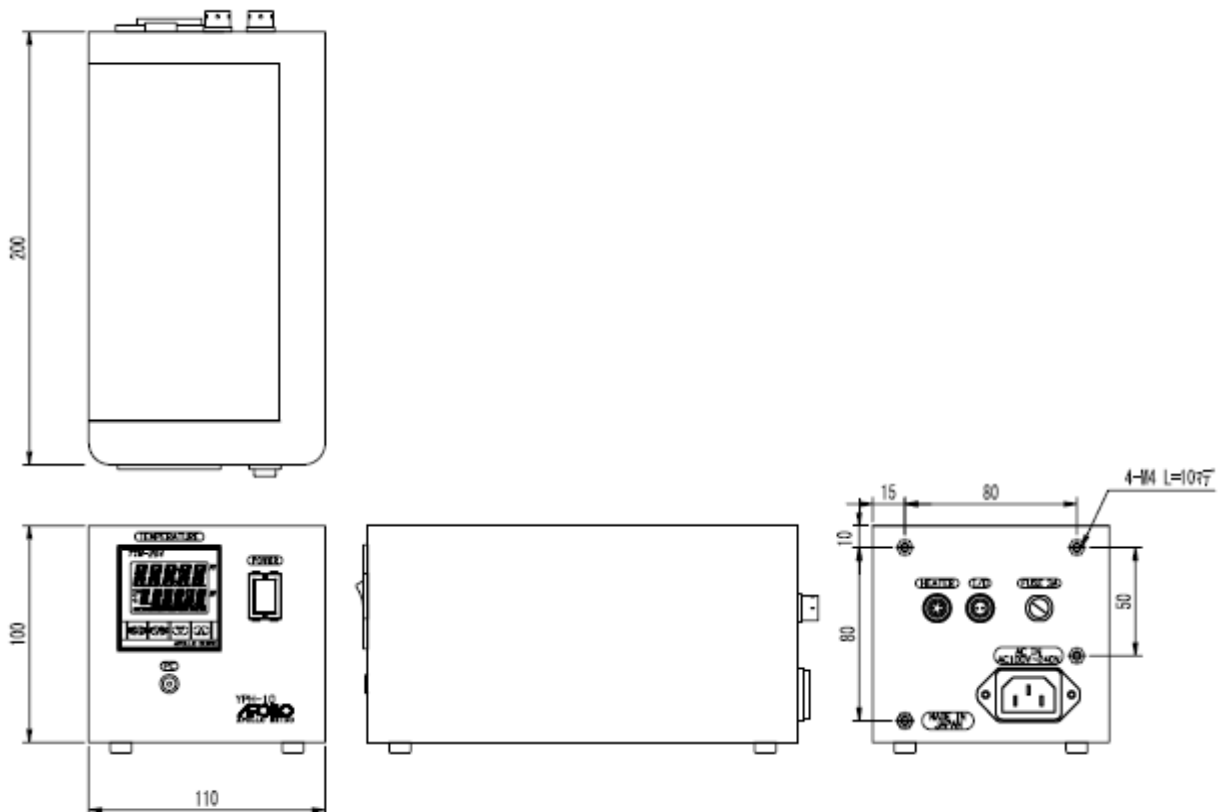
The point of contact is closed when it is within the set temperature range and open when it is out of the temperature range.

The contact capacity is AC250V 1A relay contact.

It can be used as an interlock when the temperature changes for any reason.

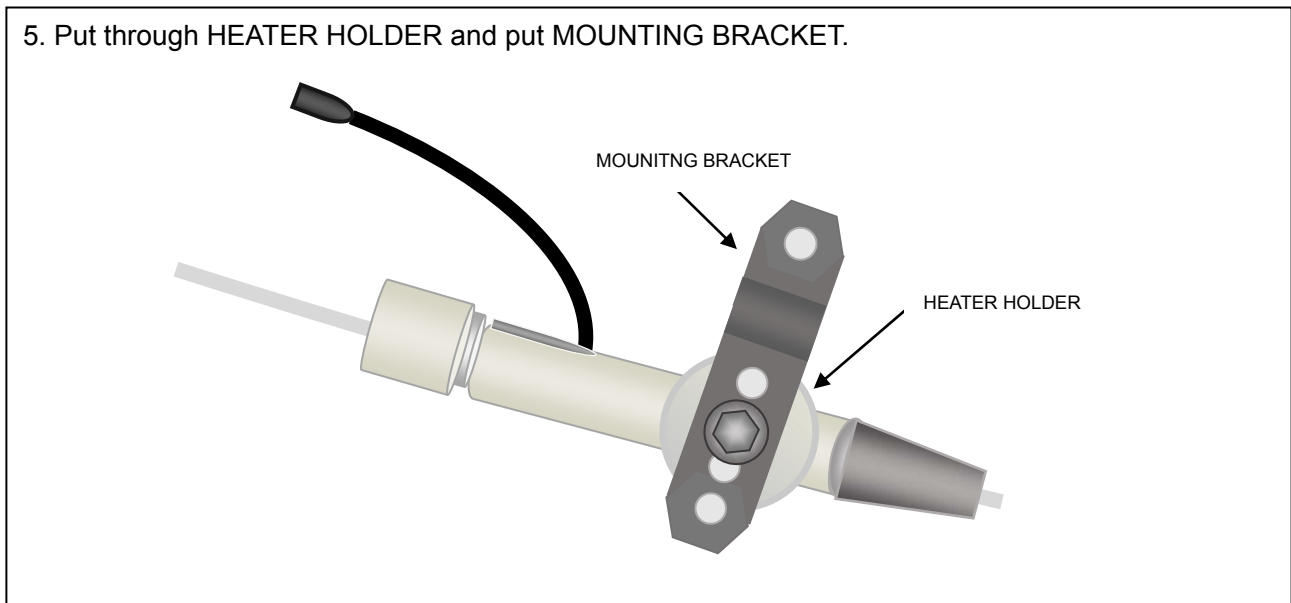
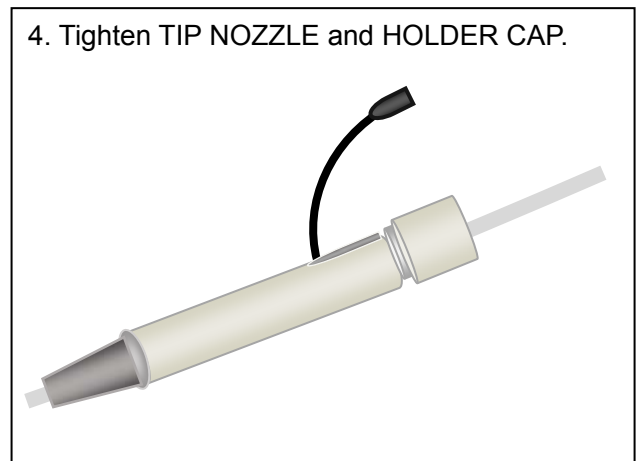
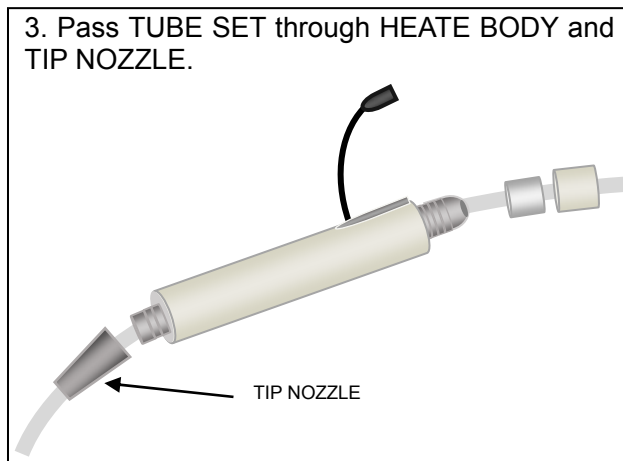
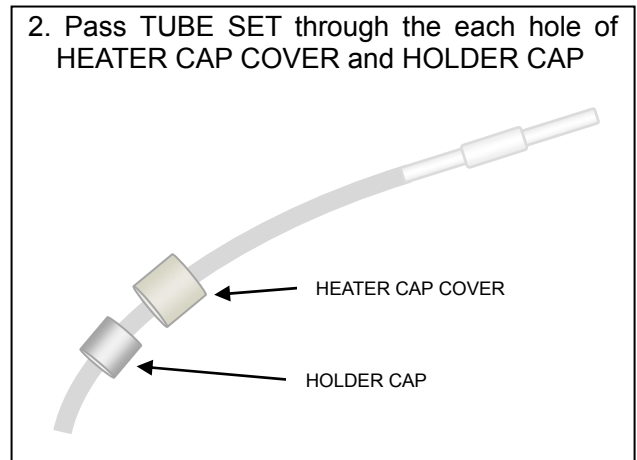
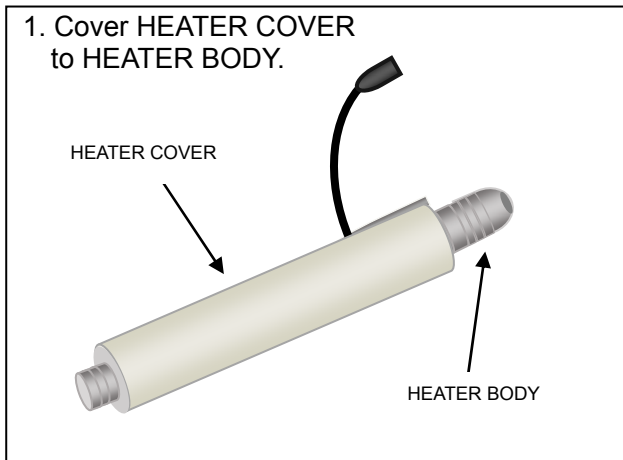


4. Dimension



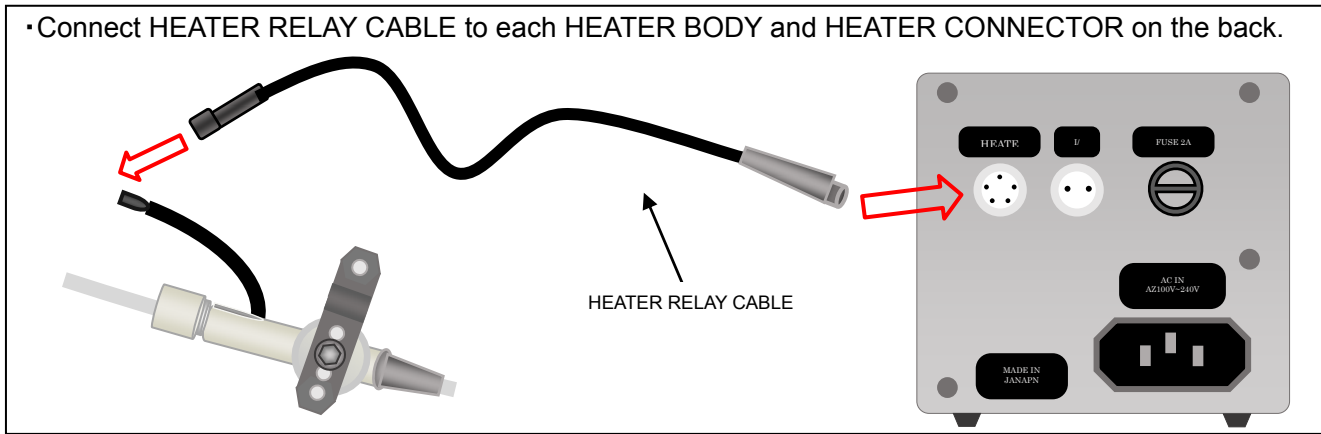
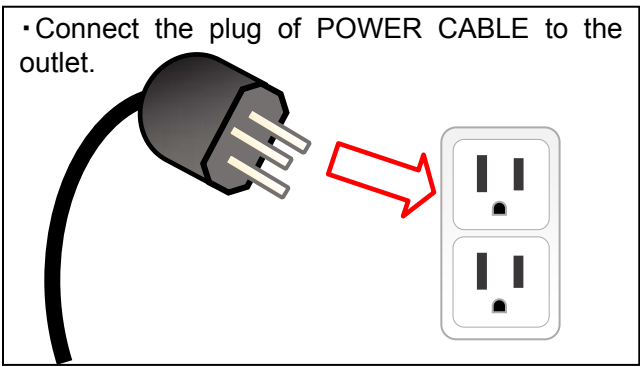
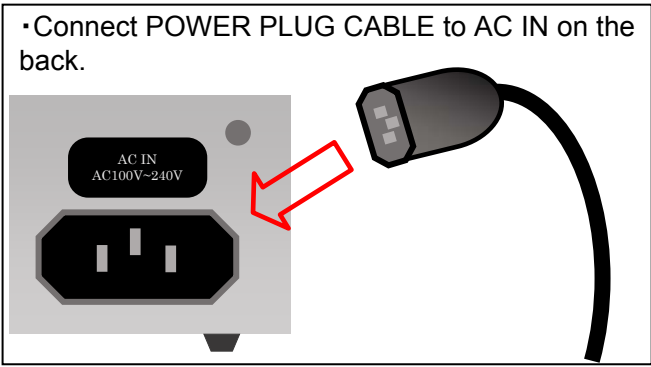
5. Installation and Connection

5.1 HEATER BODY installation



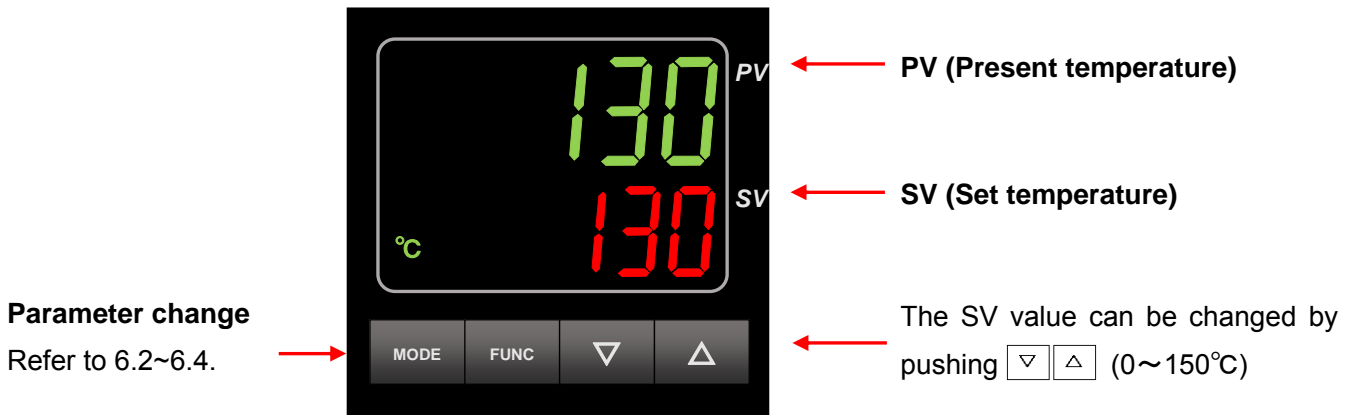
**After power on, HEATER has high temperature.
So please DO NOT touch directly.**

5.2 Connecting cables

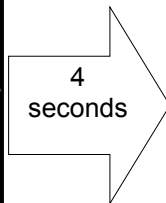


6. Temperature controller

6.1 How to operate Temperature controller



Initial setting mode



Operation screen



*When the PV display shows in green color, the temperature is within the setting range. When it is in red, it is out of its range. (PV value alarm upper/lower limit setting can be changed by SET06 → E2H / E2L) After pressing for 2seconds, display shows Setting Item Selection screen.

6.2 Setting Item Selection screen

•Input setting mode

SEt01
INP1

Setting item selection screen



PV51
0

PV calibration "0" setting



•Control setting mode

SEt04
CNE

Setting item selection screen



AL
OFF

Auto-tuning operation screen



•Out2 setting mode

SEt06
OUT2

Setting item selection screen



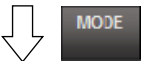
E2K
0

Enter alarm upper limit



E2L
0

Enter alarm lower limit



•Initial setting mode, Password

SEt18
INIT

Setting item selection screen



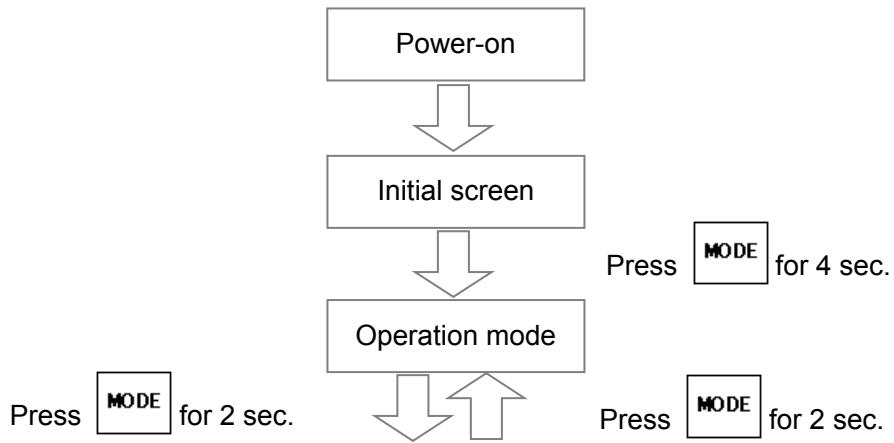
PASS
0000

Password screen



*Password setting is only for initial setting mode.
It is unnecessary to set.

6.3 Status flow cart



Setting Item Selection screen

SEt01	SEt03	SEt04	SEt06	SEt18
(SET01)	(SET03)	(SET04)	(SET06)	(SET18)
MODE	MODE	MODE	MODE	MODE
PV51	LoC	At	E2H	PASS
(PVS1)	(LoC)	(AT)	(E2H)	(PASS)
			MODE	
			E2L	
			(E2L)	

“Setting item selection screen” or “SET xx” screen is changed back to operation mode screen after 2 minutes if no operation is done.

Please carry out “Auto Tuning” after replacing the heater.

Press **MODE** for 4 sec.

Press **▲** until above screen appears.

Press **MODE** once.

Press **▲** once.

Press **MODE** for 2 sec to return.

6.4 Parameter showing

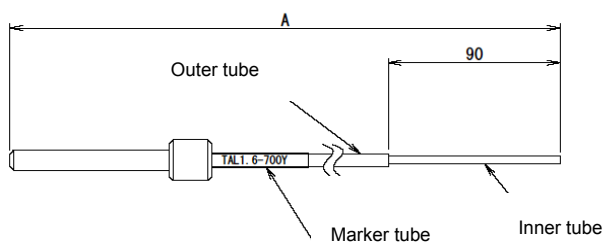
	Description	Setting detail	Initial value
PVS1	PV calibration zero setting	Use ▲ or ▼ key to change . 0~150(°C)	
LoC	Key lock setting mode	Use ▲ or ▼ key to change. 0:OFF 1:All lock 2:Lock in operation mode 3:Lock except operation mode	0
AT	Auto-tuning operation screen	Push ▲ or ▼ key to turn on. “AT” is flashing during auto-tuning on the SV line. It finishes when oFF is displayed (When ERR02 is displayed, the solder wire may not be set properly.)	oFF
E2H	PV value alarm upper limit setting	Use ▲ or ▼ key to change. 0~150(°C)	10
E2L	PV value alarm lower limit setting	Use ▲ or ▼ key to change. 0~150(°C)	10
PASS (flash)	Password setting	No need to set	—

6.5 Eleven segment characters

11-segment	Mincho	11-segment	Mincho	11-segment	Mincho	11-segment	Mincho
0	0	Ɱ	A	Ɱ	K	Ɱ	U
1	1	Ɱ	b	Ɱ	L	Ɱ	V
2	2	Ɱ	C	Ɱ	M	Ɱ	W
3	3	Ɱ	d	Ɱ	N	Ɱ	X
4	4	Ɱ	E	Ɱ	o	Ɱ	Y
5	5	Ɱ	F	Ɱ	P	Ɱ	Z
6	6	Ɱ	G	Ɱ	Q	Ɱ	/
7	7	Ɱ	H	Ɱ	R		
8	8	Ɱ	I	Ɱ	S		
9	9	Ɱ	J	Ɱ	t		

7. Parts list

Parts No.	Description	Note	
YPH-HET-ASSY08	HEATER ASSY.	for $\Phi 0.8$	
YPH-HET-ASSY1012	HEATER ASSY.	for $\Phi 1.0\sim 1.2$	
YPH-HET-ASSY16	HEATER ASSY.	for $\Phi 1.6$	
459M-212	HEATER HOLDER	common	
459M-213	MOUNT ARM	common	
459E-105	HEATER CABLE	common	
TAL _{x,x-xxx} Y <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="text-align: center;"> \downarrow Solder diameter </div> <div style="text-align: center;"> \swarrow Total length </div> </div>	TUBE SET	Refer to below list	



Model	Standard tube length (mm)	
	Point Soldering	Line Soldering
L-CAT NEO	650	780
L-CAT EVO	450	600
J-CAT200	650	780
J-CAT300	750	880
J-CAT400	750	880
TERRA-CO/SP	1500	1500
LUNA-LCO/LSP	1500	1500

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