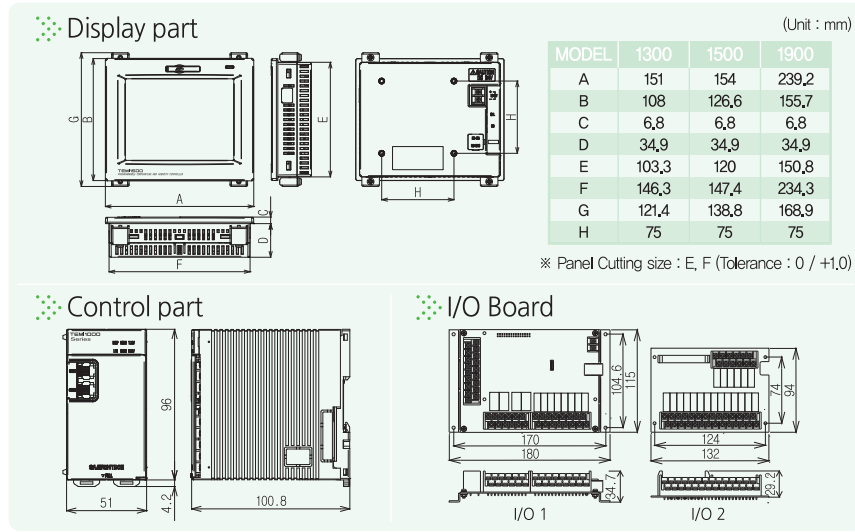


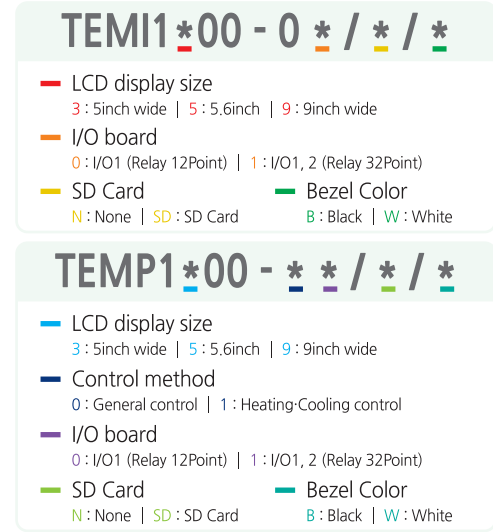
Product Specification

Classification	Items	TEMI1000	TEMP1000	
Screen	Display	TFT-LCD (1300 : 5.0" Wide, 800(W) × 480(H) / 1500 : 5.6", 640(W) × 480(H) / 1900 : 9.0" Wide, 800(W) × 480(H))		
	Language	Korean/English/Chinese/Japanese		
	Mount type	PANEL mount, VESA mount		
Analog input	Number of point	2 Points (Temperature : 1 Point, Humidity : 1 Point) / 1Points (Universal Input)		
	Type	Temp.	PT1 100Ω -90.00 ~ 200.00℃ PT2 100Ω -100.0 ~ 300.0℃ DC Voltage -1.000 ~ 2.000V (-100.0~200.0℃)	TC K, J, E, T, R, B, S, L, N, U, W, Platinel II, C RTD PT100 (IEC), JPT100 (JIS), 1/100 Displayable
		Humi.	PT 100Ω -10.0 ~ 110.0℃ (0.0~100.0%) DC Voltage 1.000 ~ 5.000V (0.0~100.0%)	DC Voltage 0.4~2V, 1~5V, 0~10V, -10~20mV, 1~100mV (4~20mA, 0~20mA, Load resistor 250Ω, 500Ω) Scale : -1999 ~ 30000
	Sampling Time	Each temperature and humidity 250ms / 250ms		
	Accuracy	Temp.	±0.1% of full scale ±1 digit (A/D 18bits)	
		Humi.	±1.0% of full scale ±1 digit (A/D 18bits)	
	Bias	Each 4 points piece and full bias for temperature and humidity		8 points of piece and full bias
	Display Unit	Temp.	℃	TC/RTD ℃, ℉
		Humi.	%	DCV ℃, ℉, EDIT, %, Pa, hPa, %RH, mV, V, Ω, mmHg, kgf
	Analog output	Output specification (Maximum 4 points)	Voltage output (SSR) 4points ON voltage 24V DC (Load resistor : Min. 600Ω/Pulse width : Min. 5ms) Current output (SCR) 4points 4~20mA DC (Load resistor : Max. 600Ω)	
Output type		Control output (Temp, Humi) / Transmission output (PV, SP) / Control output (Heating, Cooling-Option) / Transmission output (PV, SP) / Auxiliary output		
Output level		±0.3% (D/A 14bits)		
Digital input	Contact Type	Basic 16 points (Contact point capacity : Max. 12V DC, 10mA) Selection of operation for A or B point		
	Functions	RUN/STOP/HOLD/STEP, Selectable RUN patterns, Set DI Detect Delay time, Select DI error monitor 12 points base(Additional 20 points by option)		
Digital output	Contact type	4 points base C-contact Relay 8 points base A-contact Relay Additional 20 points A-contact Relay (IO2 Option)	Normal Open (Max. 30VDC/1A, 250VAC/1A) Normal Close (Max. 30VDC/1A, 250VAC/1A) Normal Open (Max. 30VDC/1A, 250VAC/1A)	
	Signal type	Inner Signal(10/8) ON/OFF(Temp:10, Humi:5/7) Time Signal(4/8) Fix-Programmable END Signal(2) Alarm Signal(8/4) UP-SOAK-DOWN Signal(6/3) RUN Signal(2/1) WAIT Signal(2/1)	Logical Signal(8) Error Signal(1) User Signal(1) DI Signal(16) Sensor open Signa(2/1) REF Signal(2) Manual Signal(12) Fix Timer Signal(2/1) Drain Signal(TEMI:1) SEG alarm Signal(TEMP:4)	
Program	Number of program	120 Patterns / 1200 Segments / 80 Patterns / 1200 Segments		
	Segment Time	Max. 999hours 59minutes 59seconds in one segment		
	Function	UP/DOWN Slope rate, WAIT, Operating Start Code, Pattern Name, Power Stop mode, PTEnd mode		
PID Control	Repetition	Pattern / Segment repeat operation		
	PID groups	9 PID groups (6 PID groups for TEMP-HUMI, 3 PID groups for TEMP only)	6 PID groups (5 Zone PID + 1 Deviation PID or 6 Seg PID)	
Data backup	Auxiliary functions	Changeable Tuning point, PID tuning Gain, Selectable HUMI control code / Changeable Tuning point, PID tuning Gain, Selectable Disease control code		
	Logging function	Internal Memory(64MB), SD/SDHC CARD (FAT32 FORMAT) Program pattern / parameter can be backup and restored, PV/SP can be stored.(You can use the SD card, data backup and data transfer of internal memory can be)		
Communication	Interface	Flexible to change between RS485 / RS232C by DIP switch, Max. 31 nodes. Max. 115,200 bps		
	Protocol	PC Link, PC Link (Checksum), MODBUS RTU, MODBUS ASC II		
Electric power	Power	24VDC 22VA Max.		
	Lithium battery	Set data reservation (CR2032)		

External dimension and Panel cutting size



Model code



Temperature & Humidity Programmable Controller

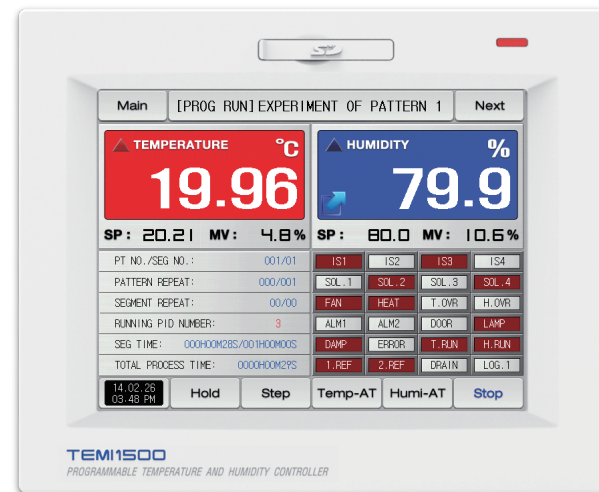
TEMI1000 Programmable Controller

SERIES TEMP1000



Temperature & Humidity Programmable Controller

TEMP1000



Specialized controller

As a specialized controller for temperature and humidity, synchronized control system with PT-PT, PT-DCV

Specialized Humidity Control

Humidity control algorithm according to the equipment size implements a stable control

High Accuracy

Precision control with 18bit A/D Converter
TEMP : ±0.1% ± 1 digit of F.S
HUMI : ±1.0% ± 1 digit of F.S

Optimizing PID group

Precision control by 6 group of TEMP/HUMI and 3 group of temperature only

Humidity Display Mode

Depending on the humidity setting to determine whether the current display of humidity → Humidity data management easier
Automatic mode : At humidity setpoint 0.0% set, " - - - " display
Manual mode : At humidity setpoint 0.0% set, now humidity PV display

TEMP1000

Programmable Controller



Various patterns

Fix and program control are possible and when program control, possible to set 80 patterns / 1200 segments

High Accuracy

Precision control with 18bit A/D Converter
±0.1% ± 1 digit of F.S

Control PID of a variety

Temperature control PID group(5 Zone PID + 1 Deviation PID or 6 Seg PID)Zone, Deviation PID etc. Various PID offer

Various UNIT displays

Available 12 kinds of various UNIT to display Under DCV sensor
(°C, %, °F, EDIT, Pa, %RH, V, kPa, mV, mmHg, kgf)

Heating-Cooling Control

Heat and Cooling Control by Equipments (Option)

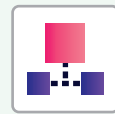
Main Functions



Touch Screen Interface
Easy operation and setting using touch screen interface



Background color can be changed
Background of screen through R, G, B association color appointment possibility



Separated Hardware
Configuration in separation of display, controller and input/output board
Configuration of diverse system and easy workability(Support VESA mount)



Digital input
Available for operation/stop, hold/step, pattern selection and error sensing using 16 point DI input signal change of error name and supporting of DO output for DI input



Digital output
32 digital outputs (ST'D 12 + OPT 20) points can be assigned to about 80 types of various signal like LOGICAL, DI, MANUAL, USER, IS, TS, ALM, RUN and so on



Powerful Communication
Basic include RS232C/485 serial communication (Communication speed 115,200bps)



Free PC Software
Free PC multi-monitoring software for Communication and SD Viewer for data management of SD data



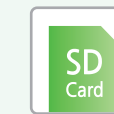
The selectivity of the bezel color
Display bezel color selectable Black or White



Digital Recorder Function
Real-time monitoring displays as trend graph and easy data acquisitions of PV, SP
No additional Recorder required



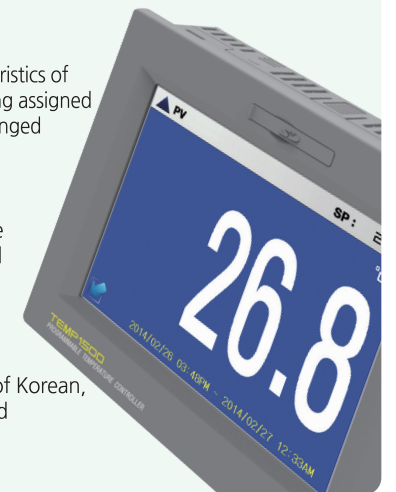
Input Sensor Bias
Offset value depending on characteristics of system helps smooth PV line applying assigned offset by each flexibly predefined ranged



SD Memory Card Support
The pattern and parameter can be up/download via SD memory card



Multi Language Menu
Supporting of various languages of Korean, English, Chinese and Japanese and it is appropriate for globalization



States display lamp name changed

Possible to change the status lamp type and name on operation display



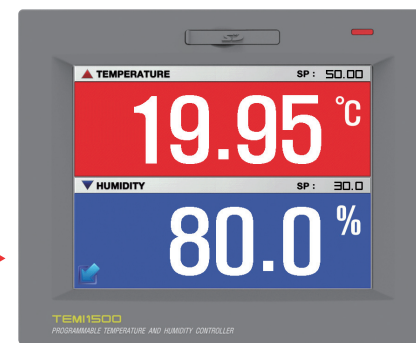
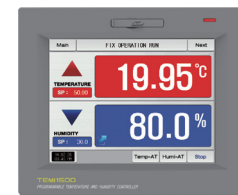
States display lamp name edit (Can input by up to 5 letters)

IS1	IS2	IS3	IS4
IS5	IS6	IS7	IS8
TS1	TS2	TS3	TS4
AL1	AL2	AL3	AL4
AL5	AL6	AL7	T.RUN
H.RUN	1.REF	2.REF	DRAIN

IS1	IS2	IS3	IS4
SOL_1	SOL_2	SOL_3	SOL_4
FAN	HEAT	T.OVR	H.OVR
ALM1	ALM2	DOOR	LAMP
DAMP	ERROR	T.RUN	H.RUN
1.REF	2.REF	DRAIN	LOG_1

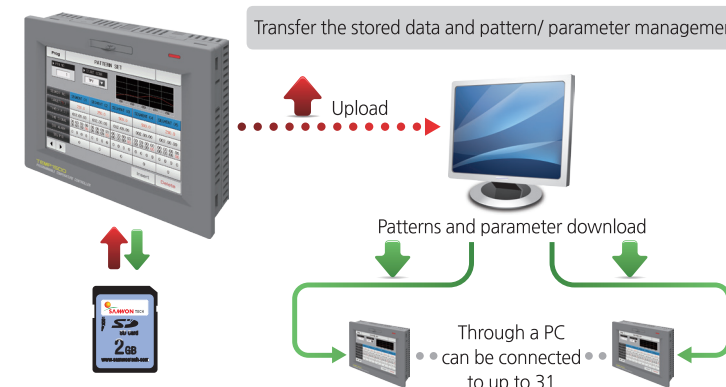
Expansion function of run screen

Retain PV visibility by expansion function of run screen



Practical use of internal memory

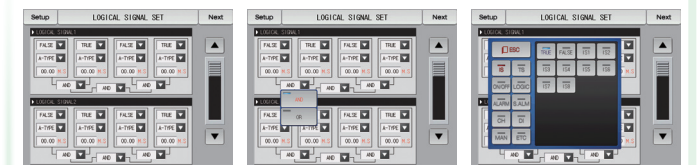
The data(data, pattern, parameter) stored in internal memory can be checked, up/download via PC/S/W, SD Card.



(Internal memory 64MB : If the sampling time was 1 second, the TEM1 controller is stored about 90 days TEMP is about 180 days)

Logical signal set

The combination of the various signals is possible and logical output is possible (AND, OR, A/B Contact, Timer operation possible)



An example of the Logical signal behavior

