

- Please keep these instructions and review before using this controller.
- This instruction manual uses WARNING and CAUTION as signal words for safety.

WARNING WARNING indicates a potentially hazardous situation which, if not avoided, will result in death or serious injury.

- In case of using this unit with machineries (warehouse, medical equipments, vehicle, train, airplane, nuclear power of safety devices etc.), it requires installing fail-safe device.
 - ▶ It may result in serious damage, fire or human injury.
 - ▶ Use a rated voltage to prevent damage or trouble.
 - ▶ It may result in fire.
- Check the number of terminal when connect each line and signal input.
 - ▶ It may cause fire or trouble.
- Do not turn on the power until the wiring completed.
 - ▶ It may cause electric shock.
- Do not repair, wiring or checkup when electric power on.
 - ▶ It may cause electric shock.
- Installation of the controller where there is no dust, corrosive or explosive gas, direct ray of the sun, mechanical vibration or shock present.
 - ▶ It may cause fire or explosive.
- This controller must be mounted panel.
 - ▶ It may cause electric shock.
- Do not repair beyond of authorized technician.
 - ▶ It may cause trouble.

CAUTION CAUTION indicates a potentially hazardous situation which, if not avoided, will result in minor or moderate injury and at other times or serious injury may affect the speed to return against unsafe practice.

- Ensure the surrounding ambient operating temperature is 0~50 °C.
 - ▶ It may cause fire or wrong operation.
- Ensure the power supply for the controller does not fluctuate. Main supply voltage fluctuation not exceed $\pm 10\%$ of the normal voltage.
 - ▶ It may cause fire.
- This controller shall not be used outdoors.
 - ▶ It might shorten the life cycle or given an electric shock.
- When wiring connection, #20AWG (0.5mm²) should be used and screw bolt on terminal block with 0.74N.m strength.
 - ▶ It may result in malfunction or error.
- Keep the controller away from high current and voltage circuits. The controller and connection wires (esp. compensation conductors and RTD lead wires) should be kept approximately 30cm away from high electric circuit to limit the possible affect of noise.
 - ▶ It may cause display fluctuation or error.
- Do not use a place where temperature fluctuate or icing occurs.
 - ▶ It may cause fire, explosive or error.
- In cleaning the controller, do not use water or an oil-based detergent.
 - ▶ It might cause an electric shock or fire that will result in damage to the product.
- Do not inflow dust or drops into inside of this controller.
 - ▶ It may cause fire or trouble.
- Installation Category II, Pollution Degree 2, Altitude over 0~2000m use.

Digital Process Indicator

EN

CE

SDM5600/5700

Thank you very much for selecting Sanup temperature controller. For your safety, please read the following before using.



SANUP ELECTRIC

■ H.Q & Factory: 240-42, Uijeongbu 2dong, Uijeongbu, Gyeonggi-do, Korea
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■ Sales Shop: 42, Jangsadong Jongro Seoul, Korea
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1 Features

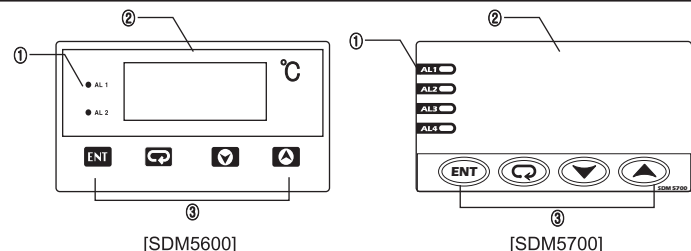
SDM5600/5700 is support to various useful functions with stable display. Especially easy usable and very wide purpose for your process.

- Universal Input _____ TC/RTD/Vdc/mAdc
- Parameters or Setting lock _____ PASS No.
- Peak Hold _____ Peak Hold
- Retransmission Output _____ 4~20mAdc
- RS-485 Interface _____ MODBUS ASCII
- Max. 4 Alarms _____ Optional(SDM5700)
- TX Power _____ 17V 30mAdc
- Big and Bright Display _____ 0.8" FND(SDM5700)
- Universal Power _____ 100-240V 50-60Hz

2 Ordering Code

MODEL	-	CODE	SPEC.
SDM 5600	-	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Digital Alarm Indicator
5700			Alarm Indicator with 0.8" FND
SIZE	5600		96(W)X48(H)X100(D) (mm)
5700			
Input		U	Universal (see input table)
Range		OU	Full Scale
Control Output		N	None
Power		F	100-240V 50/60Hz
Optional		N	None
		3	RS 485 Interface
		A	Alarm 3, 4 (SDM5700 only)
		A3	Alarm3, 4 + RS 485 (SDM5700 only)

3 Functional Description



- ① ALM: Alarm Lamp. LED
 ② PV: Process Value. 4-digit FND
 ③ Set Keys: Enter, Mode, Down and Up key. Push ENTER key 2 seconds over, display will be Peak value.

Setting Parameters

- Pressing the (ENT) key when the process value is displayed allows various parameter to be seen in the process value display.
- The indicated parameters can be changed by using the (Mode) key and (Up) key. Holding down these keys for more than 2 sec. will change the very rapidly.
- After changing the value of a parameter, the right decimal point blinks, indicating the parameter has not been accepted. By pressing (ENT) this value is accepted and entered into EEPROM. When the value is accepted the decimal point disappears.
- Once finished changing parameter values, pressing (Mode) for more than 2 sec. returns the controller to normal operation mode and the process value will be displayed. Waiting 80 sec. without key pressing will return to normal operation mode.

4 Function Parameter Table

SIGN	PARAMETERS	FUNCTION	INITIAL
AL-1	Alarm 1 set	Alarm 1 set value	EU (0.0%)
AL-2	Alarm 2 set	Alarm 2 set value	
AL-3	Alarm 3 set	Alarm 3 set value	
AL-4	Alarm 4 set	Alarm 4 set value	
PASS	PASS	Password for parameter set. Set 5.	0
InPt	Input	Set input signal (see input table)	K-Type T.C
Unit	Unit	Set display unit (°C/°F)	°C
dP	Decimal point	Set decimal point when Vdc input	0
SC-H	Scale high	Set scale when use Vdc input	100
SC-L	Scale low	-1999~9999, SC-H > SC-L	0
AL51	Alarm 1 mode	Set alarm 1 mode (see alarm table)	High alarm
HY51	Alarm 1 hysteresis	Set alarm 1 dead band	1
AL52	Alarm 2 mode	Set alarm 2 mode (see alarm table)	Standby high
HY52	Alarm 2 hysteresis	Set alarm 2 dead band	1
AL53	Alarm 3 mode	Set alarm 3 mode (see alarm table)	Low alarm
HY53	Alarm 3 hysteresis	Set alarm 3 dead band	1
AL54	Alarm 4 mode	Set alarm 4 mode (see alarm table)	Standby low
HY54	Alarm 4 hysteresis	Set alarm 4 dead band	1
E-H	Ret-out high scale	Set retransmission output scale high and low	1370 °C
E-L	Ret-out low scale		-100 °C
Flt	Filter	Input filter (0~60sec.)	0
In5	Insert	Processing value compensation EUS (-100.0~100.0%)	0
-	Processing value	Display processing value	-

Set **PASS** 10: Set for related deviation alarm.

SIGN	PARAMETERS	FUNCTION	INITIAL
SP	Set point	Set point for deviation alarm	250
dALn	Deviation set	Set point for deviation alarm mode	Dev. high
dHY5	Hysteresis	Set dead band for deviation alarm	1

Set **PASS** 15: Set for related RS485 interface and initializing.

SIGN	PARAMETERS	FUNCTION	INITIAL
Add5	Address	Interface address. Set 0 is disable.	0
SPEd	Speed	Interface speed	9600 bps
PARy	Parity	Set parity	none
dLY	Delay Time	Interface response time	1
LddF	Initializing	Parameters initializing	0

Note *Delay Time: Set 1 is 4~54msec.
 Set 2 is 54~104msec.
 Set 3 is 104~154msec.

*Initializing: Set 123 then all parameters will be change factory initial value.

*All alarm modes are interdependable.

*Peak hold display by ENT key.

5 Input Type & Measurement Range

SIGN	INPUT	RANGE	
		°C	°F
K-tc	K-Type TC	-100~1370 °C	-148~2498 °F
J-tc	J-Type TC	-100~950 °C	-148~1742 °F
E-tc	E-Type TC	-100~750 °C	-148~1382 °F
n-tc	N-Type TC	-100~1300 °C	-148~2372 °F
C-tc	C-Type TC	0~2300 °C	32~4172 °F
t-tc	T-Type TC	-200~400 °C	-328~752 °F
P.ttc	K1-Type TC	-100.0~400.0 °C	-148~752 °F
r-tc	R-Type TC	-0~1760 °C	32~3200 °F
S-tc	S-Type TC	-0~1760 °C	32~3200 °F
b-tc	B-Type TC	-0~1800 °C	32~3272 °F
dPt	JIS Pt100Ω	-200~600 °C	-328~1112 °F
dPt	DIN Pt100Ω	-200~600 °C	-328~1112 °F
dPt1	JIS Pt100Ω	-200.0~600.0 °C	-328~1112 °F
dPt1	DIN Pt100Ω	-200.0~600.0 °C	-328~1112 °F
1-5	1~5Vdc		
0-5	0~5Vdc		

Note *In case of B type TC, not accurate under 400 °C.

*For using 4~20mAdc, set 1-5 vdc input and then connect 250ohm Res. on both input terminal.

