

- Precision Control
- Advanced Reliability
- Reasonable Price
- Various Communication Protocols
- High Resolution

# Temperature Controller

## NOVA100 SERIES





# Your Best Partner!

- ▶ High Input Resolution - A/D 18 Bits
- ▶ Various Communication Protocols
  - PC Link, MODBUS, SYNC Master, SYNC Slave
- ▶ Precision Retransmission Output
  - Resolution 14 Bits
- ▶ Multi Input - T/C, RTD, DCV
- ▶ Controlling and monitoring Controller with PC
- ▶ Advanced PID Algorithm
  - with built-in Auto-tuning Function
- ▶ Over-Shooting Suppression
- ▶ 2 Point Alarm Outputs as Standard Option
- ▶ Powerful Communication
  - and 31 Sets Multi-drop Function
- ▶ Free Operation Program



## Specifications

Item	ST140/160/170/180/190	SD160 / SD190	
PV/SP Display	Each 4 Digits	Each 4 Digits	
Sampling Time	250 ms	250 ms	
Accuracy	±0.2% of FS	±0.2% of FS	
Control Loop and Mode	Single-Loop Control	-	
Running Mode	Auto / Manual	-	
Number of SetPoint	1 SP (1 Zone PID)	-	
Input	Type	Universal Input (1 Point)	
	Sensor	T/C	K, J, E, T, R, B, S, L, N, U, W, Platinel II
		RTD	Pt100, JPt100
		DCV	-10 ~ 20mV, 0 ~ 100mV, 0.4 ~ 2.0V DC, 1 ~ 5V DC, 0 ~ 10V DC (4 ~ 20mA, 0 ~ 20mA, External Resistance 250 Ω , 500 Ω )
Control Output	Type	1 Point	
	Kind	Time-proportional PID	Relay, SSR(V-Pulse)
		Continuous PID	SCR(4 ~ 20mA DC)
Alarm	Capacity	ST'D 2 Points / Max 4 Points *note1	
	Type	21 Types - High/Low Temp. Limit, Deviation Limit... *note2	
Retransmission Output	4 ~ 20mA(PV, SP, MV) or Loop Power Supply	4 ~ 20mA(PV) or Loop Power Supply	
HBA	CTL-6-S or 800:1 CT	-	
Communication Protocols	PC-Link, MODBUS(ASCII, RTU), SYNC Master, SYNC Slave	PC-Link, MODBUS(ASCII, RTU)	
Power Supply and Consumption	100 ~ 240V AC, 50 ~ 60Hz / Max. 6W below	100 ~ 240V AC, 50 ~ 60Hz / Max. 6W below	
Model	Suffix Code	Description	
ST140/160/170/180/190 SD160/190	- □ □	Digital Controller	Digital Indicator
Control Output	S	SSR	-
	A	SCR(4 ~ 20mA)	-
	R	RELAY	-
	0	-	Standard
Power	0	100 ~ 240V AC	100 ~ 240V AC
	1	24V DC	24V DC
Option	/RET	Retransmission Output *note4	Retransmission Output
	/RS	RS485 *note4	RS485
	/HBA	Heater Breaking Alarm *note4	-
	/ALM3	Relay Output 1 Point *note5	Relay Output 1 Point *note5
	/ALM4	Relay Output 1 Point *note4, *note5	Relay Output 1 Point *note4, *note5

\*note1 : ST140,160,180 - Max 2 Points

\*note4 : RET, RS, HBA, ALM4 to be purchased separately (But, Available RS, HBA )

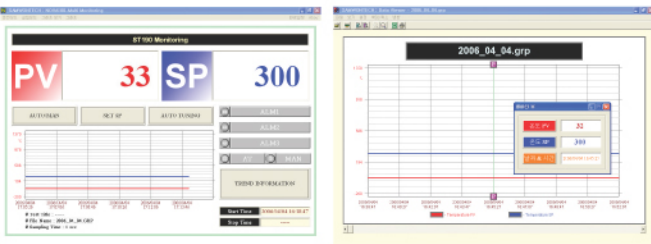
\*note2 : In case of HBA Option - 22 Types

\*note5 : Not use ST140,160,180, SD160

\*note3 : SD160 - Max 2 Points

# Special Features

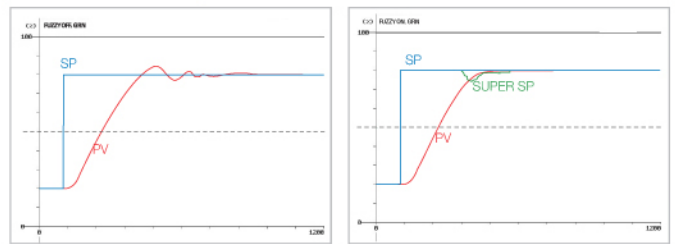
## Free Application Program



▲ Application Program Main Screen    ▲ Application Program Graph Screen

User can control and monitor NOVA100 with free operation program on PC, it is improved convenience and economy.

## Powerful Fuzzy Function



▲ General Control    ▲ Fuzzy Control

It is a effective control function about overshoot in case of serious load alternation or frequent changing SP system.

## Powerful Communication Function



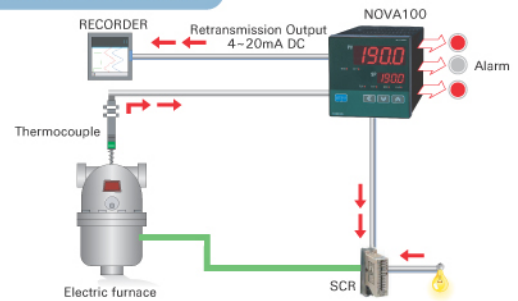
PROTOCOL - PC LINK, MODBUS(ASCII, RTU),  
SYNC Master, SYNC Slave  
Max 1.2Km with RS485, Max 31 Sets Multi-drop

# Examples

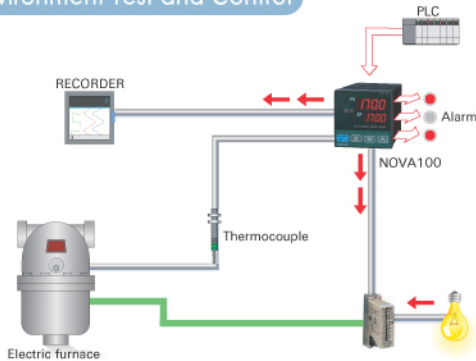
### 1. Touch Panel Configuration



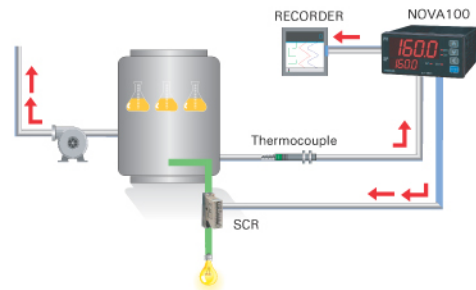
### 2. Electric Furnace Control



### 3. Environment Test and Control



### 4. Sterilization Temperature Control

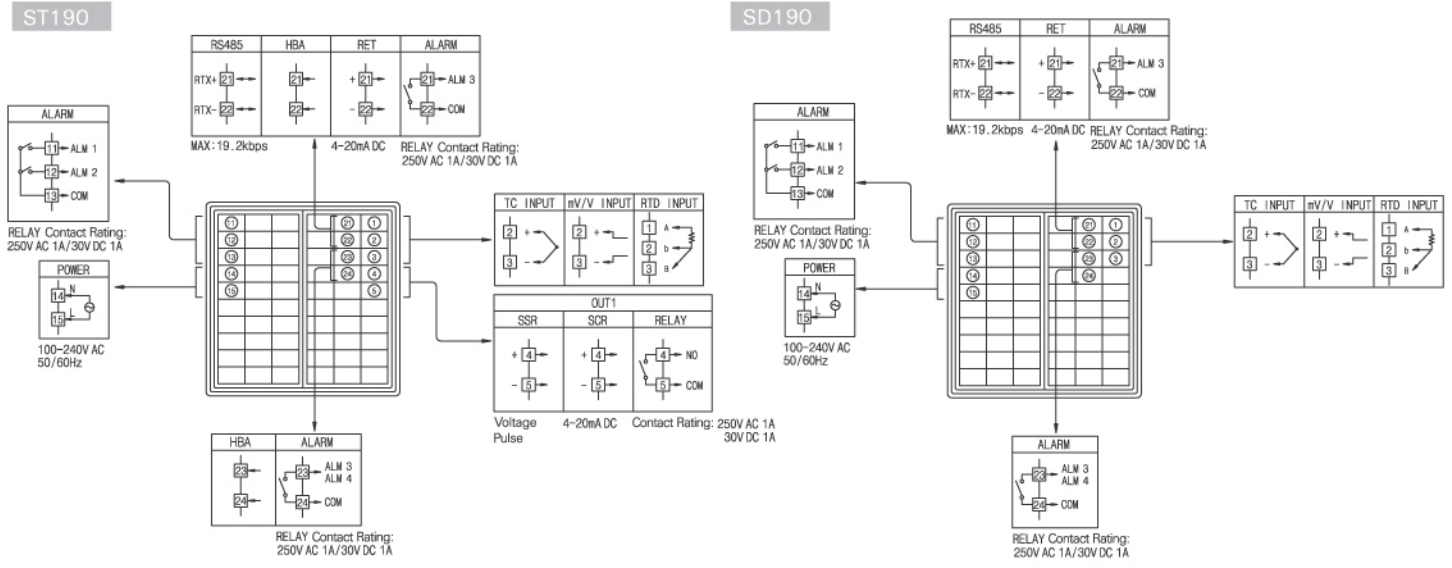


### 5. Soldering Machine Control

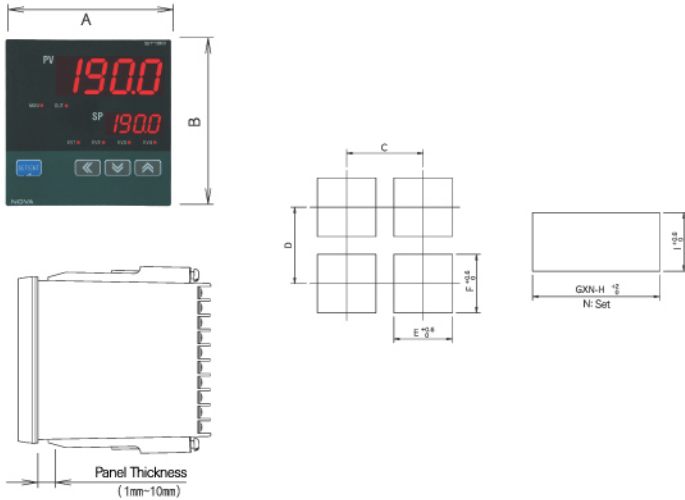




## Terminal Arrangement and Extension Wiring



## Dimension and Panel Cutting Size



MODEL	A	B	C	D	E	F	G	H	I
ST190	96	96	120	120	92	92	96	4	92
ST180	48	96	70	120	45	92	48	3	92
ST170	72	72	90	90	68	68	71	3	68
ST160	96	48	120	70	92	45	-	-	-
ST140	48	48	70	70	45	45	48	3	45
SD190	96	96	120	120	92	92	96	4	92
SD160	96	48	120	70	92	45	-	-	-



Before using this product, read the appended user's manual carefully to ensure proper and safe operation.