

A

 Temperature
Controller

ED6

Digital temperature controller

- Cooling control and heating control selection
- Alarm output and timer output selection
- ON/OFF and proportional control selection
- 0.1 °C / 1 °C selection
- Delay output time setting



Suffix code

Model	Code	Description
ED6 -	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Digital temperature controller
Control type	F	ON/OFF control
	P	Proportional control
Input	K	Thermocouple K
	P	RTD Pt100 Ω (IEC)
	C	4 – 20 mA DC (attach 250 Ω of external resistance), 1 – 5 V DC
Control output	M	Relay
	S	SSR (voltage pulse output 5 V DC)
Optional	A	Alarm or defrosting timer
	N	NONE
Power Supply Voltage	P3	10 – 24 V DC / AC, 50 – 60 Hz
	P4	100 – 240 V AC, 50 – 60 Hz

Specification

Input

Thermocouple input	K
RTD input	Pt100 Ω
DC rated voltage	1 – 5 V DC (4 – 20 mA DC, 250 Ω attach external resistance)
Input sampling time	500 ms
Input display resolution	1 °C / 0.1 °C display selection (usually less than the min indication value)
Input impedance	Thermocouple 10 MΩ, RTD 200 kΩ, DC voltage 200 kΩ
Allowable signal source resistance	Thermocouple max 100 Ω, DC voltage max 2 kΩ
Allowable wiring resistance	RTD max 10 Ω (however resistance among 3 wires should be same)
Input compensation	±30 °C (±30.0 °C)
Input scaling	-1,000 ~ 5,000 (-199.9 ~ 999.9) (TSL ~ TSH within the range)
Input signal break detection	Exceeding 10 °C from the max or min range will turn OFF the control output

Performance

Display accuracy	±0.5 % of FS ±1 Digit
Insulation resistance	Min 20 M Ω (500 V DC)
Dielectric strength	2,000 V AC, 50 / 60 Hz, for 1 min (between the different recharging terminal from each other)

Control function and output

Control type	Select ON/OFF or proportional control
Control action	Select reverse action (heating) or direct action (cooling)
Manual reset	1 ~ 100 % (amount of output)
ON/OFF control hysteresis	1 ~ 50 °C (1.0 ~ 50.0 °C)
ON/OFF control output delay time	0 ~ 240 sec
Proportional band	1 ~ 100 °C
Proportional cycle	Relay output (fix with 20 sec), SSR output (fix with 2 sec)
Position of decimal point selection	0 ~ 2 (with setting 0 : 200, with setting 1 : 20.0, with setting 2 : 2.00)
Auxiliary output function selection	Select alarm or defrosting timer
Alarm type	High alarm (absolute value) with heating control and low alarm (absolute value) with cooling control
Alarm setting range	-100 ~ 400 °C (-100.0 ~ 400.0 °C)
Alarm hysteresis	1 ~ 50 °C (1.0 ~ 50.0 °C)
Alarm output delay time	0 ~ 240 sec
Defrosting output time setting	ON time (0 ~ 999 minute), OFF time (0 ~ 999 minute)

● Output

Control output	Relay output	Contact composition : S,P,D,T, 250 V AC, 5 A (resistive load)
	SSR	Approx. 5 V DC (resistive load min 500 Ω), approx. 50 mA max
Alarm output (alarm/defrost)	Relay	Contact composition : 1 c, 250 V AC, 5A (resistive load)

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General specification

Power Supply Voltage	100 – 240 V AC, 50 – 60 Hz, 10 – 24 V DC / AC, 50 – 60 Hz
Voltage fluctuation	±10 % of the power supply voltage
Power consumption	Max 5 VA (220 V AC 60 Hz)
Ambient temperature	0 ~ 50 °C
Ambient humidity	35 ~ 85 % RH (without dew condensation)
Storage temperature	-25 ~ 65 °C
Vibration	10 – 55 Hz, peak amplitude 0.76 mm for 2 min each in 3 axis direction
Shock	300 m/s ² , to the direction 6 each 3 times
Weight	116 g

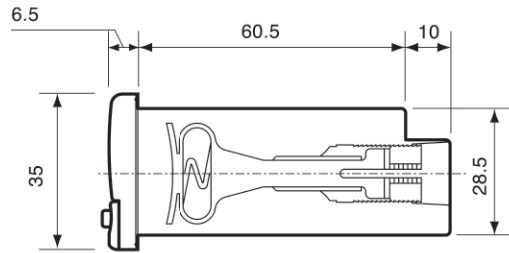
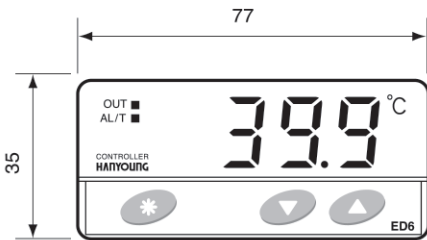
Range and input code chart

Classification	Code	Input type	Range (°C)	Accuracy
Thermocouple	K	K	-80.0 ~ 999.9	± 0.5 % of FS ± 1 Digit
RTD	P	Pt100 Ω	-100.0 ~ 400.0	
Voltage/current (DC)	C	1 – 5 V	-1,000 ~ 5,000	
		4 – 20 mA	(scaling)	

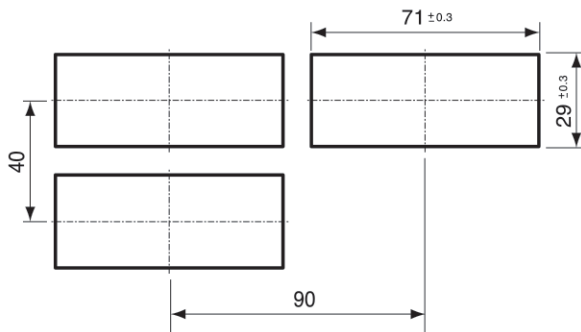
※ Attach ±0.1 % of 250 Ω external resistance at the ends input terminal (both side) when input is within the range of 4 – 20 mA.

Dimension and panel cutout (unit : mm)

Dimension



Panel cutout



Connection diagram

