DTK Series Temperature Controller Data Sheet

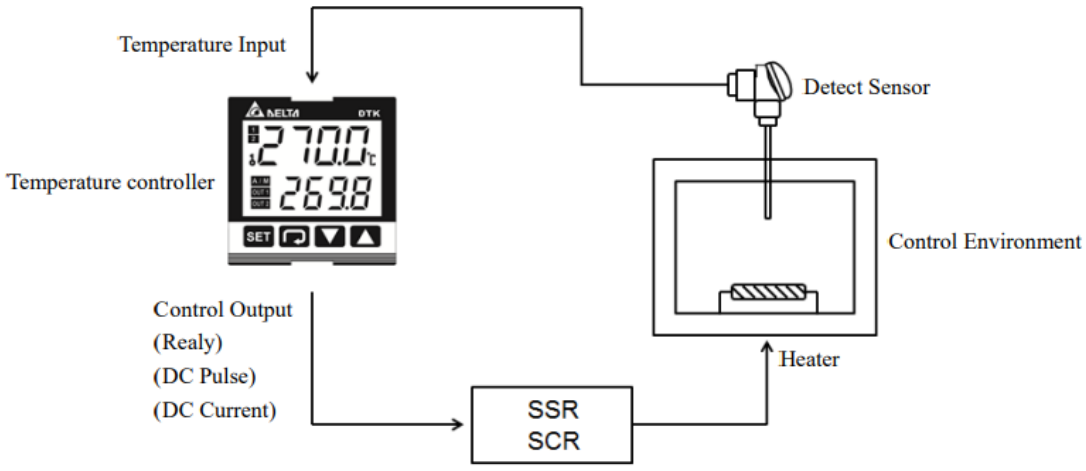
Product Features

DTK series is a new temperature controller with a high cost-performance ratio. It greatly decreases development costs and time, and improves the functions of temperature control systems. With a length of only 60mm and high-resolution LCD display, it is easy for operators to monitor the temperatures of any environment or occasion.

- High-resolution LCD panel: High contrast and customized display graphics for user's easy understanding.
- High-speed sampling time 100ms: High-speed sampling for external temperature measurement and fast output response for performance requirements of high-precision control.
- Shortened length to 60mm: Shorten the length of the controller to reduce the installation space.
- Conform with CE international safety certification

Basic System Structure

DTK obtains the temperature of the controlled environment from the sensor and sending the measured data to the electronic processor. After computing and under a fixed control cycle, it proportionally sends the heating signal via different output interfaces such as relays, voltage pulse or DC currents. By providing power to the heater and raise temperature, DTK will then control the temperature variation within a specific range.



Display, LED & Pushbuttons

PV: Present value
SV: Set value
℃, ℉: Celsius or Fahrenheit LED
1, 2: ALM1/ALM2 alarm output LED
A/M: Auto-Tuning and manual mode LED
OUT1, OUT2: Output LED
SET : "Select" and "Set up" keys
: "Set value tuning" keys

Specifications

Input Voltage	AC 100 ~ 240V +/-10%, 50/60 Hz
Power Consumption	5VA max
Display Method	LCD display.Process value (PV): Red color, Set point (SV): Green color
Sensor Type	Thermocouple: K, J, T, E, N, R, S, B, L, U, TXK
	3-wire Platinum RTD: Pt100, JPt100
	Resistance: Cu50, Ni120
Control Mode	PID, manual, and ON/OFF
Control Output	Relay output: Max. load 250VAC, 5A resistive load
	Voltage pulse output: DC 12V, Max. output current 40 mA
	Current output: DC 4 ~ 20 mA output (Load resistance: Max. 600Ω)
Alarm Output Type	Relay output: Max. load 250VAC, 3A resistive load
Display Accuracy	0 or 1 digit to the right of the decimal point (selectable)
Sampling Rate	Thermocouple or platinum resistor: 0.1 sec
Vibration Resistance	10 to 55 Hz, 10 m/s2 for 10 min, each in X, Y, and Z directions
Shock Resistance	Max. 300 m/s2, 3 times in each of 3 axes, 6 directions
Ambient Temperature	0°C ~ +50°C
Storage Temperature	-20°C ~ +65°C
Altitude	Max. 2000 m
Relative Humidity	35% ~ 80% RH (non-condensing)

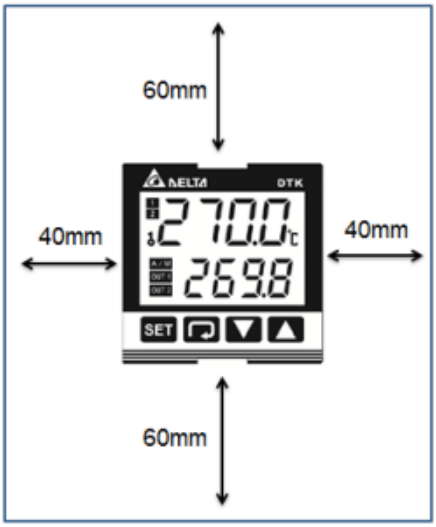
Temperature Sensors and Temperature Range

Input Temperature Sensor Type	Register Value		Temperature Range	Input Temperature Sensor Type	Register Value		Temperature Range
Thermocouple K type	K	0	-200 ~ 1300°C	Thermocouple L type	L	8	-200 ~ 850°C
Thermocouple J type	J	1	-100 ~ 1200°C	Thermocouple U type	U	9	-200 ~ 500°C
Thermocouple T type	t	2	-200 ~ 400°C	Thermocouple TXK type	t.XK	10	-150 ~ 800°C
Thermocouple E type	E	3	0 ~ 600°C	Platinum Resistance (JPt100)	JPt	11	-100 ~ 400°C
Thermocouple N type	n	4	-200 ~ 1300°C	Platinum Resistance (Pt100)	Pt	12	-200 ~ 850°C
Thermocouple R type	r	5	0 ~ 1700°C	Resistance (Ni120)	nI	13	-80 ~ 270°C
Thermocouple S type	S	6	0 ~ 1700°C	Resistance (Cu50)	Cu	14	-50 ~ 150°C
Thermocouple B type	b	7	100 ~ 1800°C				

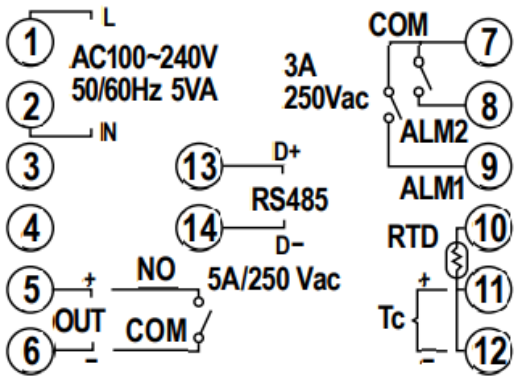
Panel Cutout

Model	Panel Cutout (W * H)	Model	Panel Cutout (W * H)
4848	45mm * 45mm	7272	68mm * 68mm
4896	44.5mm * 91.5mm	9696	91.5mm * 91.5mm

- When installing the temperature controller, a certain surrounding space should be maintained (as shown below) to ensure proper cooling and easy removal of mounting accessories.
- At least 60 mm space for upper and lower sides and 40 mm space for left and right sides.



Terminal Wiring Diagram



Ordering Information

DTK 1 2 3 4 5 6 7

Series	DTK: Delta DTK Series Temperature Controller
1 2 3 4 Panel Size (W×H)	4848：4848 1/16 DIN W48 × H48mm 7272：7272 W72 × H72mm 4896：4896 1/8 DIN W48 × H96mm 9696：9696 1/4 DIN W96 × H96mm
5 Output options	R: Relay output, 250 VAC, 5A V: Voltage pulse output 12VDC +/-15% C: DC current output, 4 ~ 20 mA
6 Communication option	0: None 1: RS485 communication
7 Alarm option	0: None 1: 1 alarm output 2: 2 alarm output