

Simultaneous Heating&Cooling Output PID Temperature Controllers

TK Series

INSTRUCTION MANUAL

TCD210240AF

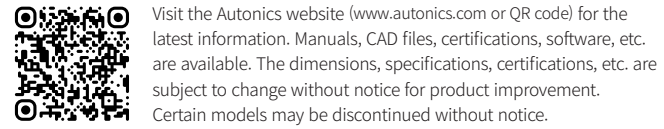
Autonics

Thank you for choosing our Autonics product.

Be sure to read and fully understand the instruction manual and other manuals before using the product.

For your safety, read and follow the safety precautions, warnings, cautions, and handling instructions listed in the instruction manual, other manuals, and the Autonics website.

Keep this document in a location where it can be easily accessed.



Safety Considerations

- Observe all ‘Safety Considerations’ for safe and proper operation to avoid hazards.
- ⚠ symbol indicates caution due to special circumstances in which hazards may occur.

⚠ Warning

Failure to follow instructions may result in serious injury or death

01. Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss.(e.g. nuclear power control, medical equipment, ships, vehicles, railways, aircraft, combustion apparatus, safety equipment, crime/disaster prevention devices, etc.)
- Failure to follow this instruction may result in personal injury, economic loss or fire.
02. Do not use or store the unit in the place where flammable/explosive/ corrosive gas, high humidity, direct sunlight, radiant heat, vibration, impact or salinity may be present.
- Failure to follow this instruction may result in explosion or fire.
03. Install on a device panel to use.
- Failure to follow this instruction may result in electric shock.
04. Do not connect, repair, or inspect the unit while connected to a power source.
- Failure to follow this instruction may result in fire or electric shock.
05. Check ‘Connections’ before wiring.
- Failure to follow this instruction may result in fire.
06. Do not disassemble or modify the unit.
- Failure to follow this instruction may result in fire or electric shock.

⚠ Caution

Failure to follow instructions may result in injury or product damage

01. When connecting the power input and relay output, use AWG 20 (0.50 mm²) cable or over, and tighten the terminal screw with a tightening torque of 0.74 to 0.90 N·m.
- When connecting the sensor input and communication cable without dedicated cable, use AWG 28 to 16 cable and tighten the terminal screw with a tightening torque of 0.74 to 0.90 N·m.
- Failure to follow this instruction may result in fire or malfunction due to contact failure.
02. Use the unit within the rated specifications.
- Failure to follow this instruction may result in fire or product damage
03. Use a dry cloth to clean the unit, and do not use water or organic solvent.
- Failure to follow this instruction may result in fire or electric shock.
04. Keep the product away from metal chip, dust, and wire residue which flow into the unit.
- Failure to follow this instruction may result in fire or product damage.

- Cautions during Use
- Follow instructions in 'Cautions during Use'. Otherwise, it may cause unexpected accidents.
 - Check the polarity of the terminals before wiring the temperature sensor. For RTD temperature sensor, wire it as 3-wire type, using cables in same thickness and length. For thermocouple (TC) temperature sensor, use the designated compensation wire for extending wire.
 - Keep away from high voltage lines or power lines to prevent inductive noise. In case installing power line and input signal line closely, use line filter or varistor at power line and shielded wire at input signal line. Do not use near the equipment which generates strong magnetic force or high frequency noise.
 - Do not apply excessive power when connecting or disconnecting the connectors of the product.
 - Install a power switch or circuit breaker in the easily accessible place for supplying or disconnecting the power.
 - Do not use the unit for other purpose (e.g. voltmeter, ammeter), but temperature controller.
 - When changing the input sensor, turn off the power first before changing. After changing the input sensor, modify the value of the corresponding parameter.

- 24 VAC~, 24-48 VDC≡ power supply should be insulated and limited voltage/current or Class 2, SELV power supply device.
- Do not overlapping communication line and power line. Use twisted pair wire for communication line and connect ferrite bead at each end of line to reduce the effect of external noise.
- Make a required space around the unit for radiation of heat. For accurate temperature measurement, warm up the unit over 20 min after turning on the power.
- Make sure that power supply voltage reaches to the rated voltage within 2 sec after supplying power.
- Do not wire to terminals which are not used.
- This unit may be used in the following environments.
 - Indoors (in the environment condition rated in 'Specifications')
 - Altitude Max. 2,000 m
 - Pollution degree 2
 - Installation category II

Ordering Information

This is only for reference, the actual product does not support all combinations. For selecting the specified model, follow the Autonics website .

T	K	①	②	-	③	④	⑤	⑥
---	---	---	---	---	---	---	---	---

- ① Digit

4: 4 digit
- ④ Power supply

2: 24 VAC 50/60 Hz, 24-48 VDC
4: 100-240 VAC 50/60 Hz
- ⑤ OUT1 Control output

R: Relay
S: SSR drive
C: Selectable current or SSR drive output
- ③ Option in/output

Size: N

N: Normal type

PN OUT2 Function

[No OUT2 (Heating or Cooling)]

①

Normal type⁽⁰¹⁾
Heating & Cooling

Alarm 1 + CT input
Alarm 2

②

Normal type

Alarm 1 + Alarm 2

D

Normal type
Heating & Cooling

Alarm 1 + Digital input 1/2
Digital input 1/2

R

Normal type
Heating & Cooling

Alarm 1+Transmission output
Transmission output

T

Normal type
Heating & Cooling

Alarm output 1 + RS485 communication
RS485 communication
- ⑥ OUT2 Control output

R: Heating & Cooling type
[Relay output]⁽⁰³⁾

C: Heating & Cooling type
[Selectable current or SSR drive output]⁽⁰⁴⁾

Size: SP
PN Function
① Alarm 1
② Alarm 1 + Alarm output 2
R Alarm 1 + Transmission output
T Alarm 1 + RS485 communication
A Alarm 1 + Alarm 2 + Transmission output
B Alarm 1 + Alarm 2 + RS485 communication
D Alarm 1 + Alarm 2 + Digital input 1/2 ⁽⁰²⁾

(01) The CT input model of TK4N can be selected only in the normal type model with alarm output 1. (except TK4SP)

(02) Only for TK4S-D, OUT2 output terminal is used as DI-2 input terminal.

(03) When operating mode is heating or cooling control, OUT2 can be used as alarm output 3 (except TK4N).

(04) When operating mode is heating or cooling control, OUT2 can be used as transmission output 2.

Product Components

- Product (+ bracket)
- Instruction manual
- [TK4N] Terminal protection cover × 1

Manual

For proper use of the product, refer to the manuals and be sure to follow the safety considerations in the manuals.
Download the manuals from the Autonics website.

Software

Download the installation file and the manuals from the Autonics website.

■ DAQMaster

DAQMaster is comprehensive device management program. It is available for parameter setting, monitoring.

Sold Separately

- Current transformer (CT)
- 11-pin controller socket: PG-11, PS-11 (N)
- Terminal protection cover: RSA / RMA / RHA / RLA-Cover
- Communication Converter: SCM-US / SCM-38I / SCM-US48I / SCM-WF48

Specifications					
Series		TK4N	TK4SP	TK4S	TK4M
Power supply	AC type	100 - 240 VAC ~ 50/60 Hz			
	AC/DC type	-	24 VAC ~ 50/60 Hz, 24-48 VDC≡		
Permissible voltage range		90 to 110 % of rated voltage			
Power consumption	AC type	≤ 6 VA			
	AC/DC type	-	AC: ≤ 8 VA, DC ≤ 5 W		
Unit weight (packaged)		≈ 70 g (≈ 140 g)	≈ 85 g (≈ 130 g)	≈ 105 g (≈ 150 g)	≈ 140 g (≈ 210 g)

Series		TK4W	TK4H	TK4L
Power supply	AC type	100 - 240 VAC~ 50/60 Hz		
	AC/DC type	24 VAC~ 50/60 Hz, 24-48 VDC≡		
Permissible voltage range		90 to 110 % of rated voltage		
Power consumption	AC type	≤ 8 VA		
	AC/DC type	AC: ≤ 8 VA, DC ≤ 5 W		
Unit weight (packaged)		≈ 141 g (≈ 211 g)	≈ 141 g (≈ 211 g)	≈ 198 g (≈ 294 g)

Sampling period		50 ms
Input specification		Refer to 'Input Type and Using Range'
Option input	CT input	• 0.0-50.0 A (primary current measurement range) • CT ratio: 1/1,000 • Measurement accuracy: ±5% F.S. ±1digit
	Digital input	• Contact - ON: ≤ 2 kΩ, OFF: ≥ 90 kΩ • Non contact - residual voltage ≤ 1.0 V, leakage current ≤ 0.1 mA • Outflow current: ≈ 0.5 mA per input
Control output	Relay	250 VAC~ 3 A, 30 VDC≡ 3 A 1a
	SSR	11 VDC≡ ±2 V, ≤ 20 mA
Alarm output	Current	DC 4-20 mA or DC 0-20 mA (parameter), Load resistance: ≤ 500 Ω
	Relay	AL1, AL2: 250 VAC~ 3 A 1a • TK4N AL2: 250 VAC~ 0.5 A 1a (≤ 125 VA)
Option output	Transmission	DC 4 - 20 mA (Load resistance: ≤ 500 Ω, Output accuracy: ±0.3% F.S.)
	RS485 comm.	Modbus RTU
Display type		7 segment (red, green, yellow), LED type
Control type	Heating, Cooling	ON/OFF, P, PI, PD, PID Control
	Heating & Cooling	
Hysteresis		• Thermocouple, RTD: 1 to 100 (0.1 to 100.0) °C/°F • Analog: 1 to 100 digit
Proportional band (P)		0.1 to 999.9 °C/°F (0.1 to 999.9%)
Integral time (I)		0 to 9,999 sec
Derivative time (D)		0 to 9,999 sec
Control cycle (T)		• Relay output, SSR drive output: 0.1 to 120.0 sec • Selectable current or SSR drive output: 1.0 to 120.0 sec
Manual reset		0.0 to 100.0%
Relay life cycle	Mechanical	OUT1/2: ≥ 5,000,000 operations AL1/2: ≥ 20,000,000 operations (TK4H/W/L: ≥ 5,000,000 operations)
	Electrical	≥ 100,000 operations
Dielectric strength		Dependent on the power supply
AC voltage type		Between the charging part and the case: 3,000 VAC ~ 50/60 Hz for 1 minute
AC / DC voltage type		Between the charging part and the case: 2,000 VAC ~ 50/60 Hz for 1 minute
Vibration		0.75 mm amplitude at frequency of 5 to 55 Hz in each X, Y, Z direction for 2 hours
Insulation resistance		≥ 100 MΩ (500 VDC≡ megger)
Noise immunity		± 2 kV square shaped noise by noise simulator (pulse width: 1 μs) R-phase, S-phase
Memory retention		≈ 10 years (non-volatile semiconductor memory type)
Ambient temperature		-10 to 50 °C, storage: -20 to 60 °C (no freezing or condensation)
Ambient humidity		35 to 85%RH, storage: 35 to 85%RH (no freezing or condensation)
Protection structure		IP65 (Front panel, IEC standards) • TK4SP: IP50 (Front panel, IEC standards)
Insulation type		Double insulation or reinforced insulation (mark: Ⓜ, dielectric strength between the measuring input part and the power part: 2 kV)
Certification		CE, ENEC, RoHS, ENEC

Communication Interface

■ RS485

Comm. protocol	Modbus RTU
Connection type	RS485
Application standard	EIA RS485 compliance with
Maximum connection	31 units (address: 01 to 99)
Synchronous method	Asynchronous
Comm. Method	Two-wire half duplex
Comm. effective range	≤ 800 m
Comm. speed	2,400 / 4,800 / 9,600 (default) / 19,200 / 38,400 bps (parameter)
Response time	5 to 99 ms (default: 20 ms)
Start bit	1 bit (fixed)
Data bit	8 bit (fixed)
Parity bit	None (default), Odd, Even
Stop bit	1 bit, 2 bit (default)
EEPROM life cycle	≈ 1,000,000 operations (Erase / Write)

Input Type and Using Range					
The setting range of some parameters is limited when using the decimal point display.					
Input type		Decimal point	Display	Using range (°C)	Using range (°F)
Thermo-couple	K (CA)	1	ℰ ℄ RH	-200 to 1,350	-328 to 2,462
		0.1	ℰ ℄ RL	-199.9 to 999.9	-199.9 to 999.9
	J (IC)	1	ℳ ℄ LH	-200 to 800	-328 to 1,472
		0.1	ℳ ℄ LL	-199.9 to 800.0	-199.9 to 999.9
	E (CR)	1	ℰ ℄ r-H	-200 to 800	-328 to 1,472
		0.1	ℰ ℄ r-L	-199.9 to 800.0	-199.9 to 999.9
	T (CC)	1	ℰ ℄ CH	-200 to 400	-328 to 752
		0.1	ℰ ℄ CL	-199.9 to 400.0	-199.9 to 752.0
	B (PR)	1	ℳ ℄ P r	0 to 1,800	32 to 3,272
		1	ℳ ℄ P r	0 to 1,750	32 to 3,182
	S (PR)	1	ℳ ℄ P r	0 to 1,750	32 to 3,182
		1	ℳ ℄ n n	-200 to 1,300	-328 to 2,372
RTD	N (NN)	1	ℳ ℄ n n	-200 to 1,300	-328 to 2,372
		1	ℰ ℄ E e	0 to 2,300	32 to 4,172
	C (TT) ⁽⁰¹⁾	1	ℳ ℄ E e	0 to 2,300	32 to 4,172
		1	ℳ ℄ E e	0 to 2,300	32 to 4,172
	L (IC)	1	ℳ ℄ L CH	-200 to 900	-328 to 1,652
		0.1	ℳ ℄ L CL	-199.9 to 900.0	-199.9 to 999.9
	U (CC)	1	ℳ ℄ CH	-200 to 400	-328 to 752
		0.1	ℳ ℄ CL	-199.9 to 400.0	-199.9 to 752.0
	Platinel II	1	ℳ ℄ L I	0 to 1,390	32 to 2,534
		0.1	ℳ ℄ U S	-199.9 to 200.0	-199.9 to 392.0
	Cu50 Ω	0.1	ℳ ℄ U S	-199.9 to 200.0	-199.9 to 392.0
		0.1	ℳ ℄ U S	-199.9 to 200.0	-199.9 to 392.0
Analog	JPT100 Ω	1	ℳ ℄ P t-L	-200 to 650	-328 to 1,202
		0.1	ℳ ℄ P t-L	-199.9 to 650.0	-199.9 to 999.9
	DPT50 Ω	0.1	ℳ ℄ P t-L	-199.9 to 600.0	-199.9 to 999.9
		0.1	ℳ ℄ P t-L	-200 to 650	-328 to 1,202
	DPT100 Ω	0.1	ℳ ℄ P t-L	-199.9 to 650.0	-199.9 to 999.9
		0.1	ℳ ℄ P t-L	-199.9 to 650.0	-199.9 to 999.9
Analog	Nickel120 Ω	1	ℳ ℄ i t-L	-80 to 200	-112 to 392
		0 to 10 V	-	-	0 to 10 V
	0 to 5 V	-	ℳ ℄ i t	-	0 to 5 V
		1 to 5 V	-	ℳ ℄ i t	1 to 5 V
	0 to 100 mV	-	ℳ ℄ u i	-	0 to 100 mV
		0 to 20 mA	-	ℳ ℄ A i	0 to 20 mA
Analog	0 to 20 mA	-	ℳ ℄ A i	-	0 to 20 mA
		-	ℳ ℄ A i	-	4 to 20 mA

(01) C (TT): Same as existing W5 (TT) type sensor

(02) G (TT): Same as existing W (TT) type sensor

- Permissible line resistance per line: ≤ 5 Ω

■ Display accuracy

Input type	Using temperature	Display accuracy
Thermo-couple RTD	At room temperature (23°C ±5 °C)	(PV ±0.3% or ±1 °C higher one) ±1-digit • Thermocouple K, J, T, N, E below -100 °C and L, U, PLII, RTD Cu50 Ω, DPT50 Ω: (PV ±0.3% or ±2 °C higher one) ±1-digit • Thermocouple C, G and R, S below 200 °C: (PV ±0.3% or ±3 °C higher one) ±1-digit • Thermocouple B below 400 °C: There is no accuracy standards
	Out of room temperature range	(PV ±0.5% or ±2 °C higher one) ±1-digit • RTD Cu50 Ω, DPT50 Ω: (PV ±0.5% or ±3 °C higher one) ±1-digit • Thermocouple R, S, B, C, G: (PV ±0.5% or ±5 °C higher one) ±1-digit • Other sensors: ≤ ±5 °C (≤ -100 °C)
Analog	At room temperature (23°C ±5 °C)	±0.3% F.S. ±1-digit
	Out of room temperature range	±0.5% F.S. ±1-digit

• In case of TK4SP Series, ±1 °C will be added to the degree standard.

Unit Descriptions

TK4L

Autonics

4

3

1

2

1. PV display part (Red)

• Run mode: Displays PV (Present value).

• Setting mode: Displays parameter name.

2. SV display part (Green)

• Run mode: Displays SV (Setting value).

• Setting mode: Displays parameter setting value.

3. Input key

Display	Name
[A/M]	Control switching key
[MODE]	Mode key
[◀], [▼], [▲]	Setting value control key

4. Indicator

Display	Name	Description
°C, %, °F	Unit	Displays selected unit (parameter)
AT	Auto tuning	Flashes during auto tuning every 1 sec
OUT1/2	Control output	Turns ON when the control output is ON • SSR output (cycle/phase control) MV over 5% ON • Current output Manual control: 0% OFF, over ON Auto control: below 2% OFF, over 3% ON
AL1/2	Alarm output	Turns ON when the alarm output is ON
MAN	Manual control	Turns ON during manual control
SV1/2/3	Multi SV	The SV indicator is ON which is currently displayed. (When using multi SV function)

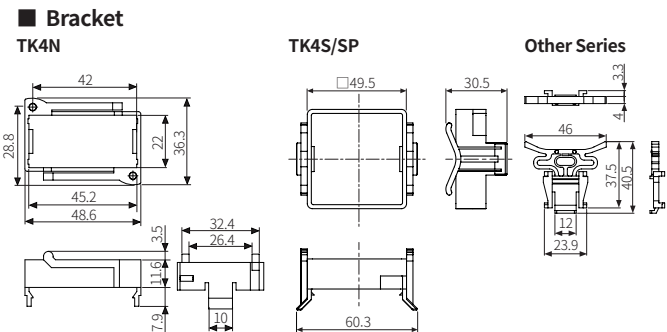
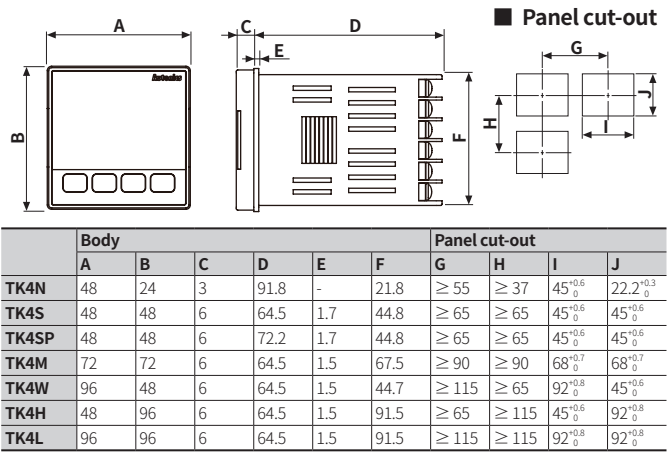
5. PC loader port:

For connecting communication converter (SCM Series).

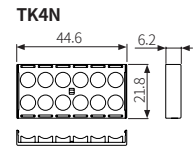
• For the details about old model, refer to the user manual. Download the manuals from the Autonics website.

Dimensions

- Unit: mm, For the detailed drawings, follow the Autonics website.
- Below is based on TK4S Series.

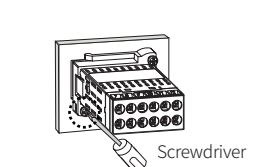


Terminal protection cover



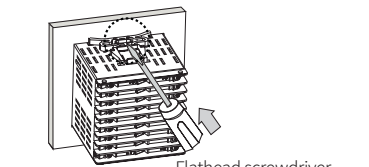
Installation Method

TK4N



After mounting the product to panel with bracket, fasten the bolts by using screwdriver.

Other Series



Insert the unit into a panel, fasten the bracket by pushing with a flathead screwdriver.

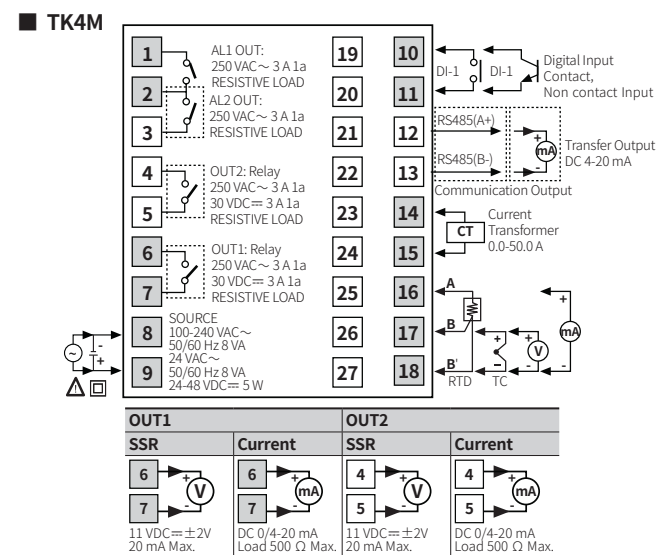
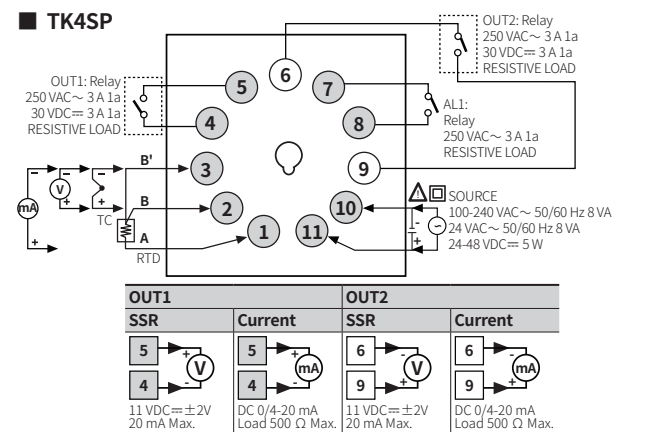
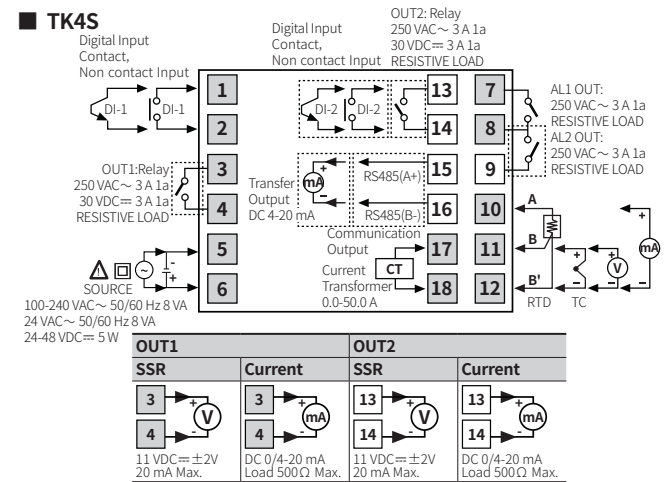
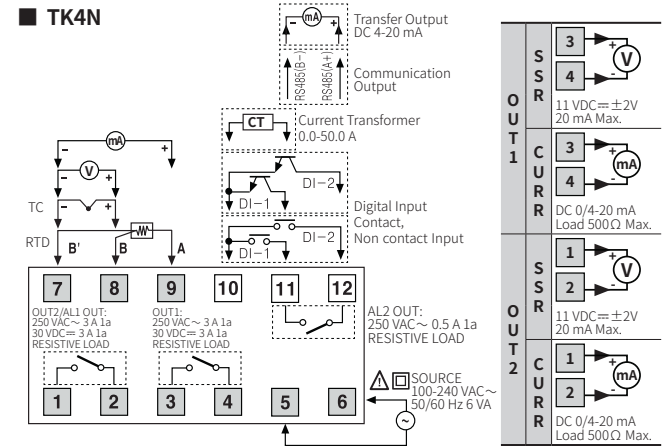
Errors

Display	Input	Description	Output	Troubleshooting
αPE n	Temperature sensor	Flashes at 0.5 sec interval when input sensor is disconnected or sensor is not connected.	'Sensor error, MV' parameter setting value	Check input sensor status.
	Analog	Flashes at 0.5 sec interval when input is over F.S. ±10%.	'Sensor error, MV' parameter setting value	Check analog input status.
HHHH	Temperature sensor	Flashes at 0.5 sec intervals if the input value is above the input range. ⁰¹⁾	Heating: 0%, Cooling: 100%	When input is within the rated input range, this display disappears.
	Analog	Flashes at 0.5 sec intervals if the input value is over 5 to 10% of high limit or low limit value.	Normal output	
LLLL	Temperature sensor	Flashes at 0.5 sec. intervals if the input value is below the input range. ⁰¹⁾	Heating: 100%, Cooling: 0%	
	Analog	Flashes at 0.5 sec intervals if the input value is over -5 to -10% of low limit or high limit value.	Normal output	
Err	Temperature sensor	Flashes at 0.5 sec intervals if there is error for setting and it returns to the error-before screen.	-	Check setting method.
	Analog			

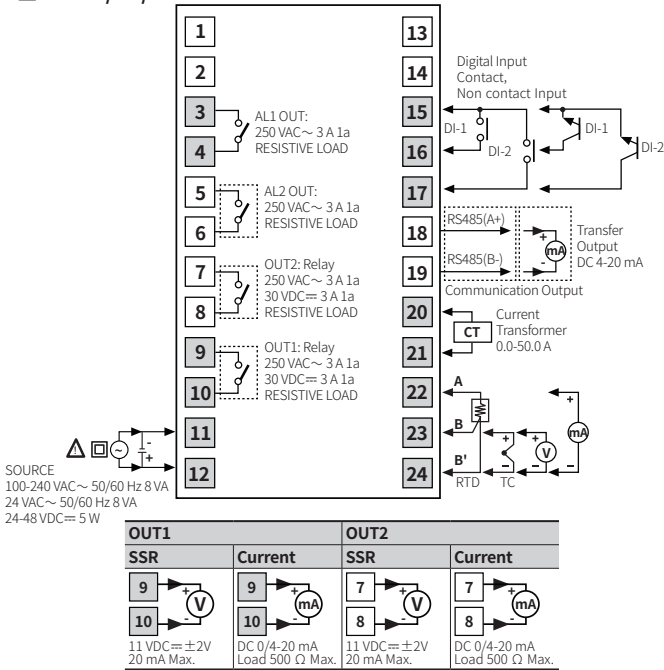
01) Be careful that when HHHH / LLLLL error occurs, the control output may occur by recognizing the maximum or minimum input depending on the control type.

Connections

- Shaded terminals are standard model.
- Digital input is not electrically insulated from internal circuits, so it should be insulated when connecting other circuits.



TK4H / W / L



Crimp Terminal Specifications

- Unit: mm, Use the crimp terminal of follow shape.

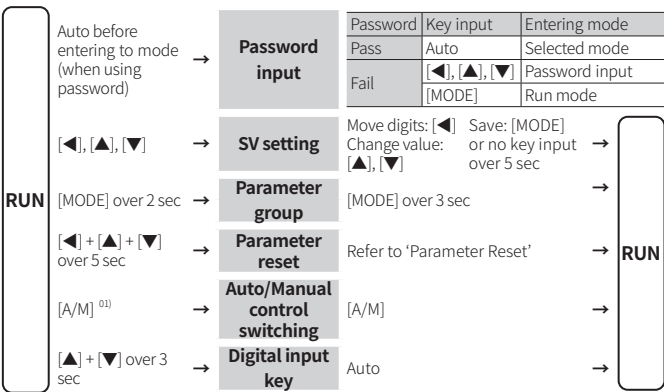


Initial Display When Power is ON

When power is supplied, after all display will flash for 1 sec, model name is displayed sequentially. After input sensor type will flash twice, enter into RUN mode.

	1. All display	2. Model	3. Input specification	4. Run mode
PV display part	8.8.8.8	ttt	ttt	αPE n
SV display part	8.8.8.8	ttt	ttt	t

Mode Setting



01) In case of TK4N / 4S / 4SP model, short press of [MODE] key replaces [A/M] key function.

Parameter Reset

- Press the [◀] + [▲] + [▼] keys for over 5 sec. in run mode, INIT turns ON.
- Change the setting value as YES by pressing the [▲] , [▼] keys.
- Press the [MODE] key to reset all parameter values as default and to return to run mode.

Parameter Setting

- Some parameters are activated/deactivated depending on the model or setting of other parameters.
- The 'Parameter mask' feature, which hide unnecessary or inactive parameters, and the 'User parameter group' feature, which quickly and easily set up certain parameters that are frequently used, can be set up in DAQMaster.
- Refer to the user manual for the details.

Parameter 1 group			Parameter 4 group		
Parameter	Display	Default	Parameter	Display	Default
Control output RUN/STOP	r - 5	r U n	Alarm output1 Operation mode	RL - 1	d u C C
Multi SV selection	5 u - n	5 u - 0	Alarm output1 Option	RL 1t	RL - R
Heater current monitoring	C t - R	0.0	Alarm output1 Hysteresis	R 1H y	0.0 1
Alarm output1 low limit	RL 1L	155.0	Alarm output1 contact type	R 1n	n o
Alarm output1 high limit	RL 1H	155.0	Alarm output1 ON delay time	R 1o n	0.0 0.0
Alarm output2 low limit	RL 2L	155.0	Alarm output1 OFF delay time	R 1o f	0.0 0.0
Alarm output2 high limit	RL 2H	155.0	Alarm output2 Operation mode	RL - 2	C J d u
Alarm output3 low limit	RL 3L	155.0	Alarm output2 Option	RL 2t	RL - R
Alarm output3 high limit	RL 3H	155.0	Alarm output2 Hysteresis	R 2H y	0.0 1
Multi SV 0	5 u - 0	0.0 0.0	Alarm output2 contact type	R 2n	n o
Multi SV 1	5 u - 1	0.0 0.0	Alarm output2 ON delay time	R 2o n	0.0 0.0
Multi SV 2	5 u - 2	0.0 0.0	Alarm output2 OFF delay time	R 2o f	0.0 0.0
Multi SV 3	5 u - 3	0.0 0.0	Alarm output3 Operation mode	RL - 3	α F F

Parameter 2 group

Parameter	Display	Default
Auto tuning RUN/STOP	R t	α F F
Heating proportional band	H - P	0 10.0
Cooling proportional band	C - P	0 10.0
Heating integral time	H - I	0.0 0.0
Cooling integral time	C - I	0.0 0.0
Heating derivative time	H - d	0.0 0.0
Cooling derivative time	C - d	0.0 0.0
Dead overlap band	d b	0.0 0.0
Manual reset	r E 5t	05.00
Heating hysteresis	H.H y 5	0.0 2
Heating OFF offset	H.o 5t	0.0 0
Cooling hysteresis	C.H y 5	0.0 2
Cooling OFF offset	C.o 5t	0.0 0
MV low limit	L - n u	-10.0 0
MV high limit	H - n u	100.0 0
RAMP up change rate	r R n u	0.0 0
RAMP down change rate	r R n d	0.0 0
RAMP time unit	r.U n t	n i n

Parameter 3 group

Parameter	Display	Default
Input specification	i n - t	tt C R H
Temperature unit	U n i t	α C
Analog low limit	L - r 0	0.0 0.0
Analog high limit	H - r 0	100.0 0
Scaling decimal point	d o t	0.0
Low limit scale	L - 5 C	0.0 0.0
High limit scale	H - 5 C	100.0 0
Display unit	d.U n t	α P o
Input correction	i n - b	0.0 0.0
Input digital filter	n R u F	0.0 0. 1
SV low limit	L - 5 u	- 2.0 0
SV high limit	H - 5 u	135.0 0

Parameter 5 group		
Parameter	Display	Default
Multi SV number	n t 5 u	1
Digital input key	d i - t	5 t α P
Digital input1 Terminal Function	d i - 1	α F F
Digital input2 Terminal Function	d i - 2	α F F
Manual control, initial MV	i t t. n u	R U t o
Manual control, preset MV	P r. n u	0.0 0.0
Sensor error MV	E r. n u	0.0 0.0
Control stop MV	S t. n u	0.0 0.0
Control stop alarm output	S t.R L	C o n t
User level	U 5 E r	5 t n d
SV setting lock	L C 5 u	α F F
Parameter 1 group lock	L C P 1	α F F
Parameter 2 group lock	L C P 2	α F F
Parameter 3 group lock	L C P 3	α F F
Parameter 4 group lock	L C P 4	α F F
Parameter 5 group lock	L C P 5	α F F
Password setting	P y d	0.0 0.0