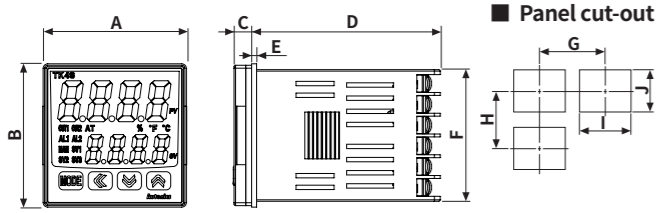


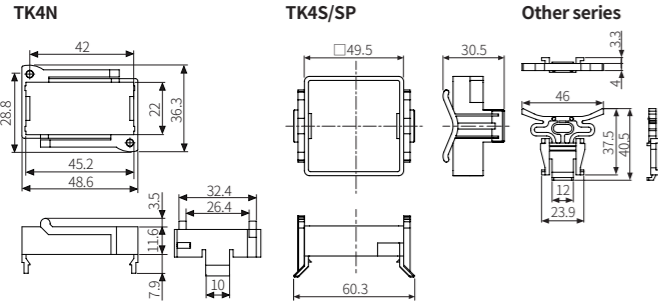
Dimensions

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

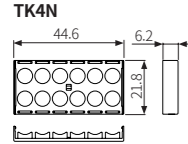


	Body					Panel cut-out				
	A	B	C	D	E	F	G	H	I	J
TK4N	48	24	3	91.8	-	21.8	≥ 55	≥ 37	45 ^{+0.6} ₀	22.2 ^{+0.3} ₀
TK4S	48	48	6	64.5	1.7	44.8	≥ 65	≥ 65	45 ^{+0.6} ₀	45 ^{+0.6} ₀
TK4SP	48	48	6	72.2	1.7	44.8	≥ 65	≥ 65	45 ^{+0.6} ₀	45 ^{+0.6} ₀
TK4M	72	72	6	64.5	1.5	67.5	≥ 90	≥ 90	68 ^{+0.7} ₀	68 ^{+0.7} ₀
TK4W	96	48	6	64.5	1.5	44.7	≥ 115	≥ 65	92 ^{+0.8} ₀	45 ^{+0.6} ₀
TK4H	48	96	6	64.5	1.5	91.5	≥ 65	≥ 115	45 ^{+0.6} ₀	92 ^{+0.8} ₀
TK4L	96	96	6	64.5	1.5	91.5	≥ 115	≥ 115	92 ^{+0.8} ₀	92 ^{+0.8} ₀

Bracket

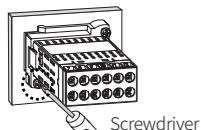


Terminal protection cover



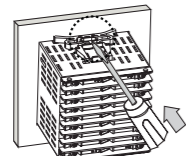
Installation Method

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.

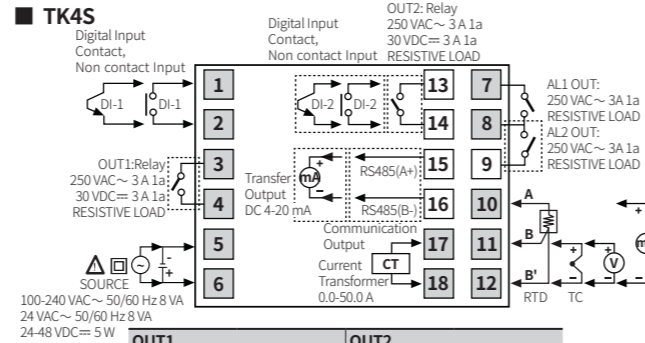
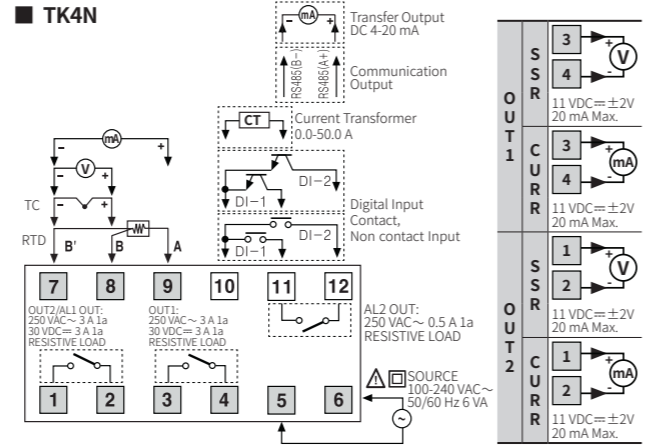
Errors

Display	Input	Description	Output	Troubleshooting
oPE 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%	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 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	-	-	-

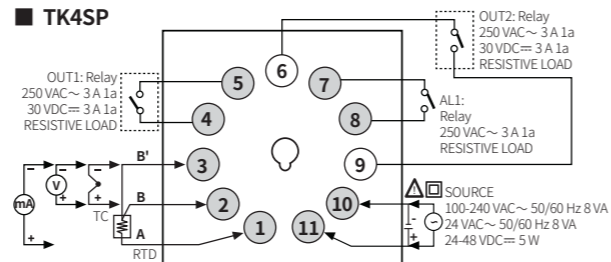
⁰¹⁾ Be careful that when HHHH / LLLLL error occurs, the control output may occur by recognizing the maximum or minimum input depending on the control type.

Connections

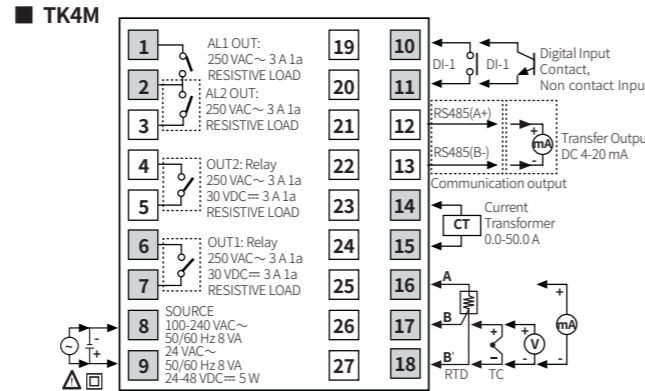
- Shaded terminals are standard model.
- Digital input is not electrically insulated from internal circuits, so it should be insulated when connecting other circuits.



OUT1	OUT2		
SSR	Current	SSR	Current
3	4	13	14
11 VDC ± 2V 20 mA Max.	DC 0/4-20 mA Load 500 Ω Max.	11 VDC ± 2V 20 mA Max.	DC 0/4-20 mA Load 500 Ω Max.

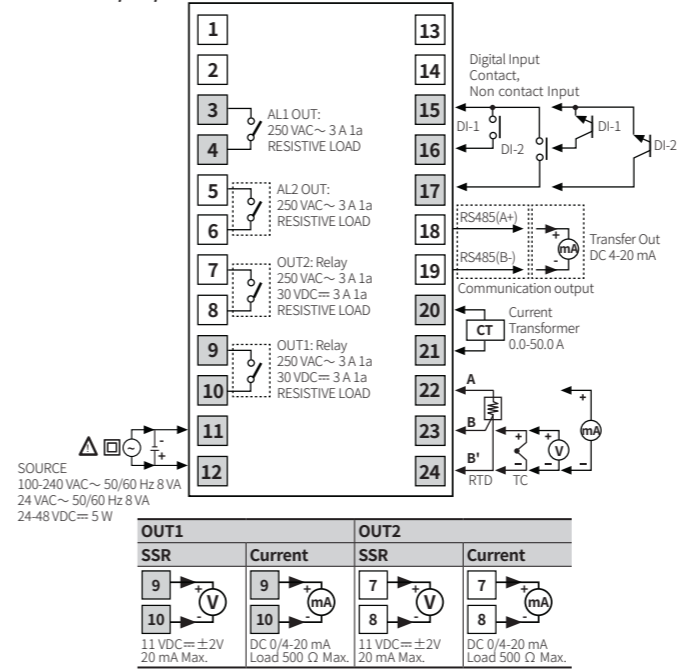


OUT1	OUT2		
SSR	Current	SSR	Current
5	4	6	9
11 VDC ± 2V 20 mA Max.	DC 0/4-20 mA Load 500 Ω Max.	11 VDC ± 2V 20 mA Max.	DC 0/4-20 mA Load 500 Ω Max.



OUT1	OUT2		
SSR	Current	SSR	Current
6	7	4	5
11 VDC ± 2V 20 mA Max.	DC 0/4-20 mA Load 500 Ω Max.	11 VDC ± 2V 20 mA Max.	DC 0/4-20 mA Load 500 Ω Max.

TK4H / W / L



OUT1	OUT2		
SSR	Current	SSR	Current
9	10	7	8
11 VDC ± 2V 20 mA Max.	DC 0/4-20 mA Load 500 Ω Max.	11 VDC ± 2V 20 mA Max.	DC 0/4-20 mA Load 500 Ω Max.

Crimp Terminal Specifications

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

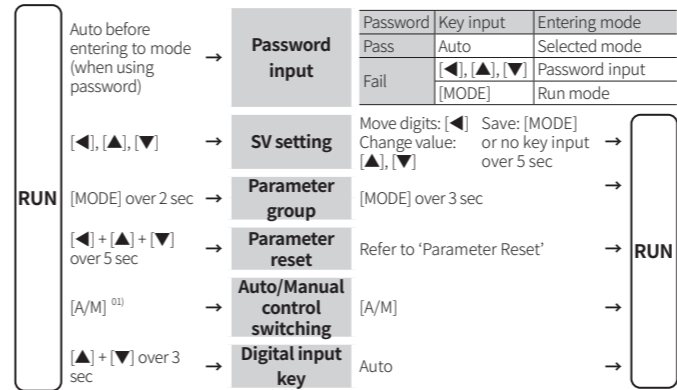


Initial Display When Power is ON

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	EEY	EEY	oPE n
SV display part	8.8.8.8	14r n	EEYH	0

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	Display	Default
Control output RUN/STOP	r - 5	r U n
Multi SV selection	5 u - n	5 u - 0
Heater current monitoring	C t - A	0 0
Alarm output1 low limit	AL L L	1 5 5 0
Alarm output1 high limit	AL L H	1 5 5 0
Alarm output2 low limit	AL L L	1 5 5 0
Alarm output2 high limit	AL L H	1 5 5 0
Alarm output3 low limit	AL L L	1 5 5 0
Alarm output3 high limit	AL L H	1 5 5 0
Multi SV 0	5 u - 0	0 0 0 0
Multi SV 1	5 u - 1	0 0 0 0
Multi SV 2	5 u - 2	0 0 0 0
Multi SV 3	5 u - 3	0 0 0 0

Parameter 4 group

Parameter	Display	Default
Alarm output1 Operation mode	RL - 1	d u C C
Alarm output1 Option	RL L t	RL - R
Alarm output1 Hysteresis	RL H Y	0 0 1
Alarm output1 contact type	R L n	n o
Alarm output1 ON delay time	R L o n	0 0 0 0
Alarm output1 OFF delay time	R L o f	0 0 0 0
Alarm output2 Operation mode	RL - 2	J J d u
Alarm output2 Option	RL L t	RL - R
Alarm output2 Hysteresis	RL H Y	0 0 1
Alarm output2 contact type	R L n	n o
Alarm output2 ON delay time	R L o n	0 0 0 0
Alarm output2 OFF delay time	R L o f	0 0 0 0
Alarm output3 Operation mode	RL - 3	o F F
Alarm output3 Option	RL L t	RL - R
Alarm output3 Hysteresis	RL H Y	0 0 1
Alarm output3 contact type	R L n	n o
Alarm output3 ON delay time	R L o n	0 0 0 0
Alarm output3 OFF delay time	R L o f	0 0 0 0
LBA time	L b R t	0 0 0 0
LBA band	L b R b	0 0 2 (0 0 3)
Analog Transmission output1 Mode	R a n 1	P u
Transmission output1 low limit	F S L 1	- 2 0 0
Transmission output1 high limit	F S H 1	1 3 5 0
Analog Transmission output2 Mode	R a n 2	P u
Transmission output2 low limit	F S L 2	- 2 0 0
Transmission output2 high limit	F S H 2	1 3 5 0
Communication address	A d r 5	0 1
Communication speed	d b P 5	9 6
Comm. parity bit	P r t y	n o n E
Comm. stop bit	S t P 2	2
Response time	r S Y t	2 0
Comm. write	C o n W	E n R

Parameter 2 group

Parameter	Display	Default
Auto tuning RUN/STOP	R t	o F F
Heating proportional band	H - P	0 1 0 0
Cooling proportional band	C - P	0 1 0 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 5 t	0 5 0 0
Heating hysteresis	H H Y 5	0 0 2
Heating OFF offset	H o 5 t	0 0 0
Cooling hysteresis	C H Y 5	0 0 2
Cooling OFF offset	C o 5 t	0 0 0
MV low limit	L - n u	+ 0 0 0
MV high limit	H - n u	1 0 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 R n t	n i n

Parameter 3 group

Parameter	Display	Default
Input specification	i n - t	EEYH
Temperature unit	U n i t	o C
Analog low limit	L - r 0	0 0 0 0
Analog high limit	H - r 0	1 0 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	1 0 0 0
Display unit	d U n t	o 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	1 3 5 0

Parameter 5 group

Parameter	Display	Default
Multi SV number	n E 5 u	1
Digital input key	d i - E	5 t o P
Digital input1 Terminal Function	d i - 1	o F F
Digital input2 Terminal Function	d i - 2	o F F
Manual control, initial MV	i E 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 S E r	5 t n d
SV setting lock	L C P 5	o F F
Parameter 1 group lock	L C P 1	o F F
Parameter 2 group lock	L C P 2	o F F
Parameter 3 group lock	L C P 3	o F F
Parameter 4 group lock	L C P 4	o F F
Parameter 5 group lock	L C P 5	o F F
Password setting	P W d	0 0 0 0