








Product Overview

LCD Display PID Control Temperature Controller [TX Series]

Series	TX4S	
Appearances & Dimensions	  	
	[W48×H48×L45mm]	
Power supply	100-240VAC 50/60Hz	
Allowable voltage range	90 to 110% of rated voltage	
Power consumption	Max. 8VA	
Display method	11-segment (PV: white, SV: green), other display (yellow) with LCD method ^{※1}	
Character size	PV(W×H)	6.9×15.3mm
	SV(W×H)	4.1×9.2mm
Input type	RTD	DPT100Ω, Cu50Ω (permissible line resistance max. 5Ω)
	TC	K(CA), J(IC), L(IC), T(CC), R(PR), S(PR)
Display accuracy	RTD	<ul style="list-style-type: none"> ●At room temperature (23°C±5°C): (PV ±0.3% or ±1°C, select the higher one) ±1-digit ●Out of room temperature: (PV ±0.5% or ±2°C, select the higher one) ±1-digit (for more information, refer to the ■ Specification)
	TC	
Control output	Relay	250VAC 3A 1a
	SSR	Max. 12VDC ± 2V 20mA
	Current	DC4-20mA or DC0-20mA (load resistance max. 500Ω)
Option output	Alarm output	AL1, AL2 Relay: 250VAC 3A 1a
	Trans. output	DC4-20mA (load resistance max. 500Ω, output accuracy: ±0.3%F.S.)
	Com. output	RS485 Communication output (Modbus RTU method)
Sampling period	50ms	
Control method		
Reference	H-11 to 25	








※1. When using the unit at low temperature (below 0°C), display cycle is slow. Control output operates normally.

2/4-CH Modular Type, PID Control Temperature Controller [TM Series]

Series	TM2	TM4	
Appearances & Dimensions	 		
	[W30×H100×L84.8mm]		
No. of channels	2 CH (insulated each channel-dielectric strength 1,000VAC)	4 CH (insulated each channel-dielectric strength 1,000VAC)	
Power supply	24VDC		
Permissible voltage range	90 to 110% of rated voltage		
Power consumption	Max. 5W (for max. load)		
Display method	None- parameter setting and monitoring is available at external devices (PC, PLC, etc.)		
Input type	Thermocouple	K(CA), J(IC), E(CR), T(CC), B(PR), R(PR), S(PR), N(NN), C(TT), G, (TT), L(IC), U(CC), Platinel II	
	RTD	JPt100Ω, DPT100Ω (permissible line resistance max. 5Ω)	
Sampling period	50ms (2CH synchronous sampling)	100ms (4CH synchronous sampling)	
Measured accuracy	Thermocouple	(PV ±0.5% or ±1°C, select the higher one) ±1-digit max. (for more information, refer to the ■ Specification)	
	RTD		
	CT input	±5% F.S. ±1-digit max.	—
Control output	Current output	±1.5% F.S. ±1-digit max.	—
	Relay	250VAC 3A 1a	—
	SSR	Max. 12VDC ±3V 30mA	Max. 22VDC ±3V 30mA
Option output	Current	Selectable DC 4-20mA or DC 0-20mA (load resistance max. 500Ω)	—
	Alarm	250VAC 3A 1a	—
Option input	Communication	RS485 communication output (Modbus RTU method)	
	CT input	0.0-50.0A (primary current measurement range) ※CT ratio=1/1000	—
Control method	Digital input	<ul style="list-style-type: none"> • Contact input: ON max. 1kΩ, OFF min. 100kΩ • Solid-state input: ON residual voltage max. 1.5V, OFF leakage current max. 0.1mA • Outflow current: Approx. 0.5mA per input 	—
	Heating, Cooling		
Reference	H-26 to 34		

Product Overview





High Performance, General-Purpose, PID Control Temperature Controller [TK Series]

Series	TK4N	TK4S	TK4SP	TK4M	TK4W	TK4H	TK4L	
Appearances & Dimensions	 [W48×H24×L91.8mm]	 [W48×H48×L64.5mm]	 [W48×H48×L72.2mm]	 [W72×H72×L64.5mm]	 [W96×H48×L64.5mm]	 [W48×H96×L64.5mm]	 [W96×H96×L64.5mm]	
	AC power	100-240VAC 50/60Hz						
Power supply	AC/DC power	—						
AC/DC power	24VAC 50/60Hz, 24-48VDC							
Allowable voltage range	90 to 110% of rated voltage							
Power consumption	AC power	Max. 6VA	Max. 8VA					
	AC/DC power	—						
AC/DC power	Max. 8VA (24VAC 50/60Hz), Max. 5W (24-48VDC)							
Display method	7 Segment (PV: red, SV: green), Other display part (green, yellow, red) LED method							
Character size	PV (W×H)	4.5×7.2mm	7.0×14.0mm	7.0×14.6mm	9.5×20.0mm	8.5×17.0mm	11.0×22.0mm	
	SV (W×H)	3.5×5.8mm	5.0×10.0mm	6.0×12.0mm	7.5×15.0mm	6.0×12.0mm	7.0×14.0mm	
Input type	RTD	JPt100Q, DPT100Q, DPT50Q, Cu100Q, Cu50Q, Nickel120Q (6 types)						
	Thermocouple	K(CA), J(IC), E(CR), T(CC), B(PR), R(PR), S(PR), N(NN), C(TT), G(TT), L(IC), U(CC), Platinel II (13 types)						
	Analog	Voltage: 0-100mV, 0-5V, 1-5V, 0-10V (4 types) / Current: 0-20mA, 4-20mA (2 types)						
Display accuracy	RTD	• At room temperature (23°C±5°C): (PV ±0.3% or ±1°C, select the higher one) ±1-digit • Out of room temperature range: (PV ±0.5% or ±2°C, select the higher one) ±1-digit ※In case of TK4SP Series, ±1°C will be added. (for more information, refer to the Specification)						
	Thermocouple	• At room temperature (23°C±5°C): ±0.3% F.S. ±1-digit, • Out of room temperature range: ±0.5% F.S. ±1-digit						
	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						
	CT input	±5% F.S. ±1-digit						
Control output	Relay	OUT1, OUT2: 250VAC 3A 1a						
	SSR	Max. 11VDC ±2V 20mA						
	Current	Selectable DC4-20mA or DC0-20mA (resistive load max. 500Ω)						
Sub output	PV transmission	DC4-20mA (resistive load 500Ω max., accuracy: ±0.3% F.S.)						
	Communication	RS485 communication output (Modbus RTU)						
Alarm output	AL1, AL2 Relay: 250VAC 3A 1a (※TK4N AL2: 250VAC 0.5A 1a (max. 125VA), TK4SP: AL1 only)							
Sampling period	50ms							
Control method	Heating, cooling	ON/OFF P PI PD PID						
	Heating&cooling	ON/OFF P PI PD PID						
Reference	H-35 to 58							








(A)	Photoelectric Sensors
(B)	Fiber Optic Sensors
(C)	Door/Area Sensors
(D)	Proximity Sensors
(E)	Pressure Sensors
(F)	Rotary Encoders
(G)	Connectors/ Connector Cables/ Sensor Distribution Boxes/Sockets
(H)	Temperature Controllers
(I)	SSRs / Power Controllers
(J)	Counters
(K)	Timers
(L)	Panel Meters
(M)	Tacho / Speed / Pulse Meters
(N)	Display Units
(O)	Sensor Controllers
(P)	Switching Mode Power Supplies
(Q)	Stepper Motors & Drivers & Controllers
(R)	Graphic/ Logic Panels
(S)	Field Network Devices
(T)	Software

Product Overview






Dual Display, PID Control Temperature Controller [TCN Series]

Series	TCN4S	TCN4M	TCN4H	TCN4L	
Appearances & Dimensions					
	[W48×H48×L64.5mm]	[W72×H72×L64.5mm]	[W48×H96×L64.5mm]	[W96×H96×L64.5mm]	
Power supply	AC power	100-240VAC 50/60Hz			
	AC/DC power	24-48VDC, 24VAC 50/60Hz			
Allowable voltage range	90 to 110% of rated voltage				
Power consumption	AC power	Max. 5VA (100-240VAC 50/60Hz)			
	AC/DC power	Max. 5VA (24VAC 50/60Hz), Max. 3W (24-48VDC)			
Display method	7 Segment (PV: red, SV: green), Other display part (green,red) LED method				
Character size	PV (W×H)	W7.0×H15.0mm	W9.5×H20.0mm	W7.0×H14.6mm	W11.0×H22.0mm
	SV (W×H)	W5.0×H9.5mm	W7.5×H15.0mm	W6.0×H12.0mm	W7.0×H14.0mm
Input type	RTD	DPT100Ω, Cu50Ω (allowable line resistance max. 5Ω per a wire)			
	Thermocouple	K(CA), J(IC), L(IC), T(CC), R(PR), S(PR)			
Display accuracy	RTD	<ul style="list-style-type: none"> • At room temperature (23°C±5°C): (PV ±0.5% or ±1°C, select the higher one) ±1-digit • Out of room temperature range: (PV ±0.5% or ±2°C, select the higher one) ±1-digit 			
	Thermocouple	<ul style="list-style-type: none"> ※For TCN4S-□-P, add ±1°C by accuracy standard. (for more information, refer to the Specification) 			
Control output	Relay	250VAC 3A 1a			
	SSR	Max. 12VDC ±2V 20mA			
Alarm output	AL1, AL2 Relay: 250VAC 1A 1a				
Sampling period	100ms				
Control method	ON/OFF P PI PD PID				
Reference	H-59 to 71				

Single Display, PID Control Temperature Controller [TC Series]







Series	TC4S	TC4SP	TC4Y	TC4M	TC4W	TC4H	TC4L
Appearances & Dimensions							
	[W48×H48×L64.5mm]	[W48×H48×L72.2mm]	[W72×H36×L77mm]	[W72×H72×L64.5mm]	[W96×H48×L64.5mm]	[W48×H96×L64.5mm]	[W96×H96×L64.5mm]
Power supply	AC power	100-240VAC 50/60Hz					
	AC/DC power	24-48VDC, 24VAC 50/60Hz					
Allowable voltage range	90 to 110% of rated voltage						
Power consumption	AC power	Max. 5VA (100-240VAC 50/60Hz)					
	AC/DC power	Max. 5VA (24VAC 50/60Hz), Max. 3W (24-48VDC)					
Display method	7 Segment (red), Other display part (green, yellow, red) LED method						
Character size (W×H)	7.0×15.0mm		7.4×15.0mm	9.5×20.0mm	9.5×20.0mm	7.0×14.6mm	11.0×22.0mm
Input type	RTD	DPT100Ω, Cu50Ω (allowable line resistance max. 5Ω per a wire)					
	Thermocouple	K(CA), J(IC), L(IC)					
Display accuracy	RTD	<ul style="list-style-type: none"> • At room temperature (23°C±5°C): (PV ±0.5% or ±1°C, select the higher one) ±1-digit • Out of room temperature range: (PV ±0.5% or ±2°C, select the higher one) ±1-digit 					
	Thermocouple	<ul style="list-style-type: none"> ※In case of TC4SP Series, ±1°C will be added. (for more information, refer to the Specification) 					
Control output	Relay	250VAC 3A 1a					
	SSR	Max. 12VDC ±2V 20mA					
Alarm output	AL1, AL2 Relay: 250VAC 1A 1a (※TC4SP, TC4Y have AL1 only.)						
Sampling period	100ms						
Control method	ON/OFF P PI PD PID						
Reference	H-72 to 85						

Dual PID Control Temperature Controller [TZN Series]

Series	TZN4S	TZN4M	TZN4W	TZN4H	TZN4L	
Appearances & Dimensions						
	[W48×H48×L90mm]	[W72×H72×L73mm]	[W96×H48×L100mm]	[W48×H96×L100mm]	[W96×H96×L100mm]	
Power supply	AC power	100-240VAC 50/60Hz				
	AC/DC power	—				
Allowable voltage range	90 to 110% of rated voltage					
Power consumption	AC power	Max. 5VA (100-240VAC 50/60Hz)	Max. 6VA (100-240VAC 50/60Hz)			
	AC/DC power	—	Max. 8VA (24VAC 50/60Hz), Max. 7W (24-48VDC) (only for TZN4M Series)			
Display method	7 Segment (PV: red, SV: green) LED method					
Character size	PV (W×H)	7.8×11.0mm	8.0×13.0mm	8.0×10.0mm	7.8×11.0mm	9.8×14.2mm
	SV (W×H)	—	5.0×9.0mm	8.0×10.0mm	5.8×8.0mm	8.0×10.0mm
Input type	RTD	DPT100Ω, JPT100Ω, 3wire (allowable line resistance max. 5Ω per a wire)				
	Thermocouple	K(CA), J(IC), R(PR), E(CR), T(CC), S(PR), N(NN), W(TT) (allowable line resistance max. 100Ω)				
	Analog	1-5VDC, 0-10VDC, DC4-20mA				
Display accuracy	F.S. ±0.3% or 3°C, select the higher one					
Control output	Relay	250VAC 3A 1c				
	SSR	Max. 12VDC ±3V 30mA				
	Current	DC4-20mA (max. load 600Ω)				
Sub output	PV transmission	—	DC4-20mA (max. load 600Ω)			
	EVENT1	250VAC 1A 1a				
	EVENT2	—	250VAC 1A 1a			
	Communication	—	RS485 (PV transmission, SV setting)			
Sampling period	0.5 sec					
Control method	ON/OFF P PI PD PIDF PIDS					
Reference	H-91 to 106					

※ AC/DC voltage type is except UL certification.

Dual PID Control Temperature Controller [TZ Series]

Series	TZ4SP	TZ4ST	TZ4M	TZ4W	TZ4H	TZ4L
Appearances & Dimensions						
	[W48×H48×L97.3mm]	[W48×H48×L98.8mm]	[W72×H72×L100mm]	[W96×H48×L100mm]	[W48×H96×L100mm]	[W96×H96×L100mm]
Power supply	AC power	100-240VAC 50/60Hz				
	AC/DC power	24VAC 50/60Hz / 24-48VDC (only for TZ4SP, TZ4ST, TZ4L)				
Allowable voltage range	90 to 110% of rated voltage					
Power consumption	AC power	Max. 5VA (100-240VAC 50/60Hz)	Max. 6VA (100-240VAC 50/60Hz)			
	AC/DC power	Max. 7VA (24VAC 50/60Hz), Max. 6W (24-48VDC)	—			Max. 8VA (24VAC 50/60Hz), Max. 7W (24-48VDC)
Display method	7 Segment (PV: red, SV: green) LED method					
Character size	PV (W×H)	4.8×7.8mm	9.8×14.2mm	8.0×10.0mm	3.8×7.6mm	9.8×14.2mm
	SV (W×H)	4.8×7.8mm	8.0×10.0mm	8.0×10.0mm	3.8×7.6mm	8.0×10.0mm
Input type	RTD	DPT100Ω, JPT100Ω, 3wire (allowable line resistance max. 5Ω per a wire)				
	Thermocouple	K(CA), J(IC), R(PR), E(CR), T(CC), S(PR), N(NN), W(TT) (allowable line resistance max. 100Ω)				
	Analog	1-5VDC, 0-10VDC, DC4-20mA				
Display accuracy	F.S. ±0.3% or 3°C, select the higher one					
Control output	Relay	250VAC 3A 1c				
	SSR	Max. 12VDC ±3V 30mA				
	Current	DC4-20mA (max. load 600Ω)				
Sub output	PV transmission	—	DC4-20mA (max. load 600Ω)			
	EVENT1	250VAC 1A 1a				
	EVENT2	—	250VAC 1A 1a			
	Communication	—	RS485 communication			
Control type	ON/OFF P PI PD PIDF PIDS					
Sampling period	0.5 sec					
Reference	H-91 to 106					

※ AC/DC voltage type is except UL certification.

(A) Photoelectric Sensors

(B) Fiber Optic Sensors

(C) Door/Area Sensors

(D) Proximity Sensors

(E) Pressure Sensors

(F) Rotary Encoders

(G) Connectors/ Connector Cables/ Sensor Distribution Boxes/Sockets

(H) Temperature Controllers

(I) SSRs / Power Controllers

(J) Counters

(K) Timers

(L) Panel Meters

(M) Tacho / Speed / Pulse Meters

(N) Display Units

(O) Sensor Controllers

(P) Switching Mode Power Supplies

(Q) Stepper Motors & Drivers & Controllers










(R) Graphic/ Logic Panels

(S) Field Network Devices

(T) Software

Product Overview

Thumwheel Switch Setting Type Temperature Controller [T3/T4 Series]

Series	T3S	T3H	T3HA	T3HS	T4M	T4MA	T4L	T4LA	T4LP
Appearances & Dimensions									
	[W48×H48×L77.8mm]	[W48×H96×L70mm]			[W72×H72×L75mm]		[W96×H96×L70mm]		
Power supply	100-240VAC 50/60Hz								
Allowable voltage range	90 to 110% of rated voltage								
Power consumption	Max. 5VA								
Display method	7-segment (red) LED method								
Character size (W×H)	3.8×7.6mm						8.0×14.2mm		
Input type	RTD	DPT100Ω (Allowable line resistance max.5Ω per a wire)							
	TC	K(CA), J(IC)			K(CA), J(IC), R (PR)				
Display accuracy*1	RTD	●At room temperature (23°C ± 5°C): (PV ± 0.5% or ±1°C, select the higher one) ±1-digit							
	TC	●Out of room temperature range: (PV ± 0.5% or ±2°C, select the higher one) ±1-digit							
Control output	Relay	OUT1: 250VAC 5A 1c, OUT2: 250VAC 2A 1c*2							
	SSR	Max. 12VDC±2V 20mA							
	Current	DC4-20mA (resistive load max. 500Ω)							
Alarm/Sub/Dual setting output	—		250VAC 2A 1c		—		250VAC 2A 1a		—
Sampling period	100ms								
Control method	ON/OFF P								
Hysteresis	F.S. 0.5%		F.S. 0.2 to 3% variable						
Proportional band	F.S. 3%		F.S. 1 to 10% variable						
Proportional cycle	20 sec								
RESET range	F.S. -3 to 3% variable								
Reference	H-107 to 115								








*1: In case of the T3S Series and the decimal point display models

At room temperature (23°C±5°C): (PV ±0.5% or ±2°C, select the higher one) ±1-digit

Out of room temperature range: (PV ±0.5% or ±3°C, select the higher one) ±1-digit

*2: Dual output of the T4LP is fixed as relay output and, it is also available as alarm output.

Temperature Indicator [T3/T4 Series]

Series	T3NI	T4YI	T4WI	T3SI	T3HI	T4MI	T4LI	
Appearances & Dimensions								
	[W48×H24×L48mm]	[W72×H36×L93mm]	[W96×H36×L100mm]	[W48×H48×L77.8mm]	[W48×H96×L70mm]	[W72×H72×L75mm]	[W96×H96×L70mm]	
Power supply	12-24VDC	100-240VAC 50/60Hz						
Allowable voltage range	90 to 110% of rated voltage							
Power consumption	Max. 1W	Max. 3VA						
Display method	7-segment (red) LED method							
Character size (W×H)	3.8×7.6mm	8.0×14.2mm		3.8×7.6mm	6.0×10.0mm		8.0×14.2mm	
Input type	RTD	DPT100Ω (Allowable line resistance max.5Ω per a wire)						
	TC	K(CA), J(IC)				K(CA), J(IC), R (PR)		
Display accuracy*1	RTD	●At room temperature (23°C ± 5°C): (PV ± 0.5% or ±1°C, select the higher one) ±1-digit						
	TC	●Out of room temperature range: (PV ± 0.5% or ±2°C, select the higher one) ±1-digit						
Sampling period	100ms							
Reference	H-116 to 121							




*1: In case of the T3NI, T3SI Series and the decimal point display models

At room temperature (23°C±5°C): (PV ±0.5% or ±2°C, select the higher one) ±1-digit

Out of room temperature range: (PV ±0.5% or ±3°C, select the higher one) ±1-digit




Product Overview

Analog, Non-Display, PID Control Temperature Controller [TA Series]

Series	TAS	TAM	TAL
Appearances & Dimensions	 [W48×H48×L66.7mm]	 [W72×H72×L64.5mm]	 [W96×H96×L64.5mm]
	Power supply	100-240VAC 50/60Hz	
Allowable voltage range	90 to 110% of rated voltage		
Power consumption	Max. 4VA		
Display method	Deviation LED (red, green), Output LED (red) method		
Setting type	Dial setting		
Setting accuracy ^{*1}	F.S. ±2% (room temperature 23°C±5°C)		
Input type	RTD	DPT100Ω (allowable line resistance max. 5Ω per a wire)	
	Thermocouple	K(CA), J(IC)	
Control output	Relay	250VAC 3A 1c	
	SSR	Max. 12VDC ±2V 20mA	
Control method	ON/OFF PID		
Sampling period	100ms		
Reference	H-86 to 90		

*1: Out of room temperature range: Below 100°C model is F.S. ±4%, over 100°C model is F.S. ±3%

Analog, Non-Display Type Temperature Controller [TOS/TOM/TOL Series]

Series	TOS	TOM	TOL
Appearances & Dimensions	 [W48×H48×L79mm]	 [W72×H72×L112mm]	 [W96×H96×L100mm]
	Power supply	100-240VAC 50/60Hz	110/220VAC 50/60Hz
Allowable voltage range	90 to 110% of rated voltage		
Power consumption	Max. 2.2VA	Max. 3VA	
Setting type	Dial setting		
Setting accuracy	F.S. ±2%		
Display method	LED ON	LED ON/OFF	
Input type	RTD	DPT100Ω	
	Thermocouple	K(CA), J(IC)	
Control output	Relay	250VAC 2A 1c	250VAC 3A 1c
	SSR	Max. 12VDC ±3V 20mA	
Control type	ON/OFF P		
Reference	H-122 to 125		

(A) Photoelectric Sensors

(B) Fiber Optic Sensors

(C) Door/Area Sensors

(D) Proximity Sensors

(E) Pressure Sensors

(F) Rotary Encoders

(G) Connectors/ Connector Cables/ Sensor Distribution Boxes/Sockets

(H) Temperature Controllers

(I) SSRs / Power Controllers

(J) Counters

(K) Timers

(L) Panel Meters

(M) Tacho / Speed / Pulse Meters

(N) Display Units

(O) Sensor Controllers

(P) Switching Mode Power Supplies

(Q) Stepper Motors & Drivers & Controllers


(R) Graphic/ Logic Panels

(S) Field Network Devices

(T) Software

Product Overview


Refrigeration Temperature Controller [TC3YF Series]

Model	TC3YF-11R ^{※1}	TC3YF-14R ^{※1}	TC3YF-21R	TC3YF-24R	TC3YF-31R	TC3YF-34R
Appearances & Dimensions	 <p> UL ^{us} (only for AC voltage type) [W72×H36×L77mm] </p>					
Power supply	12-24VDC	100-240VAC 50/60Hz	12-24VDC	100-240VAC 50/60Hz	12-24VDC	100-240VAC 50/60Hz
Allowable voltage range	90 to 110% of rated voltage					
Power consumption	Max. 8W	Max. 4VA	Max. 8W	Max. 4VA	Max. 8W	Max. 4VA
Display method	7 Segment (red) LED method					
Character size (W×H)	7.4×15.0mm					
Input type	NTC: Thermistor, RTD: DPT100Ω (customizable)					
Display range	NTC: -40.0 to 99.9°C (-40 to 212°F), RTD: -99.9 to 99.9°C (-148 to 212°F) ^{※2}					
Display accuracy	(PV ±0.5% or ±1°C, select the higher one) ±1-digit					
Control output	Compressor output (250VAC 5A 1a)		Compressor output (250VAC 5A 1a) Defrost output (250VAC 10A 1a)		Compressor output (250VAC 5A 1a) Defrost output (250VAC 10A 1a) Evaporation-fan output (250VAC 5A 1a)	
Sampling period	0.5 sec					
Control method	ON/OFF					
Reference	H-126 to 131					

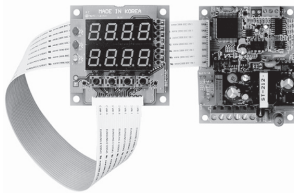
※1: It is natural defrost type without defrost function.

※2: RTD (DPT100Ω) type is customizable.




Simple Operation Type Temperature Controller [TC3YT Series]

Model	TC3YT-B4R	TC3YT-B4R16
Appearances & Dimensions	 <p> UL ^{us} [W72×H36×L77mm] </p>	
Power supply	100-240VAC 50/60Hz	
Allowable voltage range	90 to 110% of rated voltage	
Power consumption	Approx. 4VA	
Display method	7 Segment(red) LED method [Deviation "■" signal(Green), unit display(Yellow)]	
Character size (W×H)	7.4×15.0mm	
Input type	TC: K(CA), J(IC), RTD: DPT100Ω (DIN)	
Control period	1 to 120 sec	
Control output	Relay output 250VAC 3A 1c	Relay output 250VAC 16A 1c
Sampling period	500ms	
Control method	ON/OFF P	
Reference	H-132 to 137	

Board Type, Dual PID Control Temperature Controller [TB42 Series]

Model	TB42-14R	TB42-14S	TB42-14C	TB42-14N
Appearances & Dimensions	 <p>[Display part: W60×H60mm] [Controller part: W65×H78mm]</p>			
Power supply	100-240VAC 50/60Hz			
Allowable voltage range	90 to 110% of rated voltage			
Power consumption	Max. 5VA			
Display method	7 Segment (PV: green, SV: red) LED method			
Character size (W×H)	8.0×10.0mm			
Input type	RTD	DPT100Ω, JPT100Ω (allowable line resistance max. 5Ω per a wire)		
	Thermocouple	K(CA), J(IC) (tolerance of outer resistance is max. 100Ω)		
Display accuracy	F.S. ±0.5% or 3°C, select the higher one			
Output	Relay	250VAC 3A 1a	—	—
	SSR drive	—	Max. 12VDC ±3V 30mA	—
	Current	—	—	DC4-20mA (max. load 600Ω)
	Transmission	—	—	DC4-20mA (max. load 600Ω)
Sub output	Event1	Relay output (250VAC 0.5A 1a)		
	Event2	OK monitoring display by LED		
Sampling period	0.5 sec			
Control method	ON/OFF P PI PD PIDF PIDS			
Reference	H-138 to 146			

Temperature/Humidity Transducer [THD Series]

Series	THD-R-T	THD-R-PT/C	THD-R-C THD-R-V THD-R-T	THD-D□□ THD-W□□	THD-DD□□ THD-WD□□
Appearances & Dimensions	 <p>(room type)</p> <p>[W60×H80×L30.5mm]</p>	 <p>(wall mounting type)</p> <p>[W72×H85×L34.5mm]</p>		 <p>(duct mounting type)</p> <p>(wall mounting type)</p> <p>[W72×H85×L34.5mm]</p>	
Power supply	—	24VDC			
Allowable voltage range	—	90 to 110% of rated voltage			
Power consumption	—	Max. 2.4W			
Display method	—	Non-display type			7 Segment LED display
Character size (W×H)	—	—			6.2×10.0mm
Sensor type	Temperature sensor		Temperature/Humidity sensor		
Accuracy ^{※1}	Temp.	Max. ±0.8°C	±1.0°C (at room temperature)		
	Humidity	—	±3%RH (30 to 70%RH, at room temp.), ±4%RH (10 to 90%RH)		Typ. ±2%RH (10 to 90%RH, at room temp.) ※Max. ±2.5%RH
Output	Temp.	DPT100Ω resistance value (TCR: 3850ppm/°C)		DC4-20mA (allowable impedance: max. 600Ω), 1-5VDC, RS485 communication (Modbus RTU)	
	Humidity	—			
Resolution	—	1/1000			
Sampling period	—	0.5 sec			
Reference	H-147 to 153				


※1: • Room temperature is 23°C±5°C.

- It may cause degree of degradation when this unit is exposed to organic chemicals such as alcohol gas or sulfuric acid.
- It may cause degree of degradation for humidity when using this unit at high temperature/humidity environment for a long time.
- It may cause error of humidity value when this unit is exposed to high humidity environment (over 80%RH) for a long time.


(A)	Photoelectric Sensors
(B)	Fiber Optic Sensors
(C)	Door/Area Sensors
(D)	Proximity Sensors
(E)	Pressure Sensors
(F)	Rotary Encoders
(G)	Connectors/ Connector Cables/ Sensor Distribution Boxes/Sockets
(H)	Temperature Controllers
(I)	SSRs / Power Controllers
(J)	Counters
(K)	Timers
(L)	Panel Meters
(M)	Tacho / Speed / Pulse Meters
(N)	Display Units
(O)	Sensor Controllers
(P)	Switching Mode Power Supplies
(Q)	Stepper Motors & Drivers & Controllers
(R)	Graphic/ Logic Panels
(S)	Field Network Devices
(T)	Software

Product Overview

5-CH Temperature Indicator [T4WM Series]

Series	T4WM
Appearances & Dimensions	 [W96×H48×L100mm]
Power supply	110/220VAC 50/60Hz
Allowable voltage range	90 to 110% of rated voltage
Power consumption	Max. 3VA
Display method	7 Segment (red) LED method
Character size (W×H)	9.8×14.2mm
Input type	Thermocouple: K(CA), J(IC) / RTD: DPt100Ω
Display accuracy	F.S. ±0.5% rdg ±1-digit
Input line resistance	Thermocouple: Max. 100Ω / RTD: Allowable line resistance max. 5Ω per a wire
Connectable sensors	5 (thermocouple, RTD are not used as mixed)
Switching CH	Selectable manual/auto
Auto switching time	1 to 10 sec variable (includes adjuster)
Reference	H-154 to 156

2-CH USB Temperature Data Logger [SCM-USU2I]

Model	SCM-USU2I	
Appearances & Dimensions	 [W45×H25.3×L80mm]	
Power supply	USB bus power(5VDC)	
Permissible voltage range	90 to 110% of rated voltage	
Communication method	USB	
Protocol	Modbus RTU	
Display method	Check via PC Software (DAQMaster)	
Input type	RTD	DPt100Ω, DPt50Ω, JPt100Ω, Cu100Ω, Cu50Ω, Nickel120Ω
	Thermocouple	K(CA), J(IC), E(CR), T(CC), B(PR), R(PR), S(PR), N(NN), C(TT), G(TT), L(IC), U(CC), Platinel II
	Analog	Voltage: -60-60mV, 0-200mV, 0-1V, 1-5V, 0-5V, 0-10V Current: 0-20mA, 4-20mA
Display accuracy※1	RTD	●At room temperature range (23°C±5°C) : (PV ±0.3% or ±1°C, select the higher one) ±1-digit ●Out of room temperature range : (PV ±0.5% or ±2°C, select the higher one) ±1-digit
	Thermocouple	●At room temperature range (23°C±5°C) : ±0.3% F.S. ±1-digit ●Out of room temperature range : ±0.5% F.S. ±1-digit
	Analog	●At room temperature range (23°C±5°C) : ±0.3% F.S. ±1-digit ●Out of room temperature range : ±0.5% F.S. ±1-digit
Sampling period	50ms (2-CH simultaneous sampling)	
Reference	H-157 to 165	

※1: ◎ At room temperature range (23°C±5°C)

- Below -100°C of thermocouple K, J, T, N, E, and L, U, PLII, RTD Cu50Ω, DPt50Ω
: (PV ±0.3% or ±2°C, select the higher one) ±1-digit
- Below 200°C of thermocouple C, G and R, S
: (PV ±0.3% or ±3°C, select the higher one) ±1-digit
- Below 400°C of thermocouple B does not have accuracy standard.

◎ Out of room temperature range

- RTD Cu50Ω, DPt50Ω: (PV 0.5% or ±3°C, select the higher one) ±1-digit
- Thermocouple R, S, B, C, G, L, U: (PV ±0.5% or ±5°C, select the higher one) ±1-digit
- Below -100°C of other sensors: within ±5°C