

Product Overview

PID control temperature controller

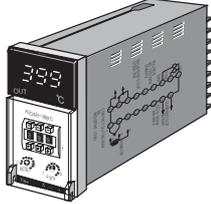
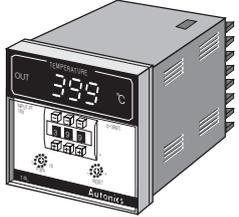
Model	TZN4S	TZN4M	TZN4H	TZN4W	TZN4L
Appearances & Dimensions	 [W48×H48×L90mm]	 [W72×H72×L85mm]	 [W48×H96×L100mm]	 [W96×H48×L100mm]	 [W96×H96×L100mm]
Functions	<ul style="list-style-type: none"> ●Multi-input function:13 kinds of multi-input mode ●Dual PID auto tuning function ●High display accuracy : ±0.3% (by F • S value of each input) ●Dual PID function:Selection function of PIDF (for high speed control), PIDS (for low speed control) 				
Power supply	100-240VAC 50/60Hz, 24VAC 50/60Hz / 24-48VDC (Only for TZN4M series)				
Allowable voltage range	90 ~ 110% of rated voltage				
Power consumption	Approx. 5VA	Approx. 6VA (Low voltage type AC:8VA, DC:7W)			
Display type	7Segment LED display [Process value (PV):Red, Setting value (SV):Green]				
Indicating accuracy	F • S ±0.3% or 3℃ (Higher one)				
Setting method	Setting by front push buttons				
Input	Thermocouple	K (CA), J (IC), R (PR), E (CR), T (CC), S (PR), N (NN), W (TT)			
	RTD	Pt100Ω			
	Analog	1-5VDC, 0-10VDC, DC4-20mA			
Control output	Relay	250VAC 3A 1c			
	SSR	12VDC ±3V 30mA Max.			
	Current	DC4-20mA Load 600Ω Max.			
Sub output	Transmission	DC4-20mA Load 600Ω Max. (PV transmission.)			
	SUB	Event1 250VAC 1A 1a	Event1, Event2 250VAC 1A 1a		
Communication function	RS485 (PV transmission, SV setting)				
Control type	ON/OFF P PI PD PIDF PIDS				
Reference	C-7-22				

PID control temperature controller

Model	TZ4SP	TZ4ST	TZ4H	TZ4M	TZ4W	TZ4L
Appearances & Dimensions	 [W48×H48×L95mm]	 [W48×H48×L95mm]	 [W48×H96×L100mm]	 [W72×H72×L100mm]	 [W96×H48×L100mm]	 [W96×H96×L100mm]
Functions	<ul style="list-style-type: none"> ●Multi-input function:13 kinds of multi-input mode ●Dual PID auto tuning function ●High display accuracy : ±0.3% (by F • S value of each input) ●Dual PID function:Selection function of PIDF (for high speed control), PIDS (for low speed control) 					
Power supply	100-240VAC 50/60Hz, 24VAC 50/60Hz / 24-48VDC (Only for TZ4SP, TZ4ST, TZ4L)					
Allowable voltage range	90 ~ 110% of rated voltage					
Power consumption	5VA	Approx. 6VA (Low voltage type AC:8VA, DC:7W)				
Display type	7Segment LED display [Process value (PV):Red, Setting value (SV):Green]					
Indicating accuracy	F • S ±0.3% or 3℃ (Higher one)					
Setting method	Setting by front push buttons					
Input	Thermocouple	K (CA), J (IC), R (PR), E (CR), T (CC), S (PR), N (NN), W (TT)				
	RTD	Pt100Ω				
	Analog	1-5VDC, 0-10VDC, DC4-20mA				
Control output	Relay	250VAC 3A 1c				
	SSR	12VDC ±3V 30mA Max.				
	Current	DC4-20mA Load 600Ω Max.				
Sub output	Transmission	DC4-20mA Load 600Ω Max. (PV transmission)				
	SUB	EVENT1 250VAC 1A 1a	EVENT1, EVENT2 250VAC 1A 1a			
Communication function	RS485 (PV transmission, SV setting)					
Control type	ON/OFF P PI PD PIDF PIDS					
Reference	C-7-22					

Product Overview

Temperature controller with digital switch setting type(Standard type)

Series	T3S	T3H	T4M	T4L
Appearances & Dimensions	 [W48×H48×L100mm]	 [W48×H96×L146mm]	 [W72×H72×L112mm]	 [W96×H96×L100mm]
Function	●Standard type ●DIN standardized External size ●Measuring and controlling high accuracy ±0.5%			
Power supply	100–240VAC 50/60Hz		110/220VAC 50/60Hz	
Allowable voltage range	90 ~ 110% of rated voltage			
Power consumption	5VA		3VA	
Display type	7Segment LED Display			
Display accuracy	F · S ± 1% rdg ± 1digit		F · S ± 0.5% rdg ± 1digit	
Setting type	Digital switch setting			
Setting accuracy	F · S ± 1%		F · S ± 0.5%	
Input	Thermocouple	K (CA), J (IC)		K (CA), J (IC), R (PR)
	RTD	Pt100Ω		
Control output	Relay	250VAC 2A 1c	250VAC 3A 1c	
	SSR	12VDC ±2V 20mA Max.	24VDC ±3V 20mA Max.	
	Current output	DC4=20mA Load 600Ω Max.		
Control type	ON/OFF P			
Reference	C-23~27			

(A) Counter

(B) Timer

(C) Temp. controller

(D) Power controller

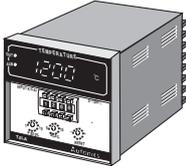
(E) Panel meter

(F) Tacho/Speed/Pulse meter

(G) Display unit

(H) Sensor controller

Temperature controller with digital switch setting type(Includes alarm function)

Series	T3HS	T3HA	T4MA	T4LA	T4LP
Appearances & Dimensions	※SUB output type  [W48×H96×L146mm]	 [W48×H96×L146mm]	 [W72×H72×L125mm]	 [W96×H96×L118mm]	※Dual setting type  [W96×H96×L118mm]
Function	●Catapult, Auto soldering machine, Includes SUB output of solder port control(T3HS Type) ●High accuracy: 0.5% ●Controlling heater and cooler at once(Dual setting type)				
Power supply	110/220VAC 50/60Hz				
Allowable voltage range	90 ~ 110% of rated voltage				
Power consumption	3VA				
Display type	7Segment LED Display				
Display accuracy	F · ± 0.5% rdg ± 1digit				
Setting type	Digital switch setting				
Setting accuracy	F · S ± 0.5%				
Input	Thermocouple	K (CA), J (IC)		K (CA), J (IC), R (PR)	
	RTD	Pt100Ω			
Control output	Relay	250VAC 3A 1c			
	SSR	24VDC ±3V 20mA Max.			
	Current output	DC4=20mA Load 600Ω Max.			
Sub output	Alarm	Alarm Out : 250VAC 1A 1a			
	SUB	250VAC 1A 1a			
Control type	ON/OFF P				
Reference	C-28~32				C-33~36

(I) Switching power supply

(J) Proximity sensor

(K) Photo electric sensor

(L) Pressure sensor

(M) Rotary encoder

(N) Stepping motor & Driver & Controller

(O) Graphic panel

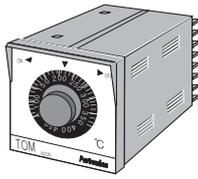
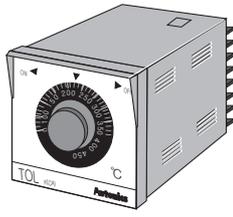
(P) Production stoppage models & replacement

Product Overview

Digital temperature Indicator

Series	T3NI	T4YI	T4WI	T3SI	T4MI	T3HI	T4LI
Appearances & Dimensions	 [W48×H24×L52mm]	 [W72×H36×L100mm]	 [W96×H48×L112mm]	 [W48×H48×L100mm]	 [W72×H72×L125mm]	 [W48×H96×L146mm]	 [W96×H96×L118mm]
Function	<ul style="list-style-type: none"> ●Indicator (No output function) ●High accuracy measurement: 0.3% or 0.5% ●Small size 			<ul style="list-style-type: none"> ●Indicator (No output function) ●High accuracy measurement : 0.5% 			
Power supply	12-24VDC	100-240VAC 50/60Hz	110/220VAC 50/60Hz	100-240VAC 50/60Hz	110/220VAC 50/60Hz		
Allowable voltage range	90 ~ 110% of rated voltage						
Power consumption	2W	3VA		5VA	3VA		
Display type	7Segment LED Display						
Display accuracy	F · S ± 0.3% rdg ± 1digit	F · S ± 0.5% rdg ± 1digit		F · S ± 1% rdg ± 1digit	F · S ± 0.5% rdg ± 1digit		
Input	Thermocouple	K(CA), J(IC)		K(CA), J(IC)	K(CA), J(IC), R(PR)	K(CA), J(IC)	K(CA), J(IC), R(PR)
	RTD	Pt100Ω					
Reference	C-37~41						

Analog temperature controller(Non-indicating type)

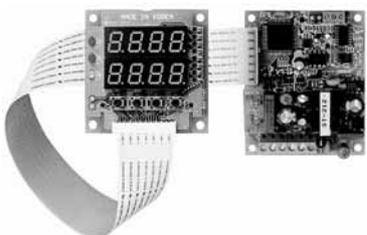
Series	TOS	TOM	TOL
Appearances & Dimensions	 [W48×H48×L92mm]	 [W72×H72×L132mm]	 [W96×H96×L121mm]
Function	<ul style="list-style-type: none"> ●Non-indicating type ●8pin plug type 	<ul style="list-style-type: none"> ●Non-indicating type (TOM, TOL) ●Setting temperature by dial 	
Power supply	110/220VAC 50/60Hz		
Allowable voltage range	90 ~ 110% of rated voltage		
Power consumption	2VA	3VA	
Display type	LED ON display	LED ON/OFF display	
Display accuracy	—		
Setting type	Dial setting		
Setting accuracy	F · S ± 2%		
Input	Thermocouple	K(CA), J(IC)	
	RTD	Pt100Ω	
Control output	Relay	250VAC 2A 1c	250VAC 3A 1c
	SSR	12VDC ± 3V 20mA Max.	
Control type	ON/OFF P		
Reference	C-42~45		

Product Overview

Cooling/defrost temperature controller

Series	TC3YF-14R	TC3YF-24R	TC3YF-34R
Appearances & Dimensions	 <p>[W72×H36×L77mm]</p>		
Functions	<ul style="list-style-type: none"> ●Manual/automatic defrost ●Input correction 	<ul style="list-style-type: none"> ●Start delay of compressor ●Error display 	<ul style="list-style-type: none"> ●Delay of defrost end ●Loop break alarm
Power supply	100-240VAC 50/60Hz		
Display type	7Segment LED Display (Red)		
Input sensor	NTC : Thermistor, RTD : DIN Pt100Ω (Option)		
Indication method	NTC : -40.0~99.9℃, RTD : -99.9 ~ 99.9℃ (Option)		
Display accuracy	[PV ±0.5% or ±1℃ Max.] rdg ±1digit		
Sampling period	Min. 0.5sec		
Output	Compressor	250VAC 5A 1a	
	Defrost	_____	250VAC 10A 1a
	Evaporation-fan	_____	250VAC 5A 1a
Memory protection	Approx. 10 years(When using non-volatile semiconductor memory)		
Control type	ON/OFF P		
Reference	C-46~51		

Board type PID control temperature controller

Series	TB42	
Appearances & Dimensions	 <p>[Display part : W60×H60mm] [Controller part : W65×H78mm]</p>	
Function	<ul style="list-style-type: none"> ●High quality and Economical type(Enable to add functions) ●Convenient and suitable for various place and purpose ●Enable to change the dimension of display board 	
Power supply	100-240VAC 50/60Hz	
Allowable voltage range	90 ~ 110% of rated voltage	
Power consumption	Approx. 5VA	
Display type	7 Segment LED Display [Processing value(PV) : Green, Setting value(SV) : Red]	
Display accuracy	F • S ±0.5% or 3℃ (High one)	
Setting type	Setting by front push buttons	
Input	Thermocouple	K(CA), J(IC)
	RTD	Pt100Ω
Control output	Relay	250VAC 3A 1a
	SSR	12VDC ±3V 30mA Max.
	Current	DC4-20mA Load 600Ω Max.
Sub output	Transmission	DC4-20mA Load 600Ω Max.
	Event1	250VAC 0.5A 1a
Control type	ON/OFF P PI PD PIDF PIDS	
Reference	C-52~53	

- (A) Counter
- (B) Timer
- (C) Temp. controller
- (D) Power controller
- (E) Panel meter
- (F) Tacho/Speed/Pulse meter
- (G) Display unit
- (H) Sensor controller
- (I) Switching power supply
- (J) Proximity sensor
- (K) Photo electric sensor
- (L) Pressure sensor
- (M) Rotary encoder
- (N) Stepping motor & Driver & Controller
- (O) Graphic panel
- (P) Production stoppage models & replacement

Product Overview

Temperature/Humidity transducer(Room type)

Model	THD-R-C	THD-R-V	THD-R-T	THD-R-PT/C	THD-R-RT
Appearances & Dimensions	 [W60×H80×L33.5mm]				
Display type	Non-indicating type				—————
Power supply	24VDC ±10%				—————
Power consumption	Max. 2.4W				—————
Measuring input	Temperature, Humidity (Built-in sensor)				Temperature (Built-in sensor)
Output accuracy	Temp.	• DC4-20mA • 1-5VDC • RS485 (MODBUS RTU)		Temperature sensor (Pt100Ω) resistance value	
	Humidity			DC4-20mA	—————
Measurement range	Temp.	-19.9 ~ 60.0℃		0 ~ 50℃	
	Humidity	0.0~99.9%RH (Be cautious of using in over 90%RH of humidity)			
Accuracy	Temp.	5.0~40.0℃:±0.5℃, 40~60.0℃:±1℃		Max. ±0.8℃ (0~50℃)	
	Humidity	Max. ±3%RH at 30~70%RH (at 25~45℃)			
Sampling period	0.5sec fixed				—————
Reference	C-54-59				

Temperature/Humidity transducer(Duct mounting/Wall mounting type)

Model	Duct mounting type	THD-D□-C	THD-D□-V	THD-D□-T	THD-DD□-C	THD-DD□-V	THD-DD□-T
	Wall mounting type	THD-W□-C	THD-W□-V	THD-W□-T	THD-WD□-C	THD-WD□-V	THD-WD□-T
Appearances & Dimensions	 [Duct Mounting type] [Wall Mounting type]				 [Duct Mounting type] [Wall Mounting type]		
	[W72×H85]				[W72×H85]		
Display type	Non-indicating type				7 Segment LED Display (3digit for temperature, humidity)		
Power supply	24VDC ±10%						
Power consumption	Max. 2.4W						
Input	Built-in temperature, humidity sensor						
Length of sensor pole	1:100mm, 2:200mm						
Output accuracy	Temp.	DC4-20mA	1-5VDC	RS485 (MODBUS RTU)	DC4-20mA	1-5VDC	RS485 (MODBUS RTU)
	Humidity						
Measurement range	Temp.	19.9 ~ 60.0℃					
	Humidity	0.0 ~ 99.9%RH					
Accuracy	Temp.	5.0~40.0℃ Max. ±0.5℃ (Max. ±1.0℃ for other term)					
	Humidity	Max. ±3%RH at 30~70%RH (at 25~45℃)					
Sampling period	0.5sec fixed						
Reference	C-54-59						

Product Overview

5 Point temperature indicator

Series	T4WM	
Appearances & Dimensions	 <p>[W96×H78×L99.6mm]</p>	
Function	<ul style="list-style-type: none"> ●5 Point temperature measurement ●High accuracy measurement : F • S ±0.5% ●Automatic or manual display of temperature in each point ●Indication type only 	
Power supply	100-240VAC 50/60Hz	
Allowable voltage range	90 ~ 110% of rated voltage	
Power consumption	Approx. 3VA	
Display type	7 Segment LED Display	
Display accuracy	F • S ±0.5%	
Setting type	—————	
Input sensor	Thermocouples : K(CA), J(IC), RTD : Pt100Ω	
Input line resistance	Thermocouples : Max. 100Ω, RTD : Max. 5Ω per a wire	
Available sensor quantity	Thermocouple : Max. 5pcs, RTD : Max. 5pcs	
Auto switching method	SELECT button type	
Auto switching time	1~10sec variable (Includes adjuster)	
Reference	C-60~62	

(A) Counter

(B) Timer

(C) Temp. controller

(D) Power controller

(E) Panel meter

(F) Tacho/Speed/Pulse meter

(G) Display unit

(H) Sensor controller

(I) Switching power supply

(J) Proximity sensor

(K) Photo electric sensor

(L) Pressure sensor

(M) Rotary encoder

(N) Stepping motor & Driver & Controller

(O) Graphic panel

(P) Production stoppage models & replacement

Converter Module(RS232C ↔ RS485 convertable)

Series	SCM-38I	
Appearances & Dimensions	 <p>[W39×H23×L75.5mm]</p>	
Power supply	12-24VDC	
Allowable voltage range	90 ~ 110% of rated voltage	
Power consumption	Approx. 1.7W	
Communication speed	1200~115200bps(1200/2400/4800/9600/12800/25600/56700/115200)	
Communication type	Half duplex type	
Available communication distance	Max. 800m	
Multi-Drop	Max. 32 Multi-drop	
Data type	Data Bit	5~ 8 Data Bits
	Stop Bit	1 or 2 Stop Bits
	Parity Bit	No/Odd/Even Parity Bit
Connection type	RS232C	D-Sub 9Pin
	RS485	4-wire Screw terminal(2 wires communication type)
Reference	C-63~65	