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Digital temperature programmable controller TTM – 30X or TTM - PX

No. programs = Patterns x Steps = max. 64

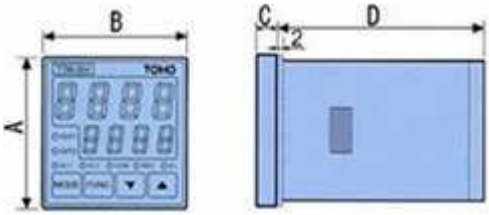
Technical specification :

Input	Thermocouple	K , J , T , R , N , B (JIS 1602 ~ 1995)
	RTD	Pt 100 , JPt 100 (resistance load 10Ω)
Indication	PV – process value	7 – segments green, 4digit, height 10mm
	SV – setting value	7 - segments red, 4 digit, height 8mm
	Lamp	LED red : RUN , OUTPUT LED green : UP, DOWN
Control method	PID/ PID FUZZY (Auto - tuning)	Proportional band P 0.1 - 200.0% of scale
		Integration time I 1 - 3600 sec (0 : OFF)
		Differentiation time D 1 - 3600 sec (0 : OFF)
		Proportion cycle T 1-120 sec
	ON / OFF	Control sensitivity C 0-999 or 0.0 - 999.9 (℃)
Control output (only one)	Relay	250Vac , 3A (resistive load)
	Voltage - SSR	0 - 12Vdc (resistance load ≥ 600)
	Voltage	1 - 5 V , 0 - 10 V (resistance load ≥ 1 K)
	Current	4 - 20 mA (resistance load ≥ 600)
Sampling time		0.5 sec (output change period is the same)
Accuracy indication	Thermocouple	±(0.3% + 1 digit) or ± 2℃ of PV (Am bient temperature : 23±10 ℃)
	RTD	±(0.3% + 1 digit) or ± 0.9℃ of PV (Ambient te mperature : 23± 10℃)
Power supply		85Vac - 240Vac (50 /60 Hz) or 24v ± 10% AC / DC
Size and weight		TTM-304, TTM P4 : 48x48mm ~ 170g , TTM-305 : 96x48mm ~ 230g , TTM-309, TTM P9 : 96x96mm ~ 300g
Power consumption		< 12VA at 240 Vac , 8VA at 24Vac and 5W at 24Vdc
Operating condition		0 - 50℃ , 20 - 90% RH
Storage condition		-25 - 70℃, 5 - 95% RH
Functions	Setting limiter	- 1 0.0 + 100.0% (for relay output and SSR: 0.0+100.0%)
	Control method	PID FUZZY ↔ PID ↔ ON/OFF , Direct ↔ Reverse
	PV correction	-199-999 or -199.9-999.9 (℃)
	Decimal point	Available
	Priority screen	Only 9 parameters for display
	Lock function	No. 4 :None, All, Lock operation , Lock except operation mode
	Self diagnostic	Data check of FRAM (ErrO) , check converter A / D (Err1)
	Programming	No. programs x No. intervals = max. 64
	Timer diving mode	0 + 99 hours and 59 min. (step increment : 1min.)
Option functions	Alarm 1 (AL1) or alarm 2 (A L 2)	Contact selectable polarity. Functions: contact output PV or 8 additional functions Range : -199.9 - 999.9 or -1999 - 9999 (℃) Sensitivity : 0.0 - 999.9 or 0 - 9999 (℃) Relay : 250 Vac 0.5 A or 125 Vac 1 A (resistance load)
	Input RUN	If input OFF : RUN , when input ON : STOP Voltage at OFF : 32Vdc and current at ON : 6mA max.
	Communication	RS 485 : multi node (1 :31 modules) Parameters : active/ inactive, 7 bits / 8 bits, no. Par / Odd, bit stop 1/2 Baud rate : 1200 / 2400 / 4800 / 9600 / 1 9200 bps Address : 1 to 9 ; delay response : 0 la 500msec.

Order code : TTM - □□□ - □ - □ - □ - □ ; TTM - P□ - 0 - □

Type	304	48 x 48 mm		
	P4	48 x 48 mm		
	305	96 x 48 mm		
	309	96 x 96 mm		
	P9	96 x 96mm		
Input	0	TTC (K, J, T, R, N, S); (K, J, R) for TTM - PX		
	1	RTD (Pt 100, JPt 100)		
Output TTM - PX	R	Relay		
	P	12 Vdc for SSR		
Output TTM – 30X	N	None		
	F	Voltage : 1 ÷ 5Vdc		
	G	Voltage : 0 ÷ 10Vdc		
	R	Relay		
	P	12Vcc for SSR		
	I	Current 4 ÷ 20mA		
Option	A	Alarm A1 (Al 1) on relay		
	B	Alarm A1 (Al 1) on relay		
	E	Input RUN		
	M	Communication RS - 485		
Power supply		85 ÷ 264Vac		
	24	24Vac/dc		

Dimension (mm) :



	A	B	C	D
TTM – 304	48	48	8	100
TTM – 305	96	48	11	80
TTM – 309	96	96	11	80

	A	B	C	D
TTM – P4	48	48	6	77
TTM – P9	96	96	9	77

Our company can execute any model of thermocouple or RTD.