

ISO-9001 : 2008 CERTIFIED COMPANY

TEMPERATURE INDICATING CONTROLLER MODEL - 200-1T

APPLICATION

Automat Temperature Indicating Controller indicate and control a process variable by converting its temperature change into mechanical displacement of a bellows through change in expansion of liquid-fill by temperature or change in gas-fill pressure by temperature.

The controllers are available either in the local type to set the set-point value with the knob on the instrument or in the remote type to set the set-point value with a pneumatic set-point signal.



FEATURES

1. A wide variety of measuring elements and control mechanisms are available to meet various applications.
2. A pneumatic circuit board and a heat - resistant weatherproof sturdy case are used, thereby greatly improving durability and reliability.
3. The pneumatic circuit board system allows to readily add or eliminate control mechanisms and units, thereby enhancing the system modification and expansion flexibility.
4. Interchangeable parts are used to the maximum practicable extent, thereby the number of parts to be kept in stock.
5. A bellows type pressure receiving element, which provides a larger torque and a higher resistance against vibration, is employed.
6. A compensation mechanisms for ambient temperature change is incorporated.



TECHNICAL SPECIFICATION

ITEM	SPECIFICATIONS			
	Special Range :		(deg. C)	
Measuring Range	Special Range (see note):		(deg. C)	
	Span	Range	Span	Range
	50	0 to 50, 50 to 100	50	-20 to 30, 20 to 70
	100	-50 to 50, 0 to 100, 100 to 200	60	-10 to 50
	150	-50 to 65, 0 to 150	80	-15 to 65, 0 to 80
	200	0 to 200, 100 to 300	100	50 to 150
	300	0 to 300, 100 to 400 (*)	120	-20 to 100, 0 to 120
	400	0 to 400 (*)	150	50 to 200
	500	0 to 500 (*)	200	-50 to 150, 50 to 250
			250	-50 to 200, 0 to 250
		300	-50 to 250	
	Note) *..... Gas-fill type (nitrogen) Others..... Liquid-fill type (kerosene)		Note) *..... Gas-fill type (nitrogen) Others..... Liquid-fill type (kerosene)	
Measuring Range	Maximum temperature plus 20% of span.			
Material	Bulb : SS 304	Armored tube: SS 304		
	Capillary tube : SS 304	Pressure element : Phosphor bronze bellows		
Capillary tube length	5 m standard (6-9 m available in 1 m increments and 12 to 30 m in 2 m increments)			
Indicating capacity	+/- 1% FS			
Repeatability	Within 0.3% FS			
Dead band	Within 0.2% FS			
Angle	44 degrees			
Scale length	150 mm			
Pointer	Process variable : Red, Set point Value : Green			
Output indicator	Scale range: 0 to 2 kg/cm ² , Indicator accuracy: +/- 3% FS			
Local setting	Internal or External setting by setting knob			
Remote setting	Pneumatic pressure setting of 0.2 to 1.0 kgf/cm ²			
Setting range	0 to 100% FS			
Control action	P+Manual reset, PI, PID, PD+Manual reset, PI+Batch, On-Off, Differential gap, P+External reset, PD+External reset			
Proportional band (P)	5-500%			
Integral (I)	0.05 to 30 min			
Derivative (D)	0.05 to 30 min			
Differential gap	1 to 100% FS, adjustable			
Batch setting pressure	0.6 to 1.1 kgf/cm ² , adjustable			
External reset pressure	0.2 to 1.0 kgf/cm ²			
Manual reset	0 to 100% FS, adjustable (by pneumatic pressure setting)			
Output	0.2 to 1.0 kgf/cm ² , or Corresponding to supply air pressure (on-off, differential gap)			
Minimum load	I.D. 4 mm x 3 m 20 cm ³			
Supply air pressure	1.4 +/- 0.14 kgf/cm ²			
Air consumption (50% output balanced)	Indicating transmitter	: 4 L/min		
	Indicating controller	: 4 L/min		
	Indicating transmitting controller	: 8 L/min		
	Manual controller	: 3 L/min		
Saturated air supply capacity	Transmitter output	: 40 L/min		
	Controller output	: 40 L/min		
	Manual control output	: 30 L/min		
Air connection	1/4 NPT internal thread			
Ambient temperature	-30 to 80 deg. C			
Relative humidity	10 to 90% RH			
Enclosure	Aluminum die-cast, IP 55			
Mouting	Panel, wall or 2" pipe mounting			

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