

Temperature Controllers

Quick Selection Table

Bulletin No.	900-TC8	900-TC16	900-TC32
Dimensions:			
Height	96 mm	48 mm	24 mm
Width	48 mm	48 mm	48 mm
Depth	78 mm	78 mm	100 mm
Sample Rate	500 ms	500 ms	500 ms
Indication Accuracy	±0.5% PV ±1 digit max.	±0.5% PV ±1 digit max.	±0.5% PV ±1 digit max.
Heating/Cooling Control Mode	✓	✓	✓
Control Method	ON/OFF or 2-PID (auto-tune and self-tune) with time proportioning ON/OFF outputs	ON/OFF or 2-PID (auto-tune and self-tune) with time proportioning ON/OFF outputs	ON/OFF or 2-PID (auto-tune and self-tune) with time proportioning ON/OFF outputs
Inputs	<ul style="list-style-type: none"> • Thermocouple Input • Platinum Resistance Temperature Sensor • Analog Input • Non-Contact Temperature Sensor 	<ul style="list-style-type: none"> • Thermocouple Input • Platinum Resistance Temperature Sensor • Analog Input • Non-Contact Temperature Sensor 	<ul style="list-style-type: none"> • Thermocouple Input • Platinum Resistance Temperature Sensor • Analog Input • Non-Contact Temperature Sensor
Outputs	Relay Output Voltage Output for Solid-State Relay Analog Output 4...20 mA	Relay Output Voltage Output for Solid-State Relay Analog Output 4...20 mA	Relay Output Voltage Output for Solid-State Relay
Alarms	3 Points	2 Points	None 1 Point
RS-232C Communications Function	✓	—	—
RS-485 Communications Function	✓	✓	✓
Event Input	✓	✓	—
Run/Stop via Keypad or Interrupts	✓	✓	Keypad
Multiple SP Selection via Keypad or Interrupts	✓	✓	Keypad
Heater Burnout Alarm	✓	✓	—
Page Number	Page 97	Page 97	Page 97

Temperature Controllers with Thermocouple Support



Bulletin	Power Supply Voltage	Max No. of Alarms Supported	Control Output Type	Supports Heater Burnout Alarm Output	Cat. No.	PQ
900-TC8 ②	100...240V AC	3	Relay Output	No	900-TC8RTZ25	1
				Yes ①	900-TC8RTHZ25	
			Voltage output (for driving SSR)	No	900-TC8VTZ25	
				Yes ①	900-TC8VTHZ25	
	24V AC/DC	3	4...20 mA Analog Output	No	900-TC8ACTZ25	
				Relay Output	No	
			Voltage output (for driving SSR)	Yes ①	900-TC8RTHU25	
				No	900-TC8VTU25	
4...20 mA Analog Output	Yes ①	900-TC8VTHU25				
	No	900-TC8ACTU25				
900-TC16 ②	100...240V AC	2	Relay Output	Yes ① ③	900-TC16RTZ25	1
			Voltage output (for driving SSR)	Yes ① ③	900-TC16VTZ25	
			4...20 mA Analog Output	No	900-TC16ACTZ25	
	24V AC/DC	2	Relay Output	Yes ① ③	900-TC16RTU25	
			Voltage output (for driving SSR)	Yes ① ③	900-TC16VTU25	
			4...20 mA Analog Output	No	900-TC16ACTU25	
900-TC32 ④ ⑤	100...240V AC	1	Relay Output	No	900-TC32RTZ25	1
			Voltage output (for driving SSR)		900-TC32VTZ25	
	24V AC/DC	1	Relay Output	No	900-TC32RTU25	
			Voltage output (for driving SSR)		900-TC32VTU25	
	100...240V AC	RS485	Relay Output	No	900-TC32CRTZ25	
			Voltage output (for driving SSR)		900-TC32CVTZ25	
	24V AC/DC	RS485	Relay Output	No	900-TC32CRTU25	
			Voltage output (for driving SSR)		900-TC32CVTU25	

① A current transformer (CT) is not provided with the unit.

② When the heating and cooling function or the heater burnout alarm is used, one of the relay alarm outputs will be disabled for each function used.

③ The heater burnout alarm is available by mounting the Cat. No. 900-TC16EIM or the Cat. No. 900-TC16COM in the 900-TC16RTZ25, RPZ25, VTZ25, VPZ25, RTU25, RPU25, VTU25 or VPU25. Heater burnout does not apply to analog output style controllers.

④ If the heating/cooling function is used, ALM1 will be used for the cooling control output and so the alarm output relay will not be available.

⑤ Cat. Nos. with a C designator (e.g., Cat. No. 900-TC32C___) include RS-485 communications, but do not have an alarm (or cooling) output.

See Publication 900-TC-SG001A-EN-P for complete product information

PQ = Package Quantity

Temperature Controllers

Product Selection

Temperature Controllers with Platinum RTD Support

Bulletin	Power Supply Voltage	Max No. of Alarms Supported	Control Output Type	Supports Heater Burnout Alarm Output	Cat. No.	PQ
900-TC8 ②	100...240V AC	3	Relay Output	No	900-TC8RPZ25	1
				Yes ①	900-TC8RPHZ25	
			Voltage output (for driving SSR)	No	900-TC8VPZ25	
	Yes ①	900-TC8VPHZ25				
	24V AC/DC	3	4...20 mA Analog Output	No	900-TC8ACPZ25	
				Relay Output	No	
Voltage output (for driving SSR)			Yes ①	900-TC8RPHU25		
	No	900-TC8VPU25				
Yes ①	900-TC8VPHU25					
900-TC16 ②	100...240AC	2	Relay Output	Yes ① ③	900-TC16RPZ25	1
				Yes ① ③	900-TC16VPZ25	
			Voltage output (for driving SSR)	No	900-TC16ACPZ25	
	4...20 mA Analog Output	No		900-TC16ACPU25		
	24V AC/DC	2	Relay Output	Yes ① ③	900-TC16RPU25	
				Yes ① ③	900-TC16VPU25	
Voltage output (for driving SSR)			No	900-TC16ACPU25		
	4...20 mA Analog Output	No	900-TC16ACPU25			
900-TC32 ④ ⑤	100...240V AC	1	Relay Output	No	900-TC32RPZ25	1
			Voltage output (for driving SSR)		900-TC32VPZ25	
	24V AC/DC	1	Relay Output	No	900-TC32RPU25	
			Voltage output (for driving SSR)		900-TC32VPU25	
	100...240V AC	RS485	Relay Output	No	900-TC32CRPZ25	
			Voltage output (for driving SSR)		900-TC32CVPZ25	
	24V AC/DC	RS485	Relay Output	No	900-TC32CRPU25	
			Voltage output (for driving SSR)		900-TC32CVPU25	

① A current transformer (CT) is not provided with the unit.

② When the heating and cooling function or the heater burnout alarm is used, one of the relay alarm outputs will be disabled for each function used.

③ The heater burnout alarm is available by mounting the Cat. No. 900-TC16EIM or the Cat. No. 900-TC16COM in the 900-TC16RTZ25, RPZ25, VTZ25, VPZ25, RTU25, RPU25, VTU25 or VPU25. Heater burnout does not apply to analog output style controllers.

④ If the heating/cooling function is used, ALM1 will be used for the cooling control output and so the alarm output relay will not be available.

⑤ Cat. Nos. with a C designator (e.g., Cat. No. 900-TC32C___) include RS-485 communications, but do not have an alarm (or cooling) output

See Publication 900-TC-SG001A-EN-P for complete product information
PQ = Package Quantity

Bulletin 900-TC Temperature Controllers Product Selection/Accessories

Option Units (Bulletins 900-TC8 and 900-TC16 — Only One Option Unit per Controller)

The unit provides communications or event input functionality

Bulletin	Name	Function	Cat. No.	PQ
900-TC8	Communications Unit	RS-232C communications ❶	900-TC8232	1
		RS-485 communications	900-TC8COM	
	Event Input Unit	Event input ❷	900-TC8EIM	
900-TC16	Communications and Heater Burnout Unit	RS-485 communications with heater burnout alarm ❸	900-TC16COM	1
	Event Input Unit and Heater Burnout	Event input with heater burnout alarm ❷ ❸	900-TC16EIM	
	Event Input Unit	Event Input	900-TC16ACEIM	
	Communications Unit	RS-485 Communications	900-TC16ACCOM	

- ❶ Enables direct RS-232 connection to personal computer using 900Builder software. A Cat. No. 900-CP1X cable or equivalent is also required.
- ❷ Provides two event inputs.
- ❸ Heater burnout is not available for 4...20 mA analog output style 900-TC16 controllers such as the 900-TC16ACTU25.

Accessories

Current Transformer (Use with Bulletins 900-TC8 and 900-TC16 Only for Heater Burnout)

Use with Bulletin No.	Hole diameter	Cat. No.	PQ
900-TC8, 900-TC16	5.8 dia.	900-CT1	1
	12.0 dia.	900-CT2	

Interface Converter (RS-232/USB to RS-485) Model

Converts personal computer RS-232 or USB (ser. B or later) communications to RS-485. Use for interface with a single Bulletin 900-TC8, or Bulletin 900-TC16 with a Cat. No. 900-TCxxCOM unit installed or a single Cat. No. 900-TC32C_ designated controller. Also allows interface to up to 31 controllers connected on a RS-485 link/network.

Bulletin No.	Size	Power Supply Voltage	Cat. No.	PQ
900-CONV	30 mm (W) x 80 mm (H) x 78 mm (D)	100...240V AC	900-CONVZ25	1
		24V AC/DC	900-CONVU25	

RS-232 Interface Cable

Allows connection between a 900-TC8 with a 900-TC8232 option unit and a PC using 900Builder software or PC with 900Builder and a 900-CONV RS232-to-RS485 converter.

Description	Cat. No.	PQ
RS-232 cable with 9-pin female D shell and 3 flying leads (3 m)	900-CP1X	1

900Builder Personal Computer Configuration Software

Allows graphical configuration and monitoring of controller parameters with data-logging and trending, plus program upload/download capability for any Bulletin 900-TCx controller.

Description	Cat. No.	PQ
900Builder Personal Computer Configuration Software for Bulletin 900-TCx Temperature Controllers	900-BLDSW1	1

See Publication 900-TC-SG001A-EN-P for complete product information
PQ = Package Quantity