

# T9800 Series Touch Screen Thermostats



**Strong system compatibility**, adopt the BACnet or Modbus communication protocol



**Build in humidity sensor**, easy environmental control for BA system



**T9800-TB21-1JAO support 0~10 VDC input**, directly access CO<sub>2</sub> or IAQ sensor signal, simplify design and save cost



The thermostats are powerful and can be used to control 2-pipe FCU / 4-pipe FCU, Single-speed / 3-speed motors / ECM motors, and on / off valves / regulating valves. Its TiO<sub>2</sub> / ESP features can make the environment to cleaner. The occupancy mode supports comfortable and more energy-efficient temperature setting. The BI input supports dry contact signals from door cards, PIR (Passive Infrared) sensor, dew point sensors, filter's differential pressure switch, etc. They support connect to remote sensors, sensor type JCI 10K NTC Temperature Sensors like TE-636S-1.

The products apply to multiple scenarios, for example, they can be used for FCU, single-speed AHUs, floor heating systems, water source heat pumps, and boilers.

Product Number	Application	Fan Control	Valve Control	Others Control	Input	Power Supply
T9800-TF21-1JSO	2-pipe FCU, Prop valve	3-speed Fan	1 Proportion Valves		1 BI, Occupancy 1 Remote sensor	24 VAC
	4-pipe FCU, Prop valve	3-speed Fan	2 Proportion Valves			
	2-pipe FCU, On / Off valve	ECM fan	1 On / Off Valve			
	4-pipe FCU, On / Off valve	ECM fan	2 On / Off Valves			
	2-pipe FCU, 3-wire On / Off valve	ECM fan	1 3-wire On / Off Valve			
	2-pipe FCU with floor heating, On / Off valve	ECM fan	1 On / Off Valve	1 Floor Heating		
	2-pipe FCU with TiO <sub>2</sub> / ESP, On / Off valve	ECM fan	1 On / Off Valve	1 TiO <sub>2</sub> / ESP		
	Water source heat pump	ECM fan		1 Compressor 1 Revert Valve		
	2-pipe FCU, Prop valve	3-speed Fan	1 Proportion Valve			
	2-pipe FCU, Prop valve with Floor Heating	ECM fan	1 Proportion Valve	1 Floor Heating		
T9800-TF20-1JSO	2-pipe FCU, Prop valve with Radiator	ECM fan	1 Proportion Valve	1 Radiator	1 BI, Occupancy 1 Remote sensor	100~240 VAC
	AHU	Single speed fan	1 Proportion Valve	1 Damper		
	2-pipe FCU, On / Off valve	3-speed Fan	1 On / Off Valve			
	4-pipe FCU, On / Off valve	3-speed Fan	2 On / Off Valves			
	2-pipe FCU, 3-wire On / Off valve	3-speed Fan	1 3-wire On / Off Valve			
	2-pipe FCU with floor heating, On / Off valve	3-speed Fan	1 On / Off Valve	1 Floor Heating		
	2-pipe FCU with TiO <sub>2</sub> / ESP, On / Off valve	3-speed Fan	1 On / Off Valve	1 TiO <sub>2</sub> / ESP		
Water source heat pump	3-speed Fan		1 Compressor 1 Revert Valve			
T9800-TB21-1JAO	Boiler			Boiler	1 x 0~10 VDC input for feedback signal 1 BI, Occupancy 1 Remote sensor	
	2-pipe FCU, Prop valve	3-speed Fan	1 Proportion Valve			

# Technical Specifications

Supply Voltage	100-240 VAC 50 / 60 Hz 20-30 VAC 50 / 60 Hz, only for T9800-TF21-1JS0
Power consumption	Max. 5 VA
Terminations	Screw terminal block
AO output(ECM Fan, Proportion Valve)	0-10 VDC output, up to 20 mA
Relay output (Fan, Valve, Tio2 and etc.)	relay (SPST) output, 2.2 A ( $I_R$ ), $\cos \Phi$ 0.98; 3.6 A ( $I_X$ ), $\cos \Phi$ 0.98; 5 A (Resistive)
Remote Sensor input	T9800 models support remote sensor, 10K NTC JCI type II, e.g. TE-636S-1
BI input	Dry contact signal
Build-in Humidity Sensor	Accuracy $\pm 5\%$
Analog Input	0-10 VDC, only for T9800-TB21-1JA0
Wire size	Screw terminal block: 1.0-1.5 mm <sup>2</sup> rigid conductor for 5 mm connector; 0.14-1.5 mm <sup>2</sup> rigid conductor for 3.5 mm connector
Mounting	Flush-mounted
Temperature measurement range	0 to 49 °C (32 to 99 °F)
Temperature accuracy	1 °C (2 °F)
Default temperature set point range	5.0 °C to 35.0 °C in 0.5 °C increments
Ambient conditions	Operating: 0 to 40 °C (32 to 104 °F), 10 to 90% RH, noncondensing, 29 °C (85 °F) maximum dew point
	Storage: -20 to 60 °C (-4 to 140 °F), 5 to 95% RH, noncondensing
Protection class	IP20
Pollution degree	2
Heat and fire resistance category	D
Temperature for ball pressure test	125 °C
Limitation of operating time	Continuous
Shipping weight	Approx 300 g
Compliance	CE mark
	RCM mark, Australia / NZ emissions compliance
	RoHS, REACH, WEEE
	BTL

## Note:

1. User can configure one model to different applications by parameter setting
2.  $I_R$  is steady-state current of FCU motor, and  $I_X$  is transient current of FCU motor
3. Remote sensor need to be ordered separately