

CT50 Communicating Touch Screen Thermostat



- WiFi Enabled Operation
- Large Touch Screen
- 2 Stage Heat and 2 Stage Cool
- Displays Energy Data - \$/kWh

Technical Specifications

Physical - Operational Characteristics

Height	4.5" (112 mm)
Width	5.9" (150 mm)
Thickness	1.4" (35 mm)
Operating Temperature	32°F ~ 122°F (0°C ~ 50°C)
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
Shock (Non-Operating)	10 free drops(1 corner, 3 edges plus 6 faces) per ISTA-1A
Vibration	14,200 circular impacts per ISTA-1A
Display	2.9" x 1.5" LCD with White Backlight [74x40mm]
Touch Screen	Yes
Setpoint Accuracy	1° F (0.5°C)
Ambient Temperature Display Accuracy	0.5° F (0.5°C)
Remote Control	Yes via Wi-Fi or 2 USNAP ports
Power Requirements	C-Wire Input: 18V~25V AC or DC Battery Power: AA Battery, 3pcs.

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Compatible Systems

Heat	Up to 2 Stages
Cool	Up to 2 Stages
Heat Pump	1 Stage
Electric Aux Heat	1 Stage
Hybrid (Fossil Aux Heat)	1 Stage
Forced Air Zoned Heat	Up to 2 Stages
Forced Air Zoned Cool	Up to 2 Stages
2 Wire Hydro Valves	Yes
3 Wire Hydro Valves	Yes
Millivolt Heat	Yes

Reliability

Operational Lifetime	15 years
Relays	250,000 cycles
Compressor	8,000/year
Heating	8,000/year
Fan	16,000/year
G, W, W2, Y, Y2, O, B, A, RC, RH	2A carry, 5 A surge
Contact Rating	(@ 24VAC) <small>*Not compatible with 110-220VAC</small>
Power-on Time	Continuous
Immunity to Voltage Dips	70% 10ms 40% 50ms
Electrostatic Discharge (Contact)	8KV
Electrostatic Discharge (Air)	20KV

Wi-Fi Radio Specifications

Wi-Fi Radio	802.11b/g
Local API	JSON
Provisioning	Ad-hoc Network
Cloud Service	Yes
Over-the-Air Upgradeable	Yes

*Wi-Fi Radio requires 24VAC power

Installer Setup Options

HVAC Fast Setup Codes
Swing from .5°F to 2°F
Multiple Recovery Settings (FAST/ECON)
Differential Temperature Setpoint Control
Filter Replacement Indicator
Radio Network Setup

Homeowner Setup Options

Simple Screen Mode with Limited UI
4 Period Program
Program Schedule (EPA default)
Holiday Program
Hold
Remote SAVE ENERGY Setpoints
Radio Display
Radio NETWORK Setup
Fan On/Auto
EMER Select (Aux Heat only)
Lock - multi-level
Calibrate Feature
Energy Price Display for Price, Consumption and Instantaneous Consumption
Grid Status Indicators (Red, Yellow, Green)