

# VX Series Energy Management Thermostat

## Model: VX-TL-KT-W Wireless Energy Management Thermostat With Lighting Control

- > **Easy to use Thermostat**
- > **Unparalleled Energy Savings**
- > **Aux output for occupancy-based control of external devices (i.e. lights, receptacles, outside air dampers)**
- > **Facilitates compliance with energy efficiency codes such as Title 24, and IECC 2015/2018.**
- > **Online management capabilities<sup>1</sup>**

The Verdant VX-TL-KT thermostat delivers unprecedented energy savings without compromising guest comfort.

New energy efficient building codes have raised the energy performance standards required of commercial buildings.

California's Title 24 (Part 6) building code as well as other state building codes founded upon IECC 2015 or 2018 energy efficiency codes have now mandated occupancy-based control of heating and air-conditioning, lighting, outside air dampers, and/or receptacles.

The Verdant VX-TL-KT thermostat reduces HVAC runtime by dynamically setting back temperature in empty rooms, without disturbing the comfort of occupants.

The thermostat can also shut off power to a lighting circuit by using an external relay that receives the thermostat's occupied/unoccupied signal.

The occupied/unoccupied signal can be configured to be Normally Open (NO) or Normally Closed (NC). This provides unsurpassed flexibility when connecting to other systems like outside air dampers or exhaust fans.

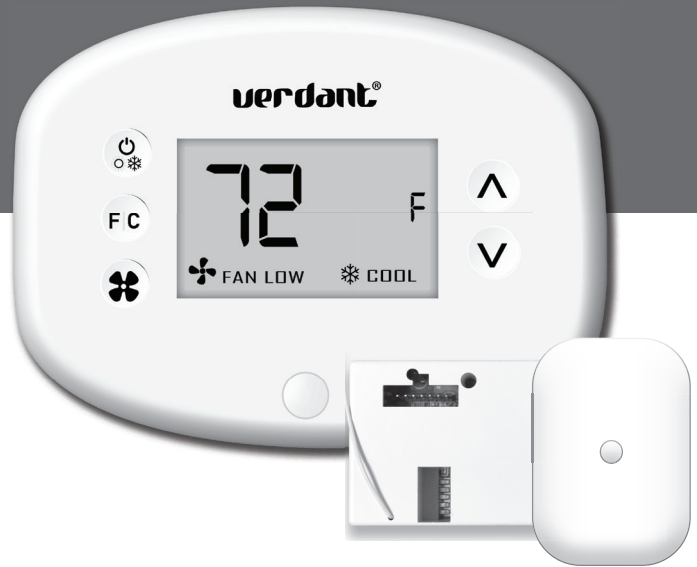
The Verdant Thermostat and Verdant HVAC Controller communicate wirelessly for a simple and effortless installation. The Verdant HVAC Controller connects to the HVAC unit using standard thermostat terminals (7 wires). In the case of a mini split or VRF unit, please contact Verdant Sales for the applicable part number.

The Verdant thermostat is powered at 24VAC in order to provide the required voltage for the occupancy output signal.

Verdant's combined solution offers building owners a cost effective energy management system that can be deployed with minimal accessories, and little to no extra labor, making it simple to install.

<sup>1</sup> Requires a network access license for each thermostat (Part Number: XMF) and one "Online Connection Kit" (Part Number: OL-KT). Additional fees apply.

<sup>2</sup> In jurisdictions where building code mandate any of the undermentioned measures, additional software licenses (Part Number: XMF) and one (1) Online Connection Kit are required. Additional fees apply.



The VX-TL-KT thermostat facilitates building-code compliance by addressing the following requirements:<sup>2†</sup>

### IECC 2015




1. C405.2.4.3 Specific application controls for sleeping units.

### IECC 2018

1. C.403.7.6 Automatic Control of HVAC system serving guestrooms integrally.
2. C405.2.4.2 Specific application controls for sleeping units

### Title 24 Part 6

1. Section 130.1(c)8 Shut-off controls for Hotel/Motel guestrooms.
2. Section 120.2(e) Shut-off and Reset Controls for Space-conditioning Systems
3. Section 130.5(d) Circuit Controls for 120V Receptacles and Controlled Receptacles.

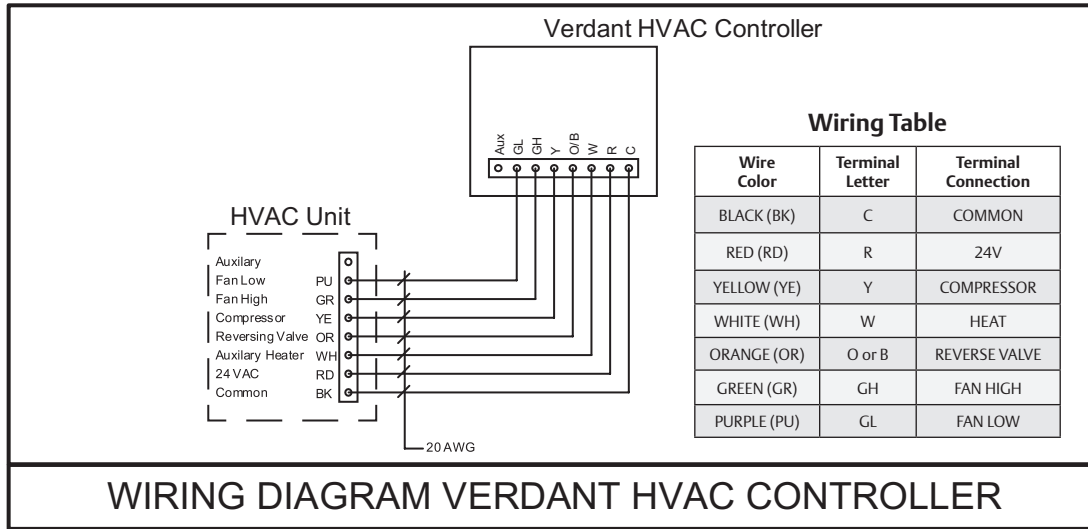
Item	Part #	Description
	VX-TL-W*	Verdant Thermostat with Lighting Control Capabilities
	AC-CC	Verdant HVAC Controller
	X9-RF-OS	Verdant Wired Occupancy Sensor

\* Also available in black. For black, replace W with B.

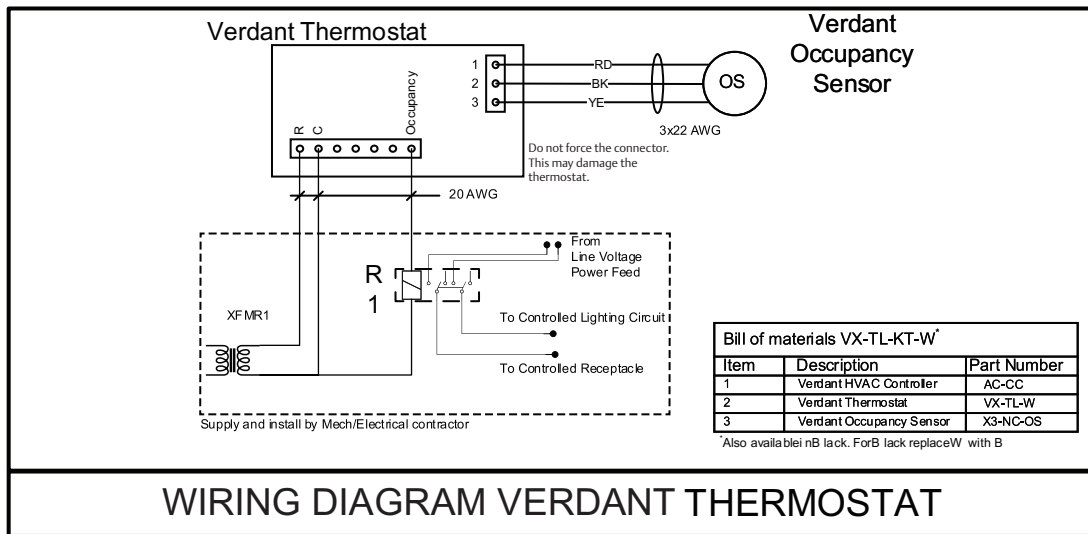
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# VX Series Technical Specifications



WIRING DIAGRAM VERDANT HVAC CONTROLLER



WIRING DIAGRAM VERDANT THERMOSTAT

	Thermostat	HVAC Controller	Occupancy Sensor
Case Dimensions (Imperial)	4.02 x 5.51" x 0.93"	3.88" x 2.13" x 0.75"	2.5" x 3.5" x 0.73"
Case Dimensions (Metric)	102mm x 140mm x 23.5mm	98mm x 54mm x 19mm	63.5mm x 88.9mm x 18.5mm
Screen Dimensions (Imperial)	3.63" x 2.13"	N/A	N/A
Screen Dimensions (Metric)	92mm x 54mm	N/A	N/A
Operating Voltage	24VAC	24VAC	24VAC
Control Outputs	Occupancy Out (Aux)	Fan High (GH) Fan Low (GL) Compressor (Y) Heat Pump (OB) Heat (W)	
Occupancy Sensor Beam Width	±47° (94°)	N/A	±47° (94°)
Wireless Frequency	902-928MHz	902-928MHz	N/A
Temperature Accuracy	±1°F	N/A	N/A
FCC ID	XEYWX	XEVV8ACCC	N/A
IC	8410A-WX	8410A-V8ACCC	N/A

## Typical HVAC Applications

- PTAC with Electric Heat
- PTHP with Electric Heat
- FCU 2-Pipe, 2 Fan, with Electric Heat
- FCU 4-Pipe, 3 Fan
- Heat Pump, 2 Fan, with Electric Heat
- WSHP, 2 Fan, with Electric Heat
- VRF Systems (Part # VX-RSW-W)
- Mini Splits (Part # VX-RSW-W)



THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION.

PURSUANT TO PART 15.21 OF THE FCC RULES, ANY CHANGES OR MODIFICATIONS TO THIS EQUIPMENT NOT EXPRESSLY APPROVED BY VERDANT ENVIRONMENTAL TECHNOLOGIES, INC. MAY VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

US PATENTS: 8,369,994; 8,141,791; 7,918,406; 7,841,542; 7,838,803; RE40,437; 7,232,075; 7,185,825; 7,156,318; 7,152,806; 7,145,110; 7,058,477; 7,050,026; 7,028,912; 6,902,117; 6,789,739; 6,786,421; 6,619,555; 6,581,846; 6,578,770; CANADIAN PATENTS: CA2615065; CA2633113; CA2633121; CA2633200; OTHER PATENTS PENDING.

Verdant Energy Management Solutions reserves the right to make changes, without notice, in design or components as progress in engineering and manufacturing methods may warrant. Product appearance may vary.  
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