



Nest & Other Power “Sharing” Thermostat Wiring Options



The 3rd Generation Nest Learning thermostat and other power sharing thermostats may cause false signals and erratic manager behavior. Below are (4) wiring methods that allow proper operation. They are compatible with Display Energy Managers and the Accel CS. The Ascent Combi and the Ascent Plus Combi require a separate transformer or compatible zone controller.

Note: Nest 4th Generation Thermostats require a “common” C wire for all HVAC systems. An add a wire “Common Maker” can be used if there is no common wire.

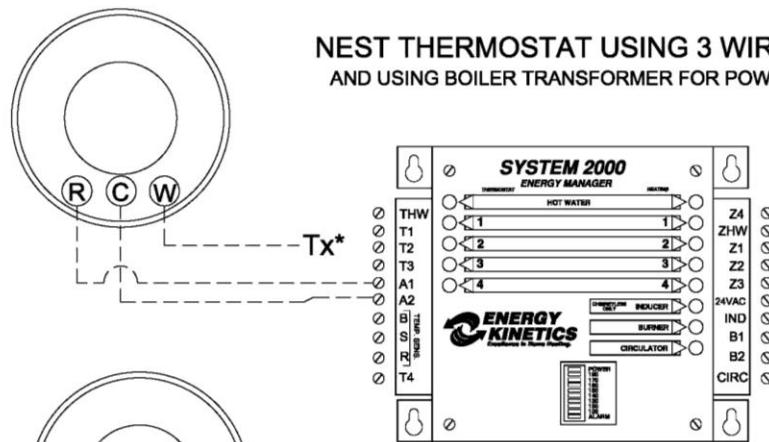


Zone 1 connection shown. Connect red wire to A1. Connect white wire to T1 for zone 1, or to T2, T3, or T4 for zones 2, 3, or 4 respectively. Connect resistor to A2 and T1 (if zone 1); similarly connect the resistor to A2 and T2, T3, or T4 for zones 2, 3, or 4 respectively.

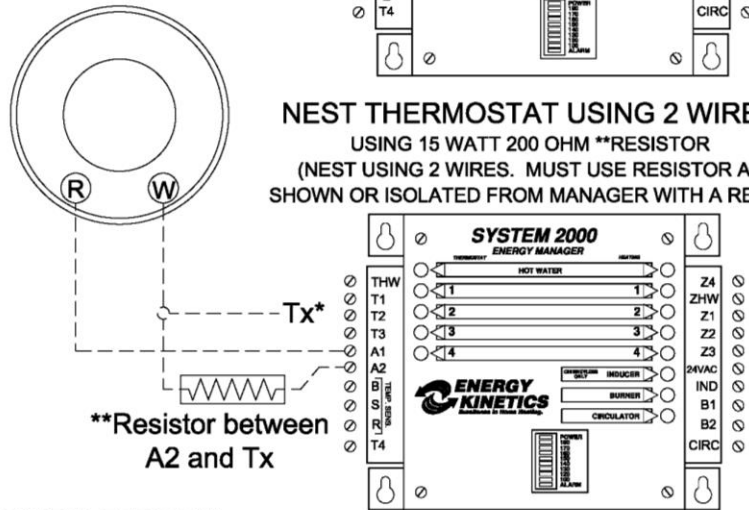
Notes: Wiring applies to Digital Energy Manager (shown) and Classic Energy Manager with red labels used on System 2000 and 90+ Resolute™. No wiring modifications are required for the Accel CS™ Condensing Energy Manager, which has a blue label.

Wiring Options	Considerations
1) Installed with Air Conditioning.	Nest uses power from the air conditioning equipment. No wiring modifications are required.
2) Add a resistor to the Nest thermostat zone (shown above).	Low cost, quick and easy installation. Mouser Part #: 280-CR15-200 RC Manufacturer: Xicon Mouser Part #: 588-TUW15J200E Manufacturer: Ohmite Resistors available from www.mouser.com
3) Provide a transformer to power the Nest thermostat along with isolation relay.	See drawing SYS-08-031. Relays and transformers are commonly found on HVAC service vehicles.
4) Provide a common power wire.	If the existing thermostat cable has a spare wire, connect A2 to C terminal to provide the Nest Thermostat with power.

NEST THERMOSTAT USING 3 WIRES AND USING BOILER TRANSFORMER FOR POWER



NEST THERMOSTAT USING 2 WIRES USING 15 WATT 200 OHM **RESISTOR (NEST USING 2 WIRES. MUST USE RESISTOR AS SHOWN OR ISOLATED FROM MANAGER WITH A RELAY)



*Tx CAN BE T1, T2, T3 OR T4
 **RESISTOR: 200 OHMS, 15 WATTS
 MOUSER PART#: 280-CR15-200-RC MANUFACTURER: XICON
 MOUSER PART#: 588-TUW15J200E MANUFACTURER: OHMITE

NEST THERMOSTAT USING AN ISOLATION RELAY AND A SEPERATE TRANSFORMER

