

This Quick Setup Guide contains the basic information required to get your new tekmar tN4 Wiring Center 316 installed and operational. An Installation and Operation Manual D316 containing all available features and operational details is included with this control or can be found at www.tekmarcontrols.com/literature.html

Basic Installation

The tN4 Wiring Center 316 is designed to operate 4 zone pumps in a hydronic heating system.

Control Location

- The Wiring Center must be mounted directly to a 4"x4" electrical box to allow for pump wiring connections.
- All 115 V (ac) pump wiring will enter into the electrical box.
- Thermostat and low-voltage wires will enter through either side knockouts or between the base of the enclosure and the cover on the sides and top. See Figure 3.

Note: The nonmetallic enclosure does not provide grounding between conduit connections. Conduit connections must be grounded by other means.

Wire the Zone Pumps

- Wire line voltage to the red zone power lead (L) at the back of the control as shown in Figure 1.
- Wire each zone pump's 115V connection to the black zone pump wires at the back of the control as shown in Figure 1.
- Wire the neutral connection of each pump to the neutral line (N) of the electrical circuit. Do the same with Ground wires.
- Mount the Wiring Center to the electrical box as shown in Figure 2.

Wire the Thermostats

- Connect tN4, C, R and W conductors to the corresponding terminals on the 316, paying special attention to ensure that the tN4 and C wires are not reversed. See the labelling shown in Figure 3.

Connect to the Mechanical System

- If the 316 is to be connected to a tN4 network, connect the tN4 and C expansion terminals to the tN4 connection on the associated tN4 device.
- If the 316 is to be connected to another control, such as a tekmar Boiler Control, use the end switch terminals to create a 'Boiler Demand' on the external control.

Wire the Power Supply

Once the transformer has been correctly sized, connect the 24 V (ac) leads from the transformer to the R and C terminals marked "Input Power" on the Wiring Center. See "Sizing the External Transformer" in the Installation and Operation Manual D316 for more detailed information.

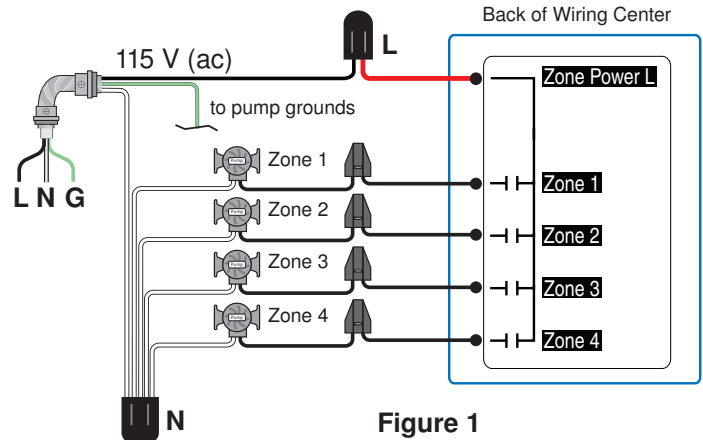


Figure 1

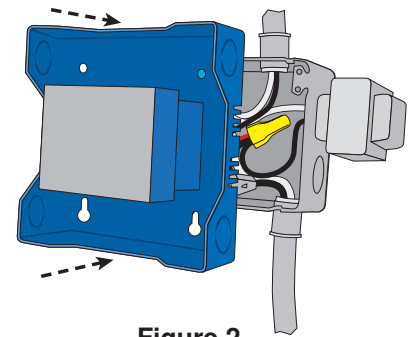


Figure 2

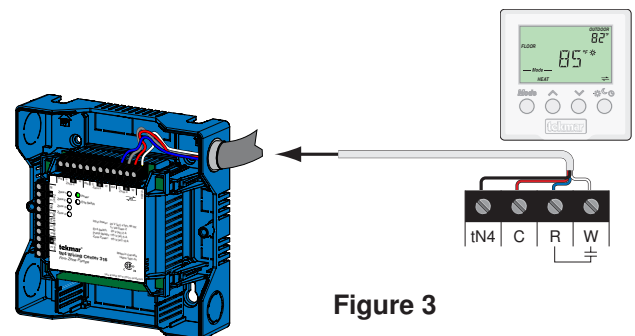
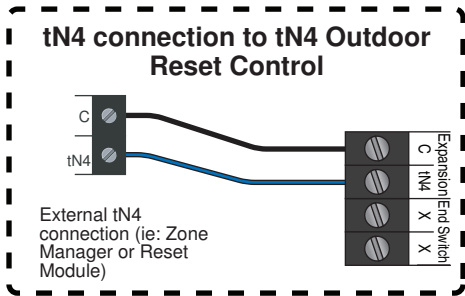


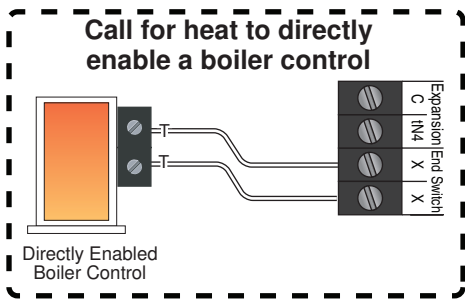
Figure 3

Application Drawing

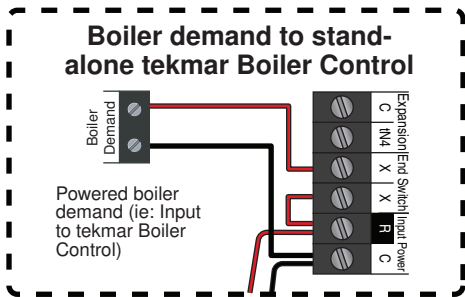
Use tekmarNet[®] 4 Thermostats to achieve better system performance



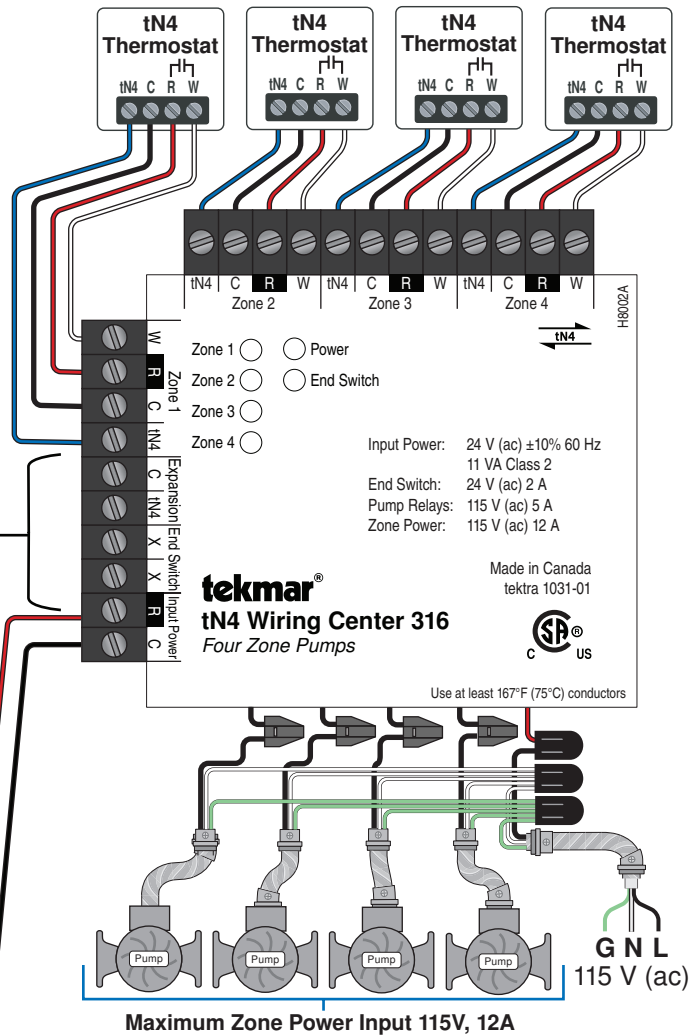
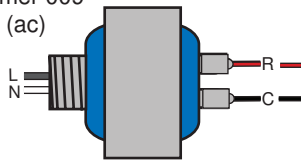
OR



OR



tekmar Transformer 009
24 V (ac)



Sizing the External Transformer:

Add up all the thermostat loads (VA) connected to the Wiring Center. The transformer must have higher capacity than this total load.

$$\boxed{} + 11 \text{ VA} = \boxed{}$$

T-stats + Control Total Load

Wiring Conventional Thermostats:

The tN4 Wiring Center 316 may be used with conventional thermostats instead.

- Connect the thermostat heat relay wires to the R and W terminals of the 316.
- Do not mix conventional and tekmarNet[®] Thermostats on the same Wiring Center.
- See the Installation and Operation Manual D316 for more detailed wiring information.

