

This Quick Setup Guide contains the basic information required to get your new tekmar tN2 Wiring Center 313 installed and operational. An Installation and Operation Manual D313 containing all available features and operational details is included with this control or can be found at [www.tekmarcontrols.com/literature/d.html](http://www.tekmarcontrols.com/literature/d.html)

### Basic Installation

The tN2 Wiring Center 313 is designed to be mounted near a zone manifold and will operate up to 4 zone valves in a hydronic heating system.

### Control Location

- The Wiring Center can be mounted either directly to the wall, or to a 4"x4" electrical box.
- Mount the enclosure to a solid backing.
- Wiring will enter through either side knockouts or between the base of the enclosure and the cover on the sides and top. See Figure 1 and Figure 2.

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

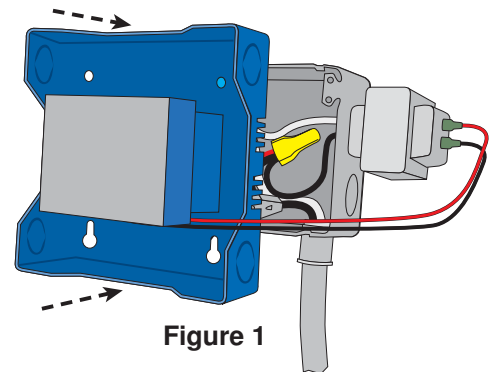


Figure 1

### Wire the Thermostats

tN2 Thermostats:

- Connect tN2 conductors to the corresponding terminals on the 313, these connections are not polarity sensitive. See the terminal labelling in Figure 2.

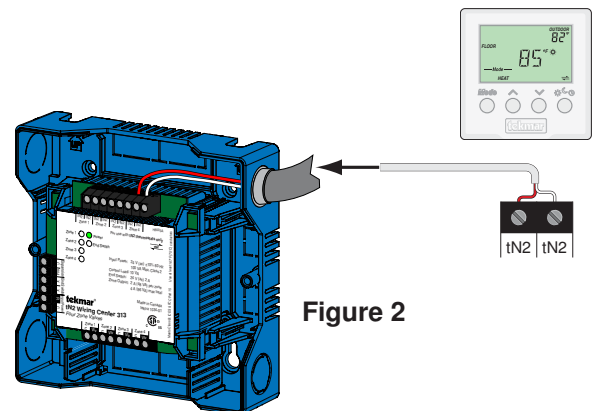


Figure 2

### Wire the Zone Valves

- Wire the zone valves to the Vlv and C terminals on the 313, as shown in Figure 3.
- End switches on zone valves are not required when using the 313.

### Connect to the Mechanical System

- If the 313 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 313 is to be connected to another control, such as a tekmar Boiler Control, use the end switch terminals to create a 'Boiler Demand' on this external control. See application on next page.

### 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 D313 for more detailed information.

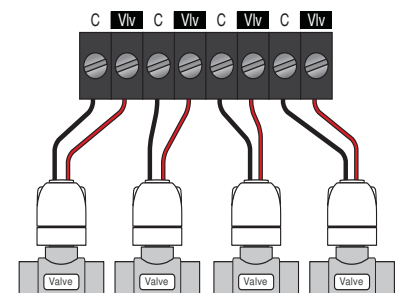
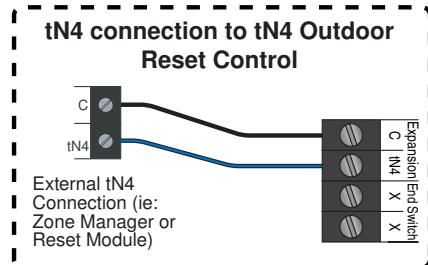


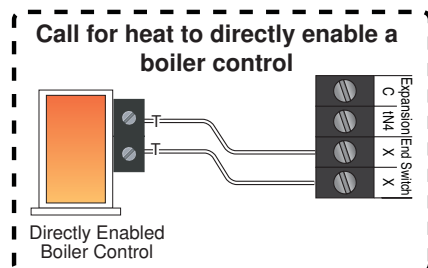
Figure 3

## Application Drawing

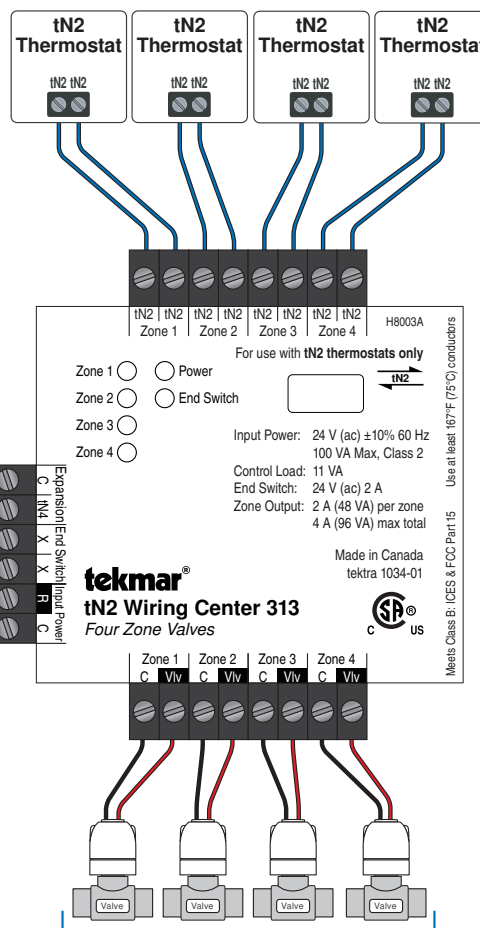
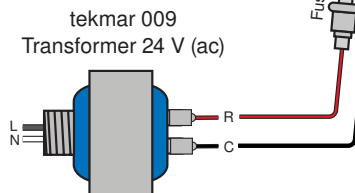
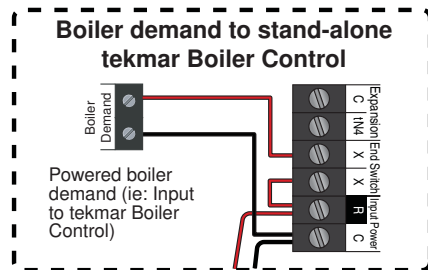
For more information on tekmarNet®2 Thermostats,  
see the D527 Brochure.



**OR**



OR



**Refer to Transformer Data Sheets for Maximum Allowable Loads**

### Sizing the External Transformer:

Add up all the thermostat and zone valve loads (VA) connected to the Wiring Center. The transformer must have higher capacity than this total load. Each tN2 Thermostat draws approximately 2 VA.

$$\boxed{\phantom{000}} + \boxed{\phantom{000}} + \boxed{3 \text{ VA}} = \boxed{\phantom{000}}$$

T-stats + Zone Valves + Control      Total Load

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