# tekmar® Submittal

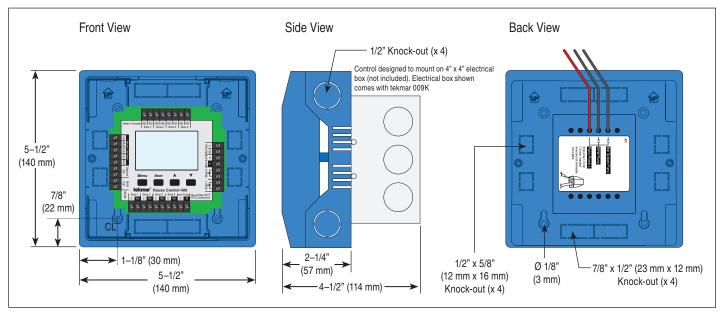




HVAC Systems Replaces: New

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The tekmarNet®2 House Control 400 is designed to operate all of the mechanical equipment in a residential hydronic heating system, coordinating their operation with network communication. It can be used in applications ranging from a single zone of baseboard with an on/off boiler, to multiple radiant floor zones with a modulating/condensing boiler. This control regulates one space heating water temperature through Outdoor Reset and Indoor Temperature Feedback. It is capable of controlling a single on/off, dual stage, or modulating boiler, Domestic Hot Water, setpoint loads, 4 on-board zone valves, and can connect up to 24 zones in total.



## **Specifications**

tN2 House Control 400 Boiler, DHW & Setpoint, Four Zone Valves				
Literature	e D400, Q400, SB057			
Control	Microprocessor control. This is not a safety (limit) control			
Packaged weight	1.4 lb (640 g)			
Dimensions	5.5" H x 5.5" W x 2.25" D (140 x 140 x 57 mm)			
Enclosure	Blue PC+ABS plastic, NEMA type 1			
Approvals	CSA C US, meets class B: ICES & FCC Part 15			
Ambient conditions	Indoor use only, 32 to 104°F (0 to 40°C), RH ≤90% Non- condensing			
Power supply	24 V (ac) ±10%, 60 Hz, 100 VA max, Class 2			
Control load	2 VA			
Zone valve load	89 VA, 24 V (ac), 3.7 A for zones 1 to 4			
Boiler stage 1, 2 relays	24 V (ac) 5 A			
Boiler system pump relay	115 V (ac) 5 A, 1/6 hp			
DHW pump relay	115 V (ac) 5 A, 1/6 hp			
Setpoint and DHW calls	Short, 0 - 32 V (ac)			
Boiler modulation output	0 - 10 V (dc) 500 $\Omega$ min load impedance, 4 - 20 mA 1 k $\Omega$ max load impedance			
Sensors	NTC thermistor, 10 kΩ @ 77°F (25°C ±0.2°C) β=3892			
-Included	Outdoor Sensor 070 and Universal Sensor 082			
Warranty	Limited 3 Year (See D400 for full warranty)			

#### **Energy Saving Features**

- Outdoor Temperature Reset
- Indoor Temperature Feedback up to 24 zones
- · Warm Weather Shut Down
- · Zone Synchronization
- DHW Post Purge

#### **Additional Features**

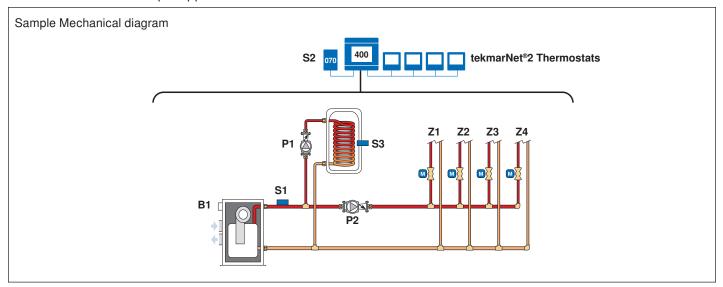
- Expandable up to 24 zones
- · Single on/off, two stage, or modulating boiler control
- DHW control
- DHW Priority
- · Automatic Boiler Differential
- · Equipment Exercising
- Boiler Protection
- Powered pump outputs
- Modulating boiler control
- System Setback (with optional Timer)
- · One touch overrides (with optional User Switch)

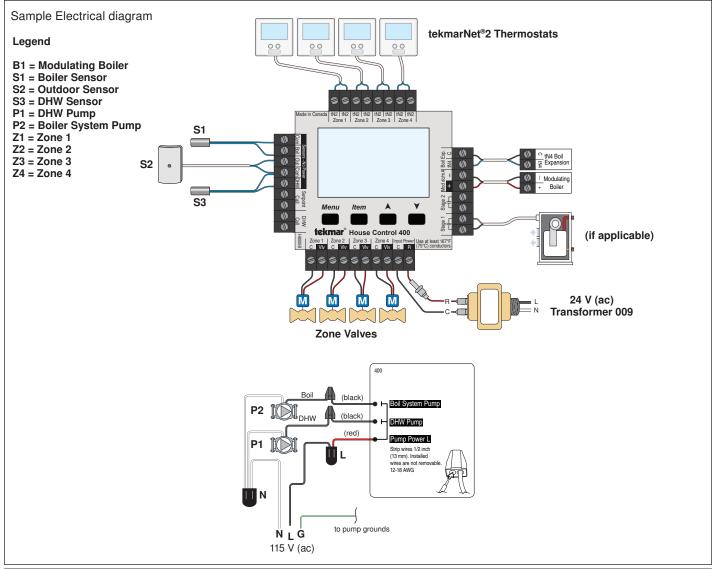
## SPECIAL REQUIREMENTS

This control is designed to mount on a 4" x 4" electrical box, and must be used with tekmarNet® thermostats for communicated heat demands

# **Sample Application Drawing**

Below is a sample application drawing for this product. This application may include other tekmar products that are required for installation. More sample applications can be found at www.tekmarcontrols.com.







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