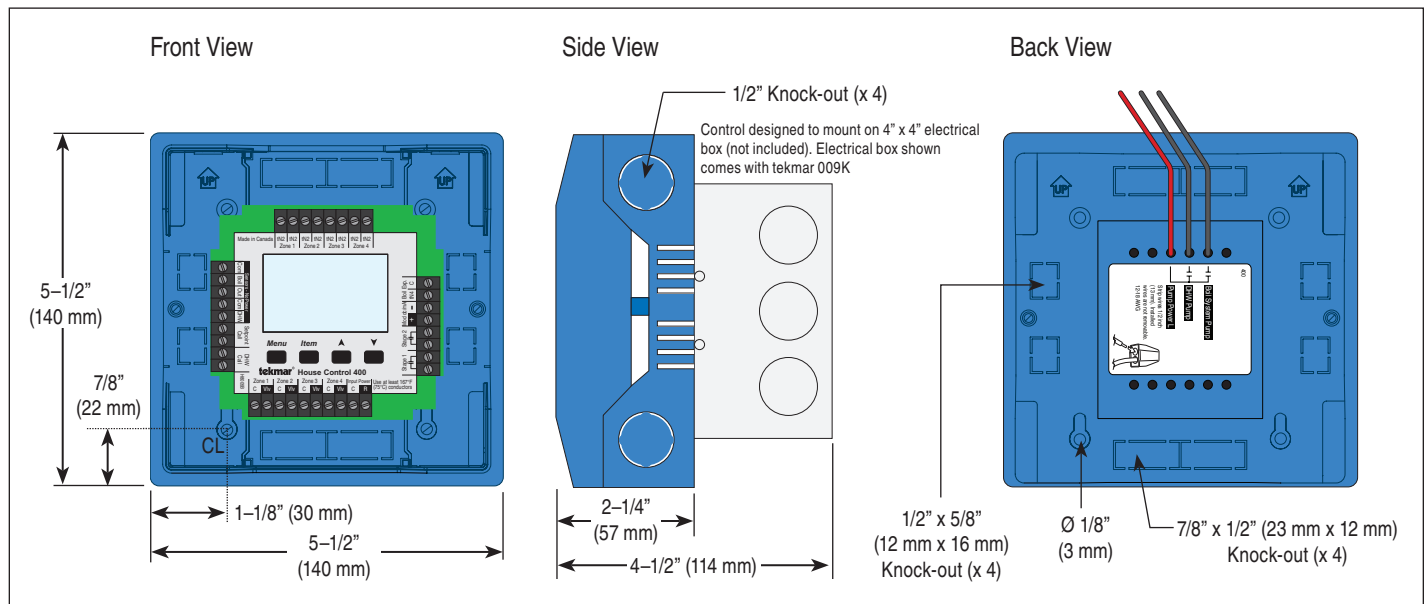


Job _____ Designer _____ Contact _____

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	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 Ω min load impedance, 4 - 20 mA 1 kΩ 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)

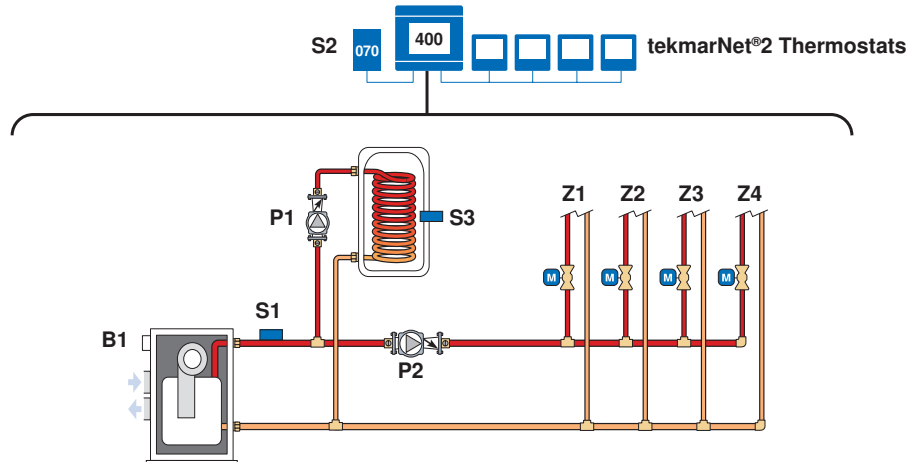
SPECIAL REQUIREMENTS

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.

Sample Mechanical diagram



Sample Electrical diagram

Legend

- B1 = Modulating Boiler**
- S1 = Boiler Sensor**
- S2 = Outdoor Sensor**
- S3 = DHW Sensor**
- P1 = DHW Pump**
- P2 = Boiler System Pump**
- Z1 = Zone 1**
- Z2 = Zone 2**
- Z3 = Zone 3**
- Z4 = Zone 4**

