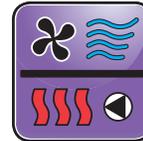


# tekmar® Submittal

## Universal Reset Module 422



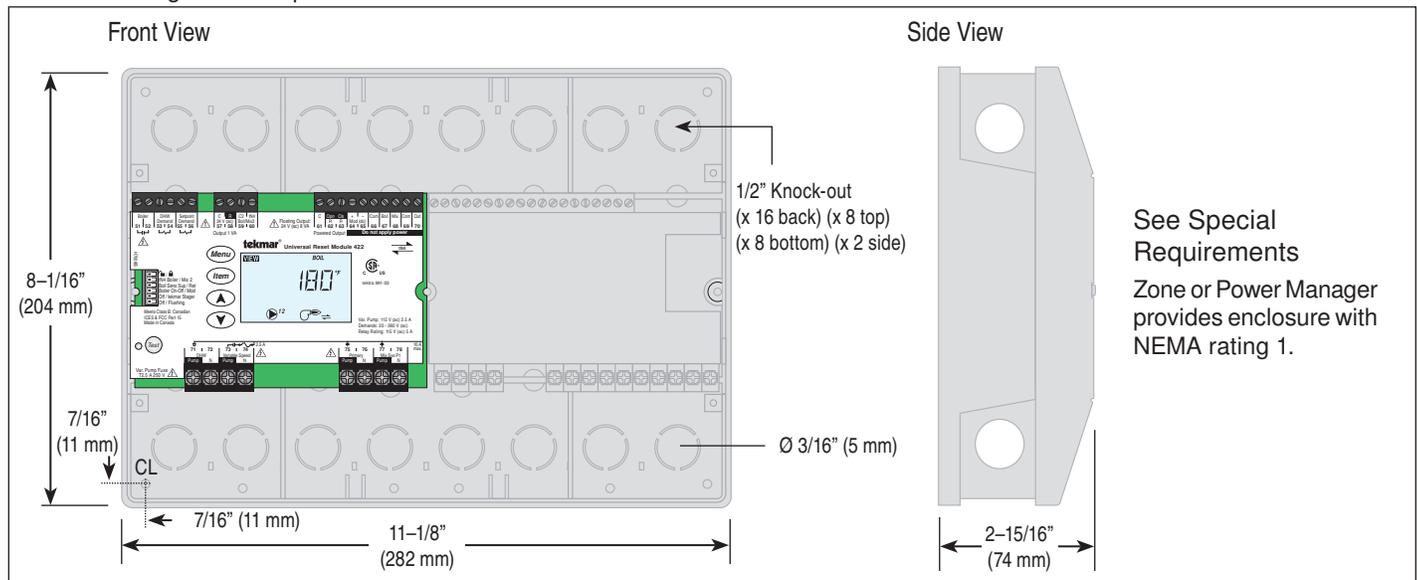
**C 422**

01/11

HVAC Systems Replaces: New

Job \_\_\_\_\_ Designer \_\_\_\_\_ Contact \_\_\_\_\_

The Universal Reset Module 422 is designed to operate all of the mechanical equipment in a hydronic heating system, except for zones, coordinating their operation through network communication. It can be used in applications ranging from a single zone of baseboard with an on/off boiler to multiple fan coils, mixed radiant floor zones, and a modulating/condensing boiler. This control regulates up to two heating water temperatures through Outdoor Reset and Indoor Temperature Feedback. It is capable of controlling a single on/off, dual stage, or modulating boiler, a mixing device, Domestic Hot Water, setpoint loads, and can connect up to 24 zones in total for each heating water temperature.



### Specifications

<b>Universal Reset Module 422 Two tN4, Mixing, Boiler, DHW, &amp; Setpoint</b>	
Literature	D422, W422, J422, D070
Control	Microprocessor PID control; This is not a safety (limit) control
Packaged weight	1.87 lb. (848 g)
Dimensions	3-5/8" H x 5-3/8" W x 9/16" D (92 x 137 x 14 mm)
Approvals	CSA C US, CSA/UL 61010-1, meets Class B: ICES & FCC Part 15
Ambient conditions	Indoor use only, 32 to 122°F (0 to 50°C), Max. RH 92% for temperatures up to 40°C, 50% RH at > 40°C, Altitude <6560 feet (2000 m), Installation Category II, Pollution Degree 2
Power Supply	Provided by interconnected (required) Zone Manager
DHW Pump Relay	115 V (ac) 5 A, 1/6 hp
Primary Pump Relay	115 V (ac) 5 A, 1/6 hp
Mixing P1 Relay	115 V (ac) 5 A, 1/6 hp
Var. Speed Pump	115 V (ac) 2.5 A, fuse T2.5 A 250 V
Combined Load	10 A Max. (for DHW, Primary, Mixing & Var. Speed Pump)
Floating Action Output	24 V (ac) 8 VA Maximum
Modulation Output	0-10 V (dc) Minimum 2500 Ω
Boiler Relay	115 V (ac) 5 A
Demands	20-260 V (ac) / 0.1 VA @ 24 V
Sensors	NTC thermistor, 10k Ω @ 77°F (25°C ± 0.2°C) β=3892
-Included	Outdoor Sensor 070 and 2 of Universal Sensor 082
Warranty	Limited 3 Year (See D422 for full warranty)

### Energy Saving Features

- Outdoor Temperature Reset
- Indoor Temperature Feedback up to 48 zones
- Warm Weather Shut Down
- Zone Synchronization
- DHW Post Purge

### Additional Features

- Expandable up to 48 zones
- Single on/off or modulating boiler control
- Variable Speed, or Floating action mixing control
- DHW control
- DHW Priority
- Automatic Boiler Differential
- Equipment Exercising
- Boiler Protection
- Powered pump outputs
- System Setback (with optional Timer)
- One touch overrides (with optional User Switch)

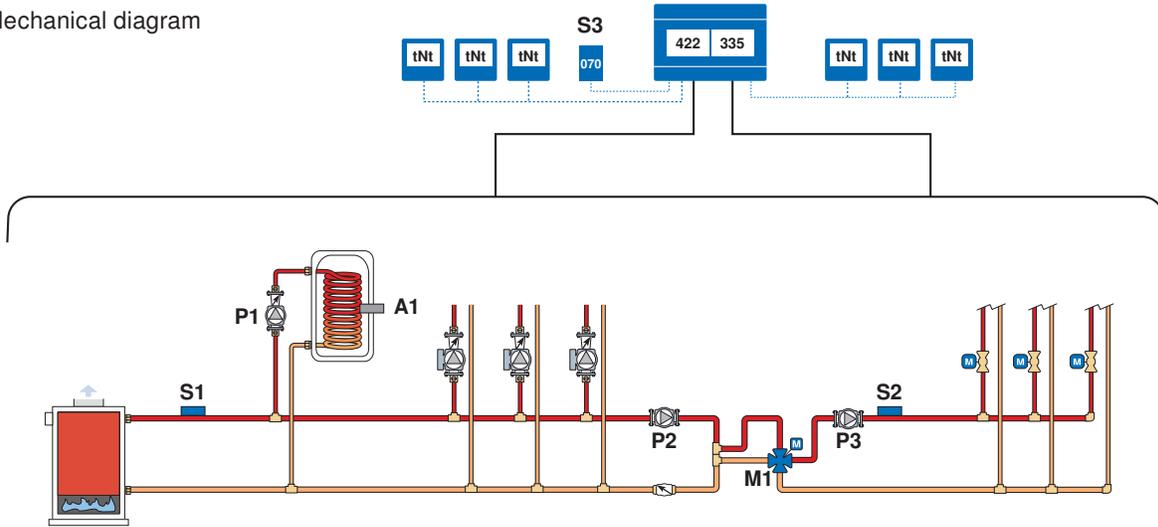
### SPECIAL REQUIREMENTS

Enclosure not included! Must be installed with a tekmarNet® Zone Manager or Power Manager for mounting and power.

## 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](http://www.tekmarcontrols.com).

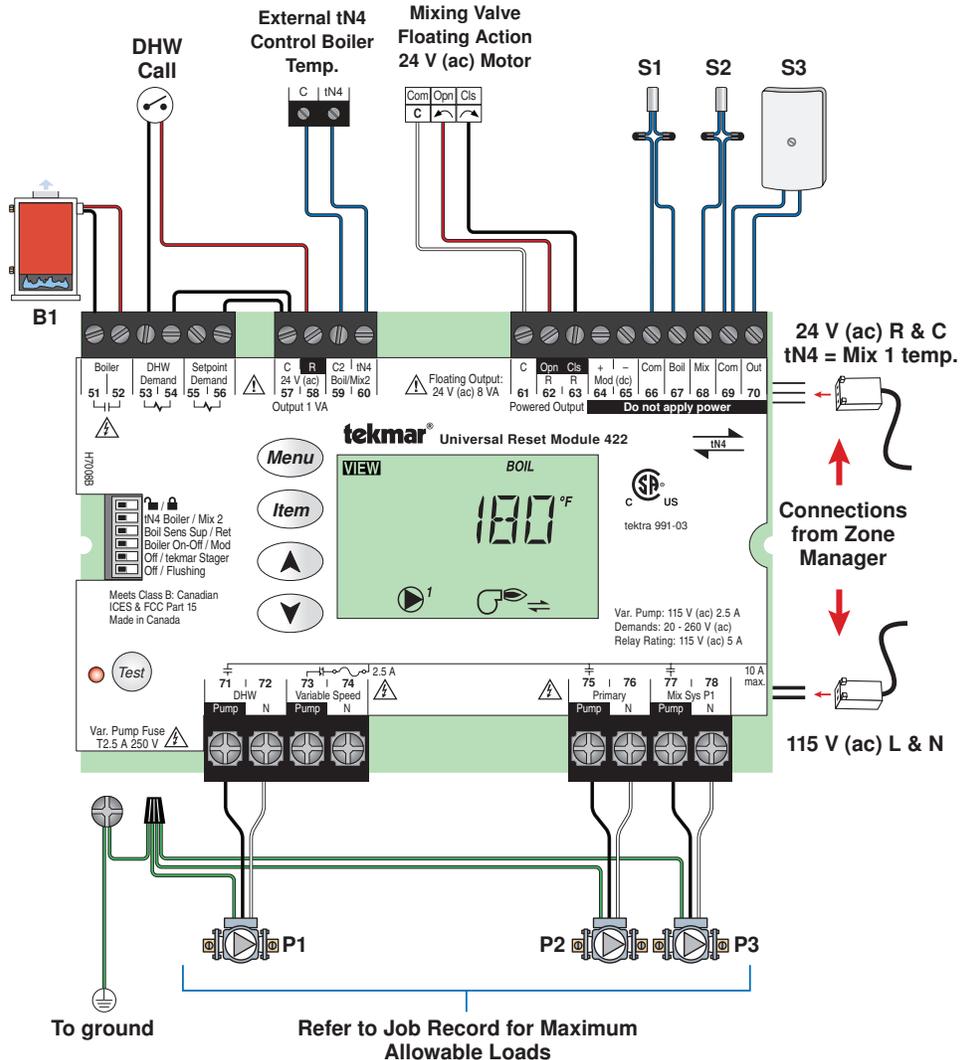
Sample Mechanical diagram



Sample Electrical diagram

### Legend

- A1 = DHW Aquastat
- B1 = On/Off Boiler
- M1 = Mixing Valve Actuator
- P1 = DHW Pump
- P2 = Boiler System Pump
- P3 = System Pump
- S1 = Boiler Sensor 082
- S2 = Mix Sensor 082
- S3 = Outdoor Sensor 070



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