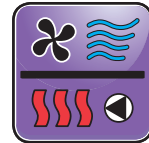


tekmar® Submittal

Mixing Reset Module 421



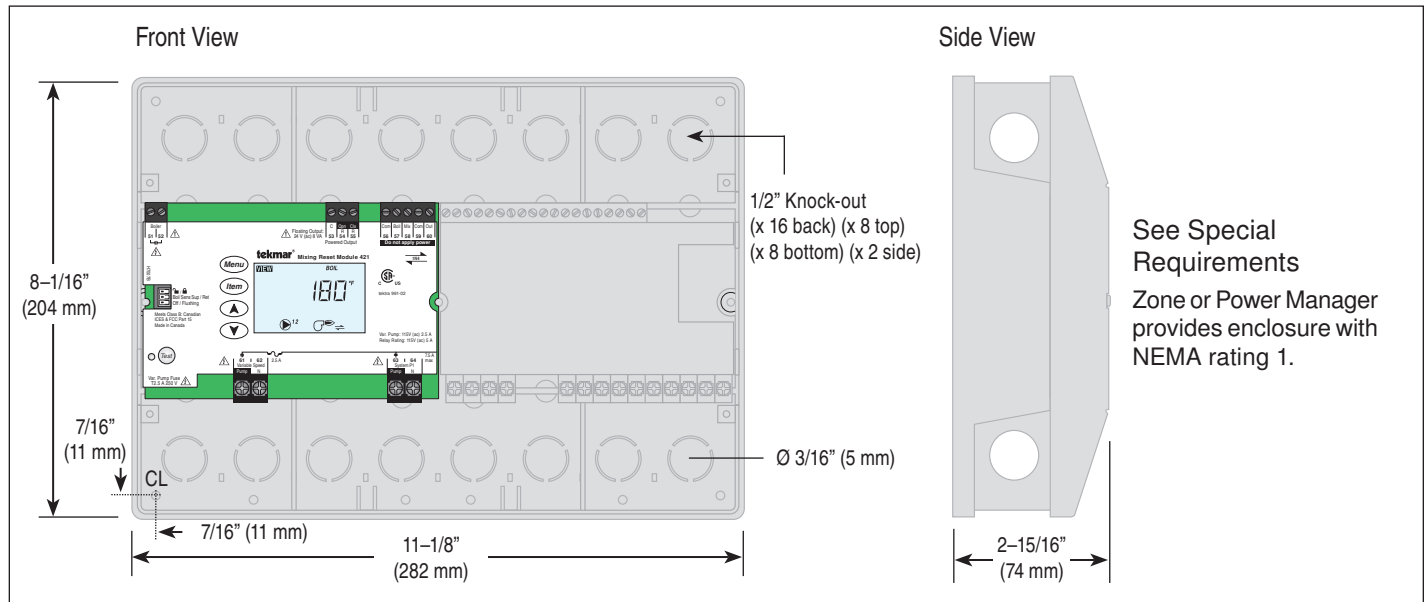
C421

01/11

HVAC Systems Replaces: New

Job _____ Designer _____ Contact _____

The Mixing Reset Module 421 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 mixed radiant with an on/off boiler, to multiple radiant floor zones with an on/off boiler. This control regulates one mixed heating water temperature through Outdoor Temperature Reset and Indoor Temperature Feedback. It is capable of controlling a single on/off boiler, floating action or variable speed injection mixing, and can connect up to 24 zones in total.



Specifications

Mixing Reset Module 421 One tN4, Mixing	
Literature	D421, W421, J421, D070
Control	Microprocessor control. This is not a safety (limit) control
Packaged weight	1.6 lb (730 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, meets Class B: ICES & FCC Part 15
Ambient conditions	Indoor use only, 32 to 122°F (0 to 50°C), RH ≤80% to 88°F (31°C), down to 50% above 104°F (40°C), Altitude <6560 ft. (2000 m), Installation Category II, Pollution Degree 2
Power supply	Provided by interconnected Zone Manager
System P1 pump relay	115 V (ac) 5 A, 1/6 hp
Variable speed pump	115 V (ac) 2.5 A, fuse T2.5 A 250 V
Combined load	7.5 A max (System and Variable Speed Pump)
Floating action output	24 V (ac) 8 VA max
Boiler relay	115 V (ac) 5 A
Demands	20 to 260 V (ac) / 0.1 VA @ 24 V
Sensors	NTC thermistor, 10 kΩ @ 77°F (25°C ±0.2°C) β=3892
—Included	Outdoor Sensor 070 and 2 of Universal Sensor 082
Warranty	Limited 3 Year (See D421 for full warranty)

Energy Saving Features

- Outdoor Temperature Reset
- Indoor Temperature Feedback up to 24 zones
- Warm Weather Shut Down
- Zone Synchronization
- System setback (with optional timer)
- One touch overrides (with optional User Switch)

Additional Features

- Expandable up to 24 zones
- Single on /off boiler control
- Variable speed, or floating action mixing control
- Automatic boiler differential
- Equipment Exercising
- Boiler Protection
- Powered pump outputs

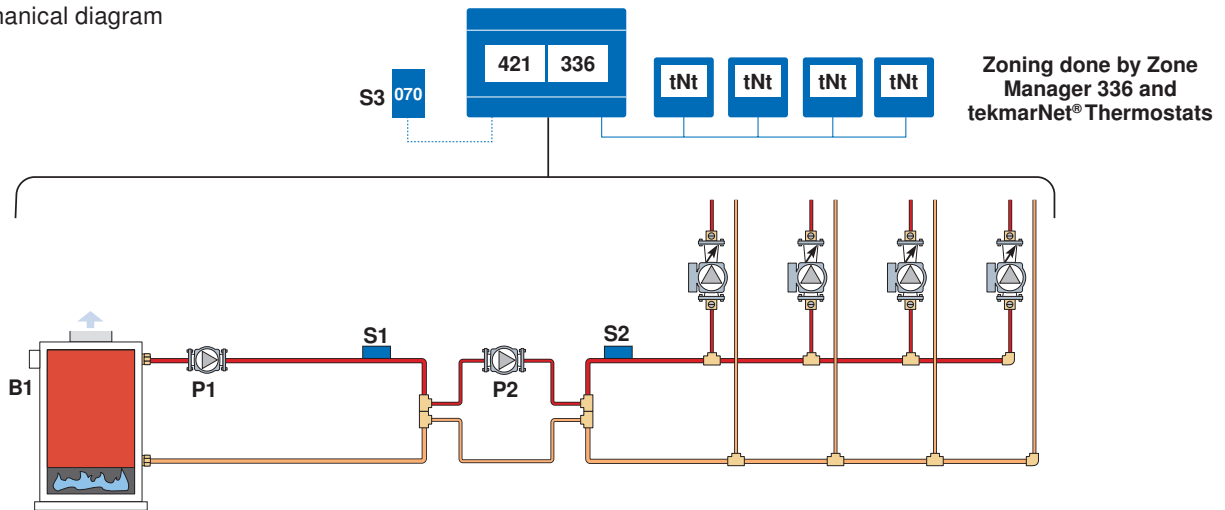
SPECIAL REQUIREMENTS

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.

Sample Mechanical diagram



Sample Electrical diagram

Legend

B1 = On / Off Boiler
P1 = Boiler pump
P2 = Variable Speed Injection Pump
S1 = Boiler Supply Sensor
S2 = Mix Supply Sensor
S3 = Outdoor Sensor

