

# tekmar® Submittal

## Mixing Expansion Module 444



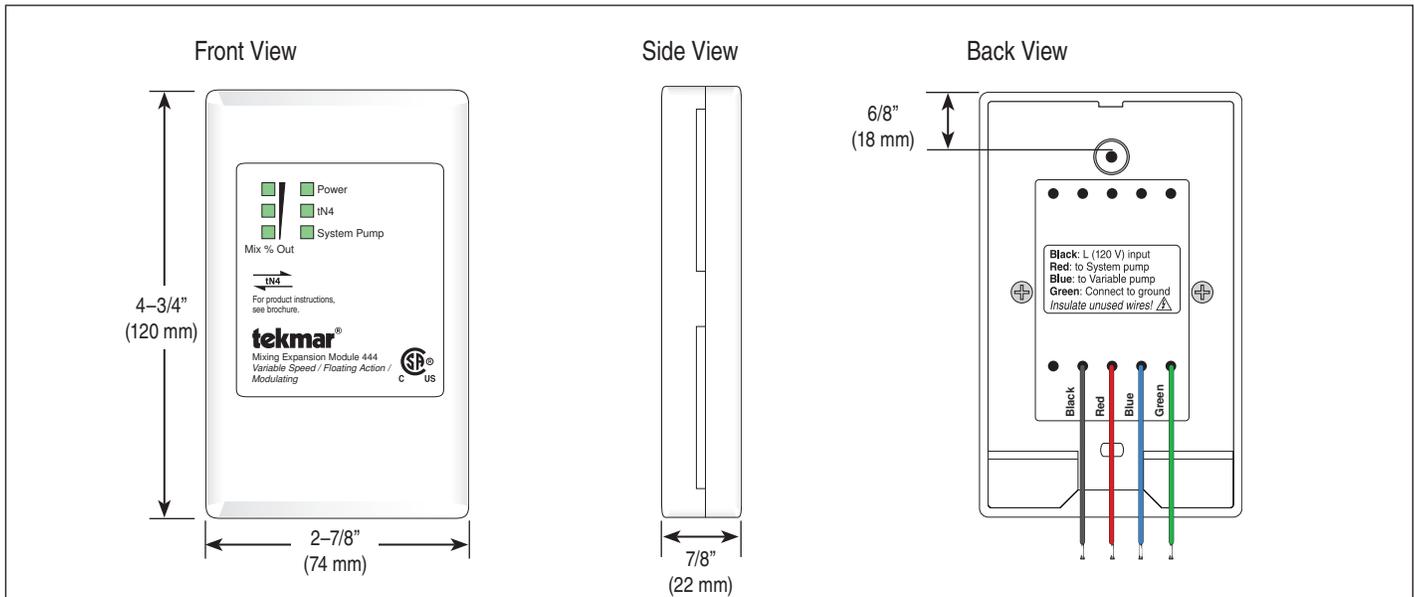
**C444**

01/11

HVAC Systems Replaces: New

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

The Mixing Expansion Module 444 is designed to operate a mixing device within a hydronic heating system as part of a tekmarNet® control system. It is capable of controlling a mixed system pump and six optional outputs for mixing: a variable speed injection pump, a floating action actuator, or an analog 0-10 V (dc), 2-10 V (dc), 0-20 mA, or 4-20 mA signal.



### Specifications

Mixing Expansion Module 444 Variable Speed / Floating Action / Modulating	
Literature	D444, W444, J444, D001, D070
Control	Microprocessor control. This is not a safety (limit) control
Packaged weight	1.1 lb. (500 g)
Dimensions	4-3/4" H x 2-7/8" W x 1-7/8" D (120 x 74 x 48 mm)
Enclosure	White PVC plastic
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 ≤92% to 104°F (40°C), and 50% above 104°F (40°C), Altitude <9840 ft. (3000 m), Pollution Degree 2
Power supply	24 V (ac) ±10%, 50/60 Hz, 4 VA standby, 56 VA fully loaded
System pump relay (front)	24 V (ac) 2A
System pump relay (back)	120 V (ac) 5A, 1/6 hp
Variable speed pump	120 V (ac) 2.4 A, internal overload circuit T2.5 A 250 V
Floating output	24 V (ac) 8 VA maximum, triac output, minimum 0.6 VA
Modulation output (voltage)	0-10V / 2-10 V (dc), minimum 10kΩ load
Modulation output (current)	0-20 mA / 4-20 mA, maximum 1kΩ load
Sensors	NTC thermistor, 10 kΩ @ 77°F (25°C ±0.2°C) β=3892
-Included	Universal Sensor 082
Warranty	Limited 3 Year (See D444 for full warranty)

### Features

- Requires a tekmarNet® 4 system control
- Powered variable speed injection pump
- Powered 24 V (ac) floating action output
- Analog 0-20 mA or 4-20 mA
- Analog 0-10 V (dc) or 2-10 V (dc)
- Powered 120 V (ac) system pump
- Powered 24 V (ac) system pump signal
- CSA C US certified for use in USA and Canada

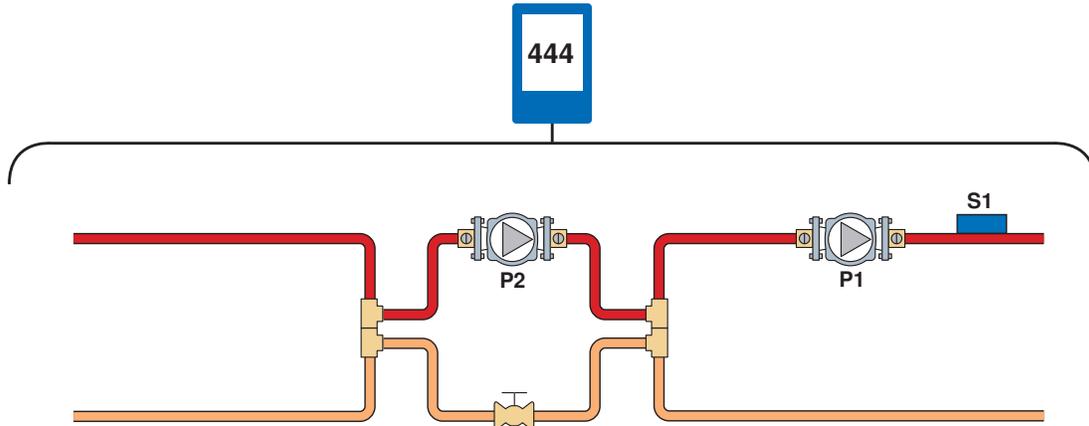
### SPECIAL REQUIREMENTS

Requires tekmarNet® system control with a mix bus (422 or 423). Designed for use with tekmarNet® thermostats.

# 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).

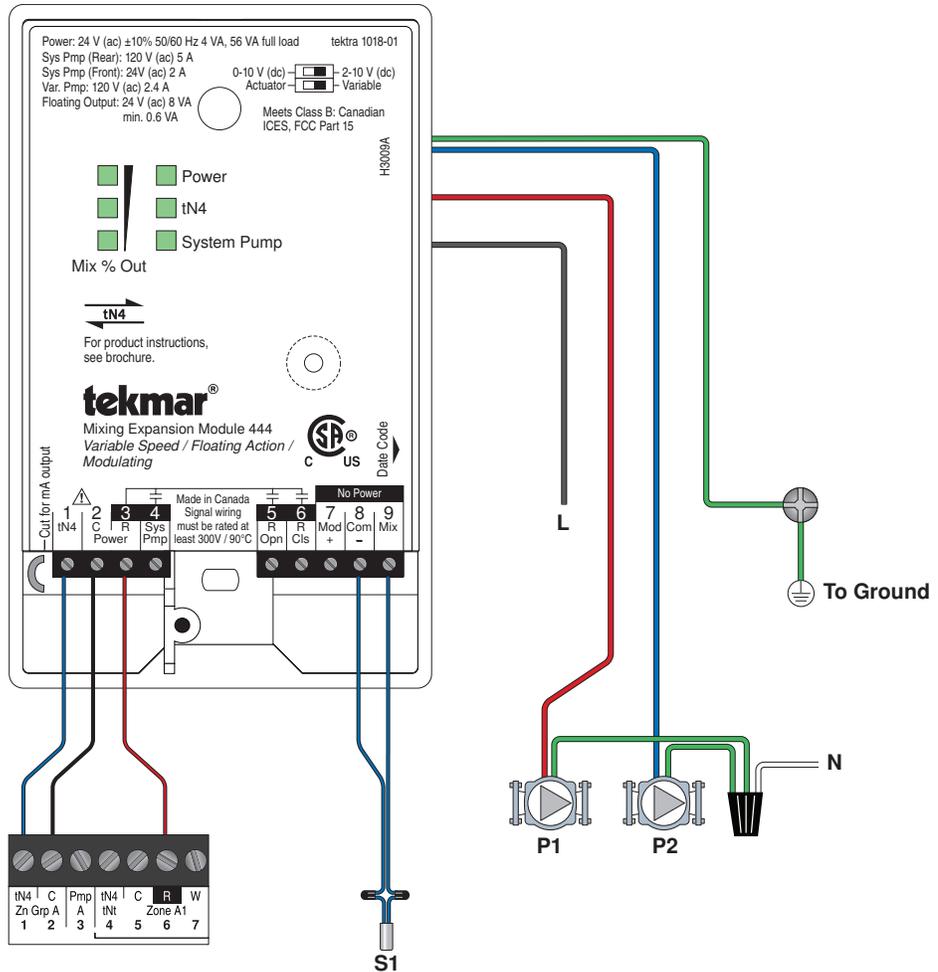
Sample Mechanical diagram



Sample Electrical diagram

**Legend**

- P1 = Mix System Pump**
- P2 = Variable Speed Injection Pump**
- S1 = Mix Supply Sensor**



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