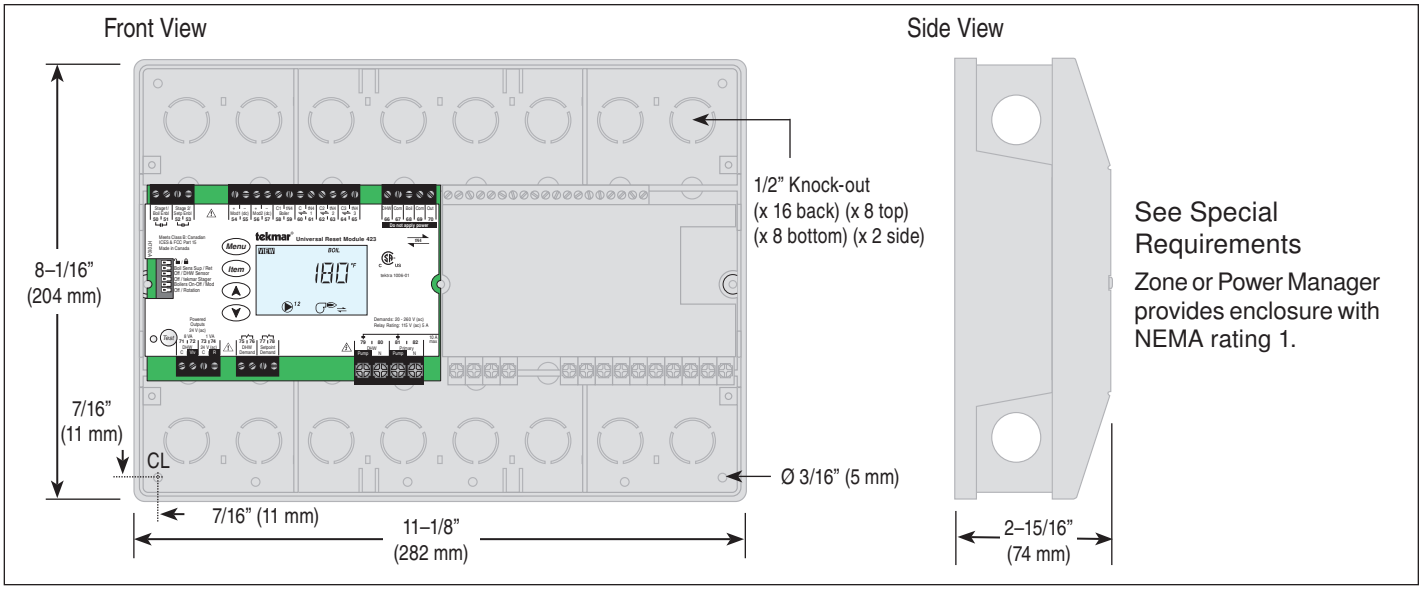
tekmar® Submittal
Universal Reset Module 423

C 423
01/11

HVAC Systems | Replaces: New

Job _____ Designer _____ Contact _____

The Universal Reset Module 423 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 four temperature systems comprised of multiple fan coils, baseboard, mixed radiant floor zones, and two modulating/condensing boilers. This control regulates up to four space heating water temperatures through Outdoor Reset and Indoor Temperature Feedback. It is capable of controlling two on/off or modulating boilers, Domestic Hot Water, setpoint loads, and can connect up to 24 zones for each space heating water temperature (96 in total).



Specifications

Universal Reset Module 423 *Four tN4, Two Boilers, DHW & Setpoint*	
Literature	D423, W423, J423, D070
Control	Microprocessor PID control; This is not a safety (limit) control
Packaged weight	1.83 lb. (830 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), RH ≤ 80% to 88°F (31°C), down to 50% from 104 to 122°F (40 to 50°C), Altitude <6560 feet (2000 m), Installation Category II, Pollution Degree 2
Power supply	Provided by interconnected Zone Manager
DHW pump relay	115 V (ac) 5 A, 1/6 hp
Primary pump relay	115 V (ac) 5 A, 1/6 hp
Combined load	10 A Maximum (for DHW and Primary Pump)
DHW valve 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, 10 kΩ @ 77°F (25°C ± 0.2°C) ß = 3892
–Included	Outdoor Sensor 070 and Universal Sensor 082
Warranty	Limited 3 Year (See D423 for full warranty)

Energy Saving Features

- Outdoor Temperature Reset
- Indoor Temperature Feedback up to 96 zones
- Warm Weather Shut Down
- Zone Synchronization
- DHW Post Purge

Additional Features

- Expandable up to 96 zones
- Two on/off or two modulating boiler control
- Controls up to 4 water temperatures (with use of up to 3 mix expansion modules)
- 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. Requires tekmarNet® mixing expansion module(s) to provide mixing. Designed for use with tekmarNet® thermostats.

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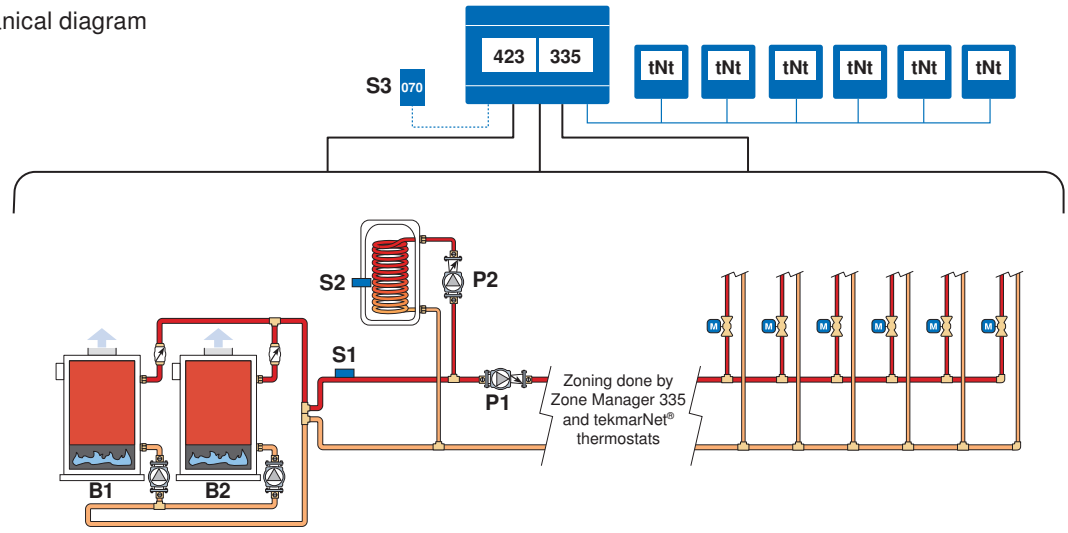
Sample Application Drawing

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.

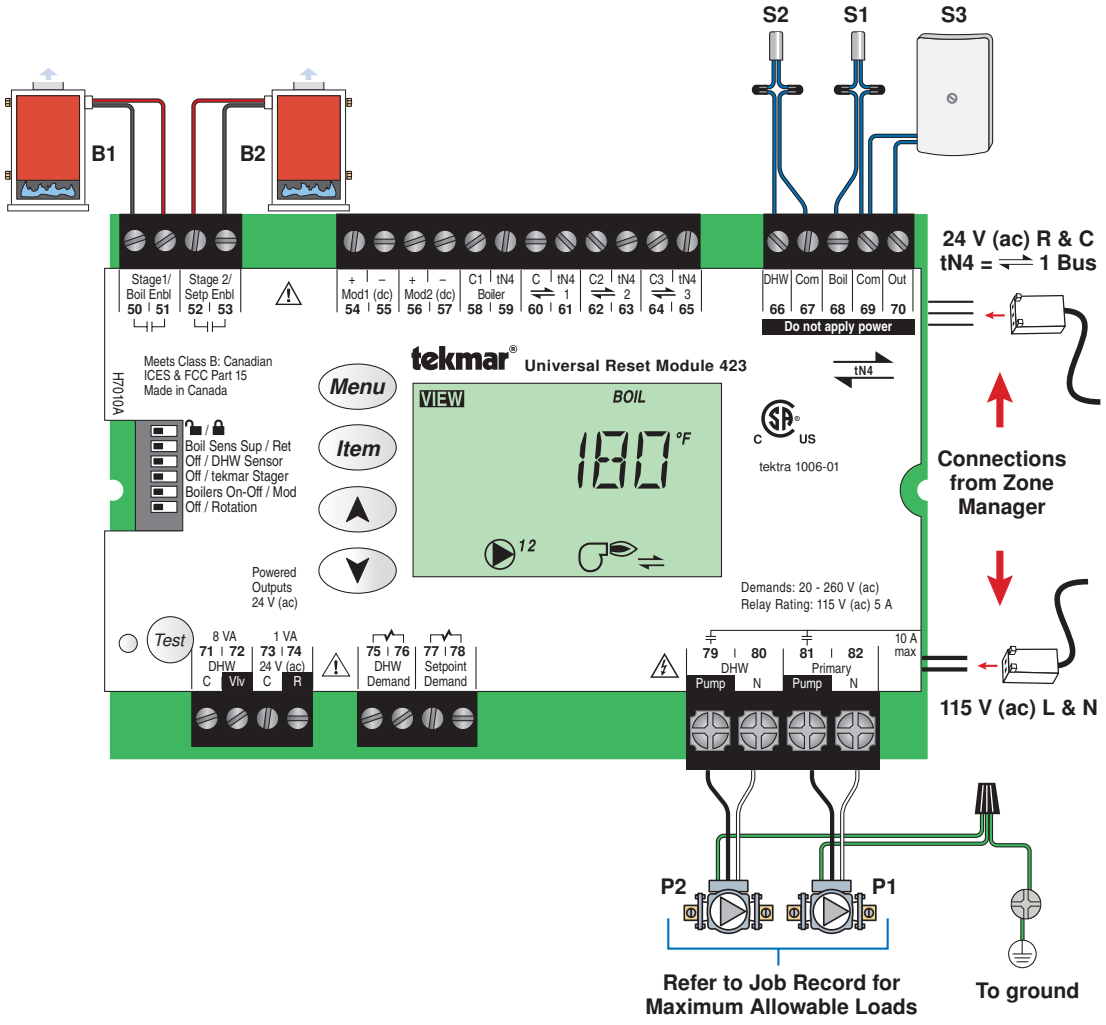
Sample Mechanical diagram



Sample Electrical diagram

Legend

B1 = On / Off Boiler 1
B2 = On / Off Boiler 2
P1 = Primary Pump
P2 = DHW Pump
S1 = Boiler Sensor
S2 = DHW Sensor
S3 = Outdoor Sensor



tekmar Control Systems

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