

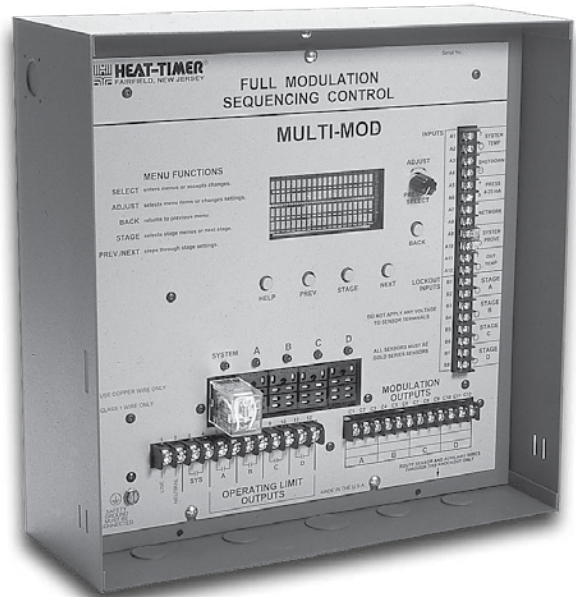
MODULATING SET POINT CONTROL

With • **Lead Lag Modulating Boiler Control**
• **Internet, BACnet, Phone, or RS232 Communication**

Multi-MOD Platinum

Description:

- **Sequences up to 4 Fully Modulating Stages for Temperature or Pressure Systems.** The Multi-MOD Platinum is the perfect control whenever multiple fully modulating stages are required for heating or cooling applications. The Multi-MOD Platinum controls the on/off and the modulation of each stage to maintain precise set point control using PID type control logic.
- **Controls 0-5V, 0-10V, 4-20mA, or 135Ω modulating motors.** The Multi-MOD Platinum is designed to accurately control the output from 0 to 100% of modulation for each of these different types of motors. One Multi-MOD Platinum can even control two different types of motors.
- **Digital Display of all System Settings.** The Multi-MOD Platinum's 80 character alphanumeric digital display names each system parameter in plain English and shows its precise value. The easy to follow menu system allows users to quickly make changes to any system setting without having to learn any specialized codes or keyboard commands. Password protection is available to prevent unauthorized users from making adjustments to control settings.
- **Automatic Rotation among Stages.** Rotating the first stage to be activated on a call for output promotes even wear on each stage. The Multi-MOD Platinum has three modes of rotation: Manual, First ON/First OFF, or automatically every selected time period from every hour to every 7 days.
- **Outdoor Reset Capability.** The Multi-MOD Platinum can be connected to existing or new Heat-Timer outdoor reset controls (HWR for hot water heat, or MPC for steam heat). The Multi-MOD Platinum also has built in hot water reset with adjustable reset ratios, offsets and outdoor cutoff.
- **Connects to Energy Management Systems.** All Multi-MOD Platins can be disabled by an Energy Management System (EMS) or other controller when there is no output requirement. The Multi-MOD Platinum can also accept a 4-20 mA input signal from an EMS to adjust the set point according to outdoor temperature or other factors.
- **Optional BACnet IP Communication.** With the BACnet option, a Multi-MOD Platinum can act as node in a BACnet network. A proprietary communication EMS/BMS can use their BACnet integration to place the Multi-MOD Platinum on their network.



- **Monitors Stage Status.** The Multi-MOD Platinum is designed to accept Lockout inputs from each stage. If any stage is in Lockout, the Multi-MOD Platinum will automatically skip it when adding more capacity. If a stage goes into Lockout during normal operation, the next stage will be activated immediately to maintain the desired output capacity.
- **Optional Remote Communication Add-On with Modem or Internet Connection Package.** Imagine being able to not just control your building heat from anywhere, but to be able to see boiler status, and temperature and pressure logs. In addition, you will be able to set and monitor wireless and hard wired sensors, configure and receive alarms and lockout status, configure and view histories, and more. Well, imagine no more. The Multi-MOD Platinum can be ordered with any of the communication packages that fit your needs. With that you can configure, set alarms and monitor a variety of sensors ranging from wireless, water meter, oil level, temperature, pressure, switch, and stack sensors.
- **Additional features include:** A purge timer, a low fire adjustment, a firing point setting for the next stage based on the firing rate of the current stage, a lag stage timer, a last stage hold adjustment, and many others.



*Ask About The Internet or The
BACnet Communication Options*



FEATURES

- All the following stage signal outputs are available: -
0-5 V or 0-10 V - 4-20 mA - 135 Ω
- The following are field selectable
- Rotation type: Manual, first on/first off, or automatic every adjustable time period from every hour to every 41 days
- Input type: Temperature, pressure, 4-20mA, or interface to outdoor reset controls HWR or MPC
- Temperature display: °Fahrenheit or °Celsius
- Lockout inputs for each stage allow the Multi-MOD Platinum to automatically begin activating the next stage if a stage goes into Lockout
- Capability of connecting to Heat-Timer network sensors or MIG box to monitor space temperatures, system temperature, pressure, oil tank levels, etc.
- A System output relay is provided and is energized when output is required. It will remain on for an adjustable time delay after the last stage turns off
- System Prove input must be made before stages are activated
- Adjustable PID type logic or throttling range controls stage loading/unloading
- Parallel loading mode—used when boiler recommends higher efficiencies at lower firing points
- Remote enable/disable function
- Remote set back feature
- Adjustable purge, lag stage delay, system run-on delay, and standby timers
- Adjustable ignition and modulation start points
- Lead stage will not turn off until the system temperature or pressure exceeds an adjustable range from the set point value, preventing short cycling of the lead stage
- The Multi-MOD Platinum can be configured to accept a 4-20mA signal to remotely change the set point
- System sensor can be located up to 500' from the control module
- System sensor reading, set point and stage information are constantly shown on the 80 character display
- Menu system provides digital display and precise adjustment of all settings
- Built-in password protection
- LEDs show status of each output relay
- Plug in field replaceable relays are rated at 6A resistive 1/3HP
- All settings and operating modes are stored permanently and maintain their values if power is lost
- Remote communication package available either at the time of order or as a field upgrade (Internet, BACnet, Phone Modem, or RS232)
- Hot water reset operation

BENEFITS

Easy to order, stock, or field upgrade

- The base Multi-MOD Platinum unit can accommodate temperature, pressure, or 4-20mA inputs, and 0-5V, 0-10V, 4-20mA and 135 Ω modulating motors.
- When ordering, you only need to specify the input sensor type and the output modulating motor type.
- If the system changes in the future, both sensors and output modules can be upgraded in the field.

Easy to install

A single 13" x 13" enclosure contains all Multi-MOD Platinum hardware and software.

- Only one sensor is required and it can be installed in any convenient location up to 500' from the Multi-MOD Platinum panel.
- Large, clearly marked 3/8" terminals facilitate wiring with standard screwdrivers.
- 80 character display and easy to use menu system guide you through all necessary settings.
- Every setting is displayed, eliminating guesswork about the precise value.

Easy to use

- After initial configuration, the Multi-MOD Platinum needs no further adjustment.
- Glancing at the 80 character display provides you with all the necessary operating information — system sensor value, setting, and output stage status.
- The PID algorithm will adjust for changes in load based on ambient conditions, outdoor conditions, or process demands.
- Lockout and System Prove inputs allow the Multi-MOD Platinum to quickly adjust to output stage or other system problems.
- The remote enable/disable function turns the Multi-MOD Platinum off automatically when no output is needed.

Fuel saving

- The Multi-MOD Platinum is unique among lead-lag systems in that is PID algorithm controls to precisely the desired set point. Unlike other systems, it does not bring all stages up to high modulation and then back them down until the desired set point is obtained. The Multi-MOD Platinum does not waste energy by activating unneeded stages and running them in the inefficient high modulation mode.
- The Multi-MOD Platinum has a built in Setback capability that lowers the set point when less output is required. This can be enabled from an EMS, a remote controller, or a manual switch.
- The remote enable/disable function allows an external control to shut the Multi-MOD Platinum down when no output is required, instead of relying on personnel to remember. For example, when the outdoor temperature rises above a desired point, a temperature controller output can disable the Multi-MOD Platinum.

- Multi-MOD Platinum's controlling heat can realize the fuel saving benefits of outdoor reset. Multi-MOD Platinums can be controlled by Heat-Timer's outdoor reset controls for hot water (HWR) or for steam heat (MPC). Multi-MOD Platinums can also accept a 4 20 mA input to change the set point based on an EMS reset schedule. The Multi-MOD Platinum can also be configured for direct hot water reset control.

Prolong output stage life

- The automatic lead stage rotation evenly distributes the wear on each output stage. No one stage is the last stage off.
- The available rotation schedule choices allow you to pick the optimum schedule for your output stages.
- The purge time sets the minimum run time for any stage, preventing harmful short cycling.
- Additional short cycling prevention is built-in to the Multi-

MOD Platinum software. As described in the previous section, on a cold start, the Multi-MOD Platinum does not bring all stages up to high modulation and then back them down. Stages are only enabled when they are required.

- Short cycling of the lead stage is minimized by the Last Stage Hold setting. This user adjustable range allows the system temperature or pressure to vary from the set point before turning the last stage off. This reduces lead stage cycling when there is a minimal load requirement.
- Stages are never turned off in high modulation, which can be very harmful. The Multi-MOD Platinum backs the modulation down to low before stages are turned off.

Multi-MOD Platinum SPECIFICATIONS

| | |
|--------------------------------------|-----------------------------------|
| Input Voltage | 120VAC |
| Power Consumption | 30VA |
| Operating Mode | Heating/Cooling |
| Lead Stage Rotation | |
| Manual | |
| First On/First Off | |
| Automatically | Every hour to every 41 days |
| Output Types | 0-5V, 0-10V, 420mA, 135Ω |
| Stage Modes | Off, Auto, On, Standby, Manual |
| Output Contacts | 5 SPST |
| Output Rating | 6A resistive, 1/3HP |
| Operating Ambient Temperature | 20 to 120°F |
| Enclosure | NEMA -1 |
| Dimensions | 13" x 13" x 5-1/2" |
| Weight | 14 Lbs |
| Sensor Accuracy | |
| Temperature | ±1°F (1°C) |
| Pressure | 1%FS |
| Temperature display | Field select °F or °C |
| Sensor Ranges | |
| Temperature | -30 to 250°F (-35 to 120°) |
| Pressure | .0 to 15, 30, 100, 200, or 300psi |
| Ignition Start Point | .1 to 50% |
| Modulation Start Point | .0% to 100% |
| Operating Mode | Normal or Process |
| Modulating Mode | Normal or Parallel |

| | |
|---|-------------------------|
| Purge Delay | 1.0 to 10.0 minutes |
| Lag Stage Delay | 0 to 60 minutes |
| System Run On Delay | 0 to 30 minutes |
| Standby Time | 0 to 60 minutes |
| Setback | |
| Temperature | 0 to 75°F (0 to 42°C) |
| Pressure (0-15 or 0-30) | 0-7.5 psi |
| Pressure (0-100) | 0-75psi |
| Pressure (0-200) | 0-150psi |
| Pressure (0-300) | 0-200psi |
| Last Stage Hold | |
| Temperature | 0 to 30°F (0 to 30°C) |
| Pressure (0-15 or 0-30) | 0-3psi |
| Pressure (0-100, 200, or 300) | 0-10% of range |
| Shutdown Input | Dry Contact Only |
| System Prove Input | Dry Contact Only |
| Lockout Inputs | Dry Contact Only |
| 4-20mA External Input | Pressure or temperature |
| Reset Ratio | 1-4, 4-1 |
| Reset Offset | (+40°F) (-40°F) |
| Remote Communication Options | |
| Phone (RIM) with Visual Gold Plus | |
| RS232 (RI) with Visual Gold Plus | |
| Internet (RINET) through www.htcontrols.com | |
| BACnet IP (BAC) | |

