

# STEAM CYCLING and SEQUENCING CONTROLS

- With
- Steam Cycling or Set Point
  - 8-Stage Control and Up To 24 Stages with Lockout
  - Space Feedback with Logic
  - Internet or BACnet Communication Options

## MPCQ Platinum



## Description:

**A unique Microprocessor Control to manage a Multi-Stage Steam Heating System Based on Outdoor Temperature or a Set Point.** The MPCQ Platinum Control series provides buildings with comfortable, even heat, yet maximizing fuel savings. In addition, it incorporates many features and flexibilities that can be customized to each application's unique characteristics.

- **Steam Heating using Cycling or Set Point.** The MPCQ Platinum control series is designed to sequence multiple steam single or multi-stage boilers. It can operate based on steam cycling which relies on the outdoor temperature or it can operate based on a specified Set Point. Each of the options has a set of pre-configured, but adjustable settings to meet the needs of each heating application.

- **Rotates up to 24 Boilers with Optional Lockout.** The MPCQ Platinum can rotate 8 stages as a stand-alone. By adding up to 2 Extension Panels each with 8 stages, it can rotate a total of 24 boilers. Furthermore, by using an Extension Panel, additional features, like Boiler Lockout, will be available.
- **Multiple Day and Night Schedules.** The control has a set of adjustable Night settings to help reduce fuel consumption. That in combination with the built-in 7-day programmable schedule, with 4 Day settings and 4 Night settings per day, can be used to customize the operation for even further temperature control and fuel savings.
- **PID Sequencing or Oversize Sequencing (OSS).** The PID responds based on the rate of change resulting in a more comfortable and stable building heat in addition to preventing stage short cycling. The OSS is a proportional sequencing. It relies on how far the System pressure is from the target set point. It can be used in process applications.
- **Optional Internet Remote Communication Add-On.** Imagine being able to not just control your building heat from anywhere, but to be able to see boiler status and temperature logs. In addition, you will be able to change schedules, set and monitor wireless and hard wired sensors, configure and receive alarms, configure and view histories, activate or deactivate sensors, and more. Well, imagine no more with the Internet communication package. With that you can configure, set alarms and monitor a variety of sensors ranging from wireless, water meter, oil level, temperature, switch, and stack sensors.
- **BACnet IP Communication Add-On.** With the BACnet option, an MPCQ Platinum can act as node in a BACnet network. A proprietary communication EMS/BMS can use their BACnet integration to place the MPCQ on their network.
- **Vari-Boost with Early Shutdown.** Another saving feature, the MPCQ Platinum allows buildings to switch to Night Setback mode earlier than scheduled based on mild outdoor temperatures.



*Ask About The Internet or The  
BACnet Communication Options*



- **Digital Display and Password Protection.** The MPCQ 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.
- **Memory.** With a built-in E-Prom, the MPCQ Platinum will never lose your settings even after a power outage or loss of battery power.
- **Space Feedback and Vacation Settings for Internet Applications.** Whenever an MPCQ Platinum is connected to the Internet, Space feedback from multiple space sensors can be activated for better heat control, in addition to a Vacation space temperature setting with start and end dates and times.
- **Boost and Vari-Boost.** To bring a building quickly back to comfortable temperatures after the cooler night period, the control has a built-in Boost feature. The Boost allows the system to run earlier than the day schedule based on outdoor temperature.

## Features:

- Built-in Steam Outdoor Reset (Steam Cycle) or Set Point - That, combined with the PID or OSS sequencing options Makes the MPCQ Platinum the control of choice for a variety of Steam applications.
- Rotates up to 24 Stages with Boiler Lockout Option - The MPCQ Platinum can rotate stages using time or First-On/First-Off options. Moreover, when used with the Extension Panels to control more stages, you'll get the opportunity to utilize the Boiler Lockout feature that is built-in the Extension Panels.
- Boiler Standby with Delay - Now you can set individual boilers to be either continuously On or Off in addition to the Automatic option. Further more, any boiler can be set to be a Standby with an adjustable delay.
- Adjustable System Delay. - The system relay can control a combustion air damper. The delay time can be used to bring fresh air to the boiler room to be available for the next firing.
- Scheduling - For additional savings, the MPCQ Platinum can control the Setback, Boost, and Early-Shutdown settings based on a 4 Day and 4 Night settings per day for a whole week.
- Built-in Prove and Shutdown - The Prove can be used to check the status of other equipment, such as the end switch on a combustion air damper prior to firing the boilers. Furthermore, Shutdown can be activated from any safety control feed back.
- Manual Bypass - Allow installers and contractors to test and override control settings when needed.
- Manual Shift - Allows for a temporary adjustable override of boiler operating schedule by switching between Day and Night. In addition, an Extended Day option is available to allow for the change of the schedule for a specified period.

### Remote Communication

- Remote Communication Option - Now you can connect your MPCQ Platinum control to the Internet or a BACnet IP system. Offering the capability to read, change, monitor, and analyze your settings in a variety of ways from virtually anywhere. (Requires either the Internet communication or the BACnet communication options.)
- Use Existing Sensors and/or Wireless Sensors and MIG Sensors - (only available with the Internet Communication Package.)
- Connect to as many as 64 sensors - When purchased with the Internet options, the MPCQ Platinum can monitor, activate, and deactivate alarms of up to 64 additional sensors. Some of these sensors can be wireless while others can monitor fuel levels, water meters, stack temperature, or smoke detectors.

# Specifications:

<b>Voltage Input:</b>	120 VAC 60 Hz
<b>Power Consumption:</b>	30 VA Max
<b>Operating Temperature:</b>	20°F/-7°C to 120°F/49°C
<b>Operating Humidity:</b>	20% to 80%
<b>Dimensions:</b>	13"W x 13" H x 5 1/2" D
<b>Weight:</b>	14 pounds
<b>Output Relay Ratings:</b>	1 Amp inductive, 6Amp resistive at 120 VAC 60 Hz, 15A total for all circuits
<b>Temperature Display:</b>	Fahrenheit or Celsius.
<b>Display:</b>	80 character Alphanumeric (4 rows with 20 characters each)
<b>LED:</b>	(1) System Output relay (RED LED), (8) Boiler Output relays (RED LED)
<b>Sensor Ranges:</b>	Outdoor temperature sensor - minus 35°F/-37°C to 250°F/ 121°C Pressure Transducer (0 - 30 psi)
<b>Day/Night Outdoor Cutoff Range:</b>	20°F/-7°C to 100°F/38°C
<b>Set Point Pressure Range:</b>	0 - 30 psi
<b>Setback:</b>	Pressure 0.0-10.0 psi
<b>Operating Mode:</b>	Cycle or Set Point
<b>Cycle Length:</b>	10 - 240 minutes
<b>Logic:</b>	PID Algorithm (Cycle or Set Point) or Oversize System (OSS) (Set Point Only)
<b>Boiler Type:</b>	On/Off, 2-Stage, 3-Stage, 4-Stage
<b>Sequencing Mode:</b>	Lo/Hi/Lo/Hi, Lo/Lo/Hi/Hi
<b>Sensor Fault Mode:</b>	Stages On, Stages Off
<b>Day/Night Heat Adjustment:</b>	A (Least Heat) through P (Most Heat)
<b>Reaction Time:</b>	1 to 10 minutes
<b>Minimum Boiler Run Time:</b>	1 to 10 minutes
<b>Stage Operation Modes:</b>	On, Off, Standby, Auto
<b>Standby Time Delay:</b>	0 to 60 minutes
<b>Stage Rotation Modes:</b>	Time ( 1 to 999 Hours (41 days)), Manual, <i>Last-On</i>
<b>Stage Sequencing:</b>	Lo/Hi/Lo/Hi or Lo/Lo/Hi/Hi
<b>Last-Stage-Hold:</b>	0.0 to 5.0 Psi
<b>Throttle:</b>	0.5 to 5.0 Psi
<b>Purge Delay:</b>	0.0 to 10.0 minutes
<b>System Run-On:</b>	0 to 360 minutes
<b>Schedules:</b>	4 Day Time and 4 Night Time (Setback) settings per day
<b>Morning Boost:</b>	Vari-Boost - Self-adjusting from 0 to 180 minutes Early Shutdown - Self-adjusting from 0 to 90 minutes Manual - Adjustable from 0 to 120 minutes
<b>Power Backup:</b>	Lithium coin battery, 100 days minimum 5 year replacement (Maintains Clock in power outages).
<b>Remote Communication Option:</b>	Internet (RINet) or BACnet IP (BAC)
<b>External Inputs:</b>	1 Network Input, 3 Aux Inputs, Shutdown Input, and Prove Input.
<b>Add-On Extension Panels:</b>	up to two Extension Panels using RS485, Each Panel with 8 stages
<b>Network Input Maximum Sensors:</b>	64 Neuron Sensors including MIG Sensors.
<b>Season:</b>	Winter and Summer.

## Item Description

## Part #

MPCQ Platinum

926790-00

MPCQ Platinum - Internet

926790-RINet

MPCQ Platinum - BACnet IP/MSTP

926790-BAC

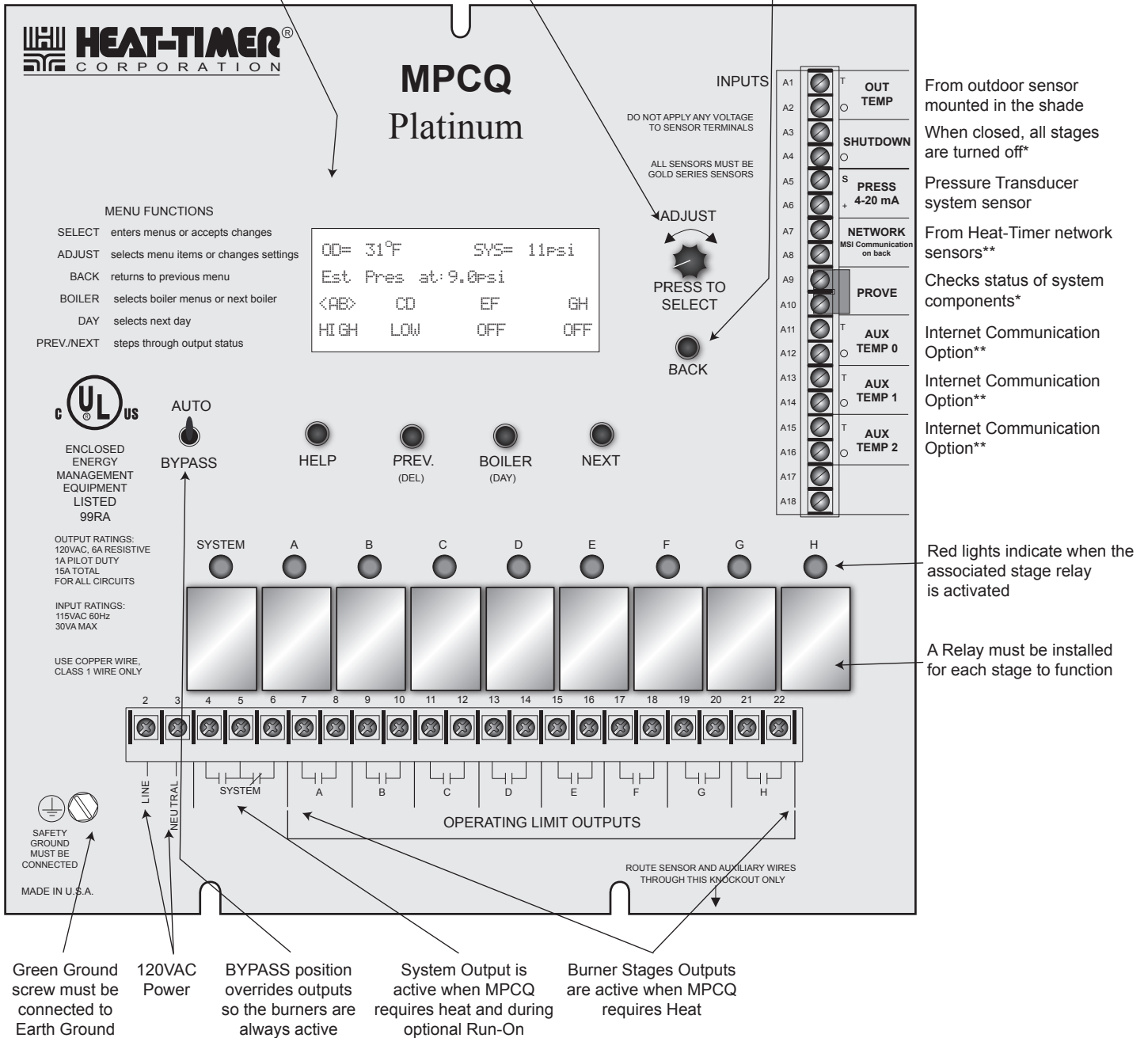


# MPCQ PLATINUM CONTROL

Digital display shows the system status, Target, outdoor, and system temperatures. To view and adjust settings, press the Adjust/Select button.

Depress the knob to move forward through the menus and to accept changes. To change a setting's value, rotate the knob.

Depress the button to go back through the menus



Green Ground screw must be connected to Earth Ground

120VAC Power

BYPASS position overrides outputs so the burners are always active

System Output is active when MPCQ requires heat and during optional Run-On

Burner Stages Outputs are active when MPCQ requires Heat

\* DRY CONTACT ONLY

\*\* Only available with the Internet Communications package

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ISO 9001:2008  
CERTIFIED