

# Boiler Alternator

## FEATURES

- Control Two or Three Boilers.
- Multi-Mode Selector Provides “Auto” and “Clock” Sequencing, As Well As Lead Boiler Selection.
- Individual Boiler Auto/Manual Switches Can Be Provided for Maximum Flexibility.
- Boiler Status Indicators Operate in Any Mode.
- DEP approved; UL and CUL pending.

## APPLICATION

The **Hays Cleveland Model C-05820 BOILER LEAD ALTERNATOR** is simple, economical, and suitable for any two- or three-boiler installation, operating on either steam pressure or hot water temperature. **Modbus communication** for interfacing with SCADA or other controls is standard.

The **Model C-05820** provides alternator-type sequencing logic to automatically fire the boilers as required to meet changing load conditions. The boilers continue to operate from their own modulation controls. Remote pressure or temperature switches for each boiler provide an input signal for the alternator.

## OPERATION

The operator can choose from the following sequencing options:

- 1) Selector position **AUTO**: The lead boiler is changed automatically after every firing cycle.
- 2) Selector position **#1, #2** or **#3**: The selected lead boiler is fixed until the operator changes the setting.
- 3) Selector position **CLOCK**: An external 7-day timer can be used to change the lead boiler at times programmed by the

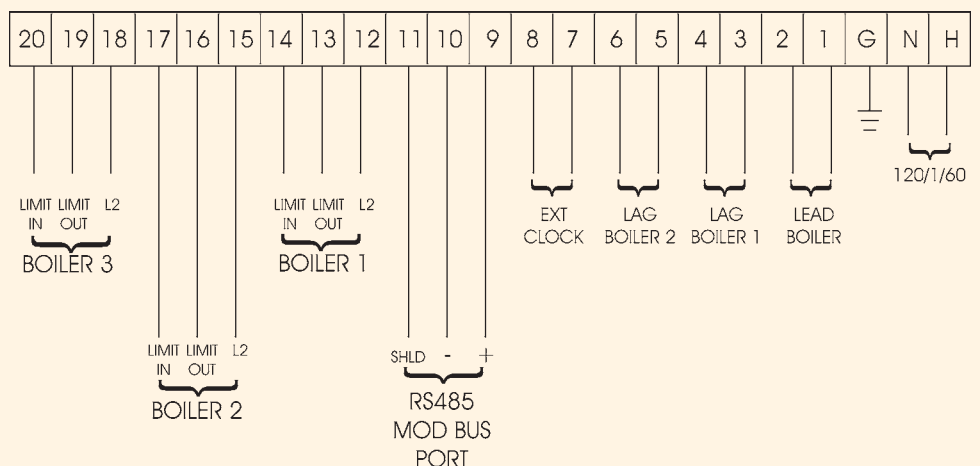
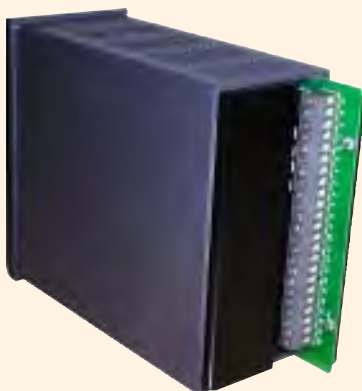


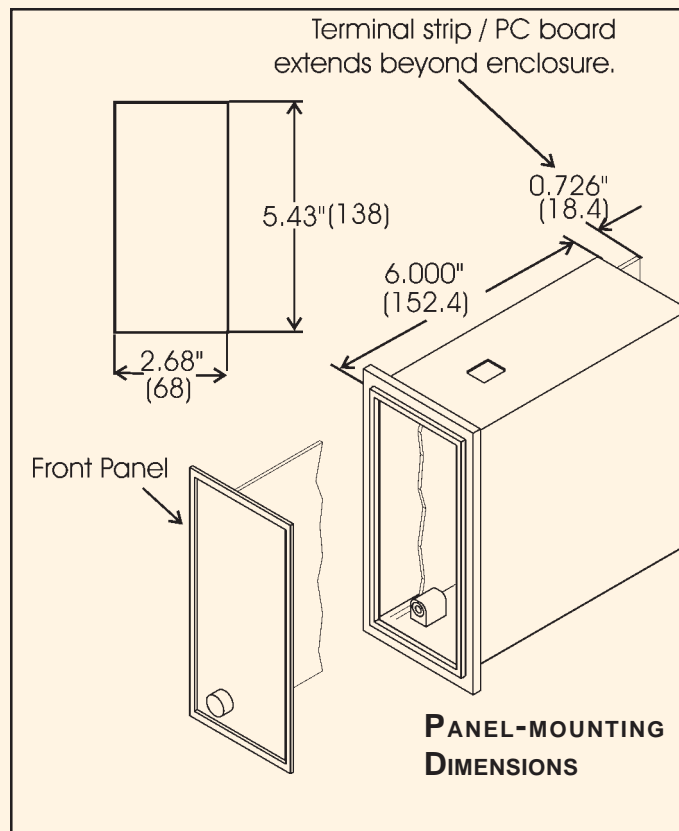
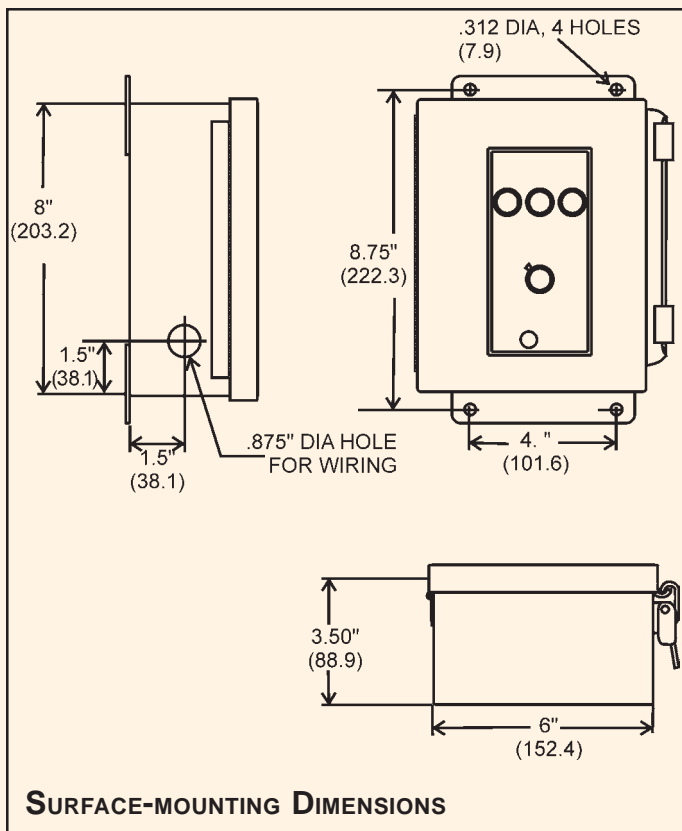
TYPICAL 3-BOILER ALTERNATOR

operator. The changeover will not interrupt the boilers during the firing cycle, but will occur at the first opportunity after all boilers are offline. Recommended clocks include the PARAGON® 7007-00, INTERMATIC® V4640, and TORK® W 220.

**Boiler status lights** for each boiler are located on the front of the alternator housing. They light to indicate that a boiler has come online.

The **Hays Cleveland Model C-05820 BOILER ALTERNATOR** can be equipped with an optional Auto/Manual switch for each boiler. The manual position permits the operator to bypass the lead lag control and use local boiler limits to turn the boilers on and off. With the switches in the automatic position, the boilers are under the control of the alternator functions. (**Note:** NYC DEP units are not equipped with Auto/Manual switches.)





## SPECIFICATIONS

- Power Requirements:** 120 v AC  $\pm$ 10, 50/60 Hz., 10 va.
- Indicator Lights:** Neon lamps for Boilers #1, #2 and #3\*.
- Function Switch (Lead Boiler Select):**  
 Three Boilers (5 Modes): Auto - Boiler #1 - Boiler #2 - Boiler #3 - Clock.  
 Two Boilers (4 Modes): Auto - Boiler #1 - Boiler #2 - Clock.
- Manual/Auto Switch\*:**  
 2-Position toggle switch, one per boiler.
- Electrical Connections:** 23-pole terminal block.
- Relay Contact Rating:** 10 amp, non-inductive to 120 v AC, 50/60 Hz.
- Fuse:** one, @ 1 amp.
- Mounting:** Flush (panel) or surface (wall) mountable housings available.
- Construction:** Durable plastic construction (panel-mounted) or rugged steel box (surface-mounted).
- Ambient Temperature Limits for Housing:** 32 to 130F (0 to 54C).
- Relative Humidity:** 0-90%, non-condensing.
- Shipping Weight:** 3 lbs. (approx).
- Approvals:** NYC DEP approved. UL and CUL pending.
- Specifications Subject to Change**  
 \* = Optional.

## HOW TO ORDER

The basic catalog number for the **Hays Cleveland Model C-05820 BOILER ALTERNATOR** is shown below. Replace suffixes A through E with the desired selections from the table below.

### C-05820-\*0-ABCDE

**A Number of Boilers.**

- 2 = Two.
- 3 = Three.

**B Application.**

- 1 = Steam pressure.
- 2 = Hot water temperature.

**C Enclosure.**

- 1 = Surface-mounting unit.
- 2 = Panel-mounting unit.

**D Manual/Auto Switches.**

- 1 = Switches included: internal (standard).
- 2 = No switches. Meets NYC DEP requirements.

**E Function Switch (4-mode or 5-mode) Location:**

- 1 = Switch inside unit (standard).
- 2 = Switch on front of unit (option).

\*Current Model Designation.

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