

# CHIEF DISPATCHER MODULATING LEAD/LAG CONTROLLERS

## Overview

### Better Steam or Hot Water System Control

- Model available for steam, hot water, and condensing boilers
- “Smart” boiler sequencing to improve response time
- Steam boiler “Base Load Auto-Shift” reduces cycling
- Hot water boiler “Header” or “Boiler” pump sequencing
- Firetube boiler thermal shock protection using blend valves
- Condensing boiler logic maximizes lower firing rate operation to increase efficiency

### Easy to Use

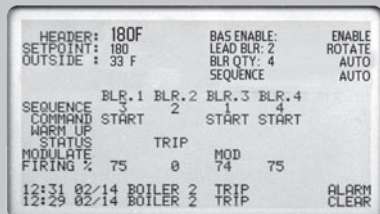
- “Plant Overview”, “Alarm”, “Historical Trend” and “Setup” displays enable informed initial setup and process assessment
- In a single wall-mounted enclosure, the Chief Dispatcher integrates a modem for off-site monitoring, RS485 Modbus communications, 24VDC power supplies and outdoor reset functions. No external control devices are required

### Easy to Order, Stock and Field Upgrade

- Complete system is ordered using a single part number
- “Plug In” option boards can be used to upgrade a system in the field

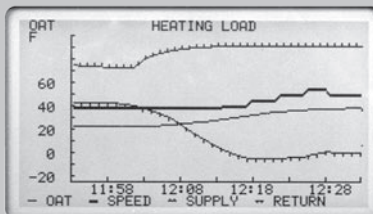


### LCD Graphic Display



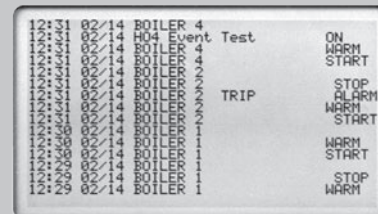
#### Plant Overview Display(s)

At a glance control and monitoring of boiler status and lead/lag sequence.



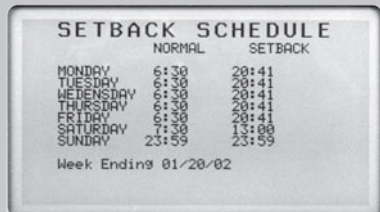
#### Historical Trend Display(s)

An essential monitoring tool. Multiple (4) Pen “Charts” are included.



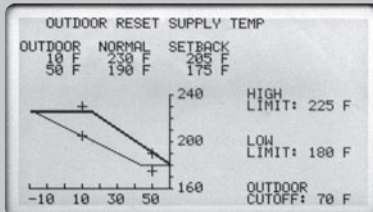
#### Alarm/Event Summary Display

Up to 200 Alarms, events and operator actions are logged with time, date stamp, and description.



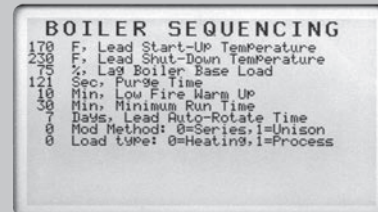
#### Setback Display(s)

Simple Day/Night/Week Setback setup.



#### Outdoor Reset Display

Easily configure normal and setback setpoints and limits. A graphical representation is automatically generated.

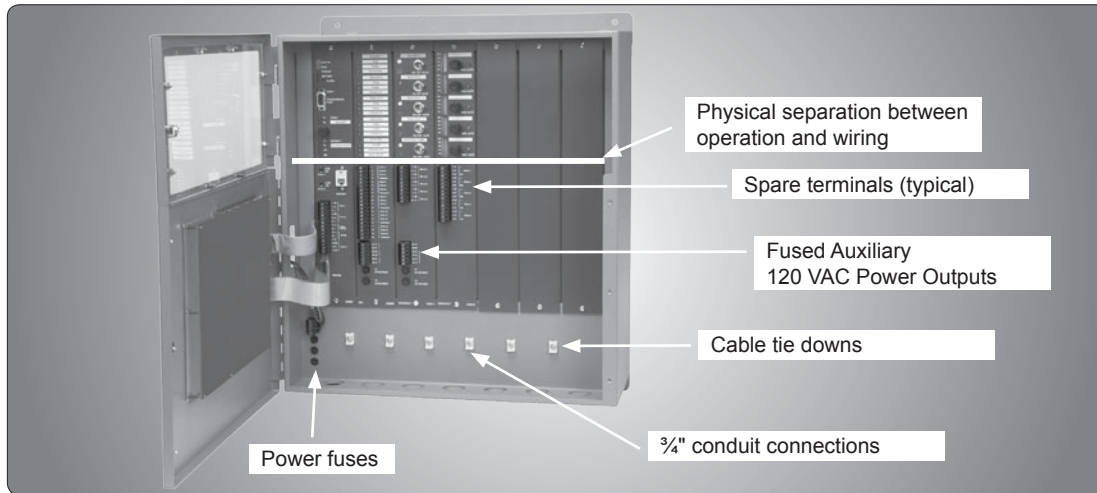


#### Boiler Setup Displays

Simple Menu style “Fill-In-The-Blanks” setup.

# CHIEF DISPATCHER MODULATING LEAD/LAG CONTROLLERS

## Overview



Chief Dispatcher with both doors open

### “Smart” Boiler Sequencing

Boilers are automatically sequenced on/off to ensure that the number of boilers in service meets steam or hot water demand. If any boiler fails to start when called, or if a boiler trips during operation, the Chief Dispatcher immediately starts another boiler to replace the “Faulted” boiler. The operator may manually select the Lead boiler or allow the Lead Boiler to rotate automatically. Additionally, the total number of boilers in service may be set automatically or manually as selected by the operator or all boilers may be shutdown by a Building Automation System (BAS) “Enable/Disable” contact input.

### “Hard Manual” Backup

Hardwired control switches and dials provide simple manual control for easy troubleshooting and service. Each boiler has an individual firing rate bargraph, “Manual” firing rate output knob, and “Auto/Manual” switch.

### Modbus Communication Interface

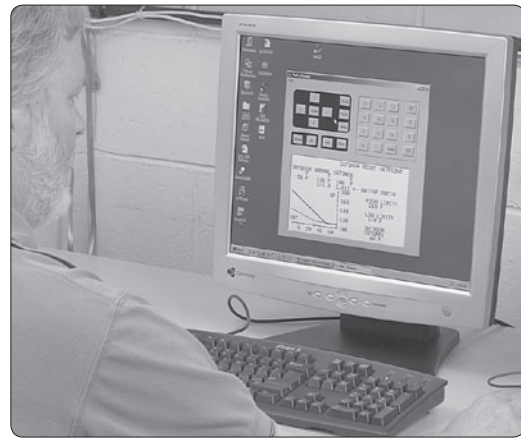
A factory configured RS485 Modbus interface is available for Building Automation or SCADA system monitoring and control.

### Building Automation System (Option ‘-BAS’)

A remote Hot Water Supply (HWS) temperature setpoint is set by either a Modbus or 4-20 mADC Building Automation System (BAS) Outdoor Reset input signal.

### Historical Trending (Option p/n 190604)

Easy to use four pen charts allow quick system assessment and maintenance monitoring such as hot water temperature and boiler operating hour trends. Up to 32 analog values plus up to 32 discrete values can be stored every 1, 5, 15, or 60 seconds. The historical memory can store 1 to 6 months of data (number of points monitored, sample interval, and data compression ratio affect duration).



PWC\_Remote™ Software

### Firing Rate Output (Option “-I” or “-P”)

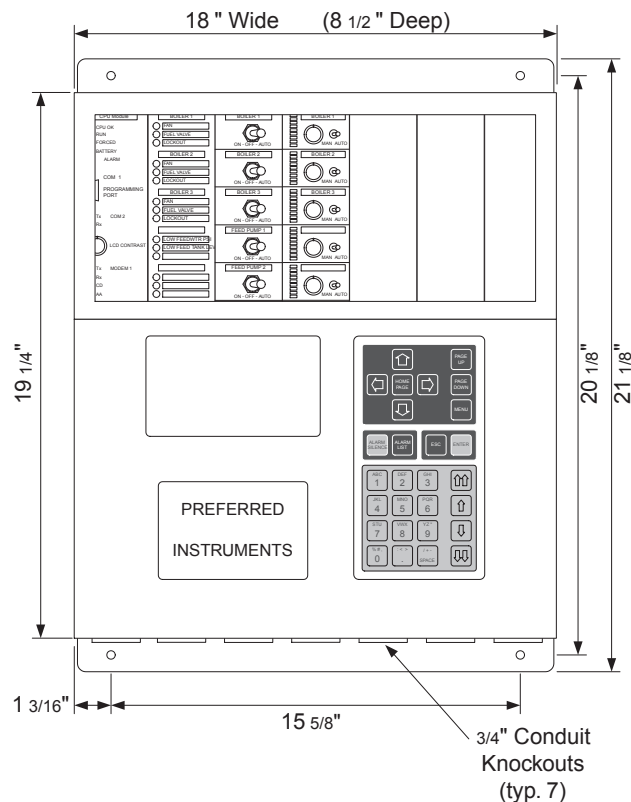
Boiler Firing Rate Analog Output Cards may be ordered as ‘-P’ = 0-135 ohm or ‘-I’ = 4-20 mADC.

### Telephone Modem (option p/n 190603)

The internally mounted Telephone Modem permits the Chief Dispatcher to “dial out” to an alphanumeric pager and allows a user to “dial in” to the Chief Dispatcher to view all displays and make tuning adjustments. Selected alarms cause the modem to dial a pager service center telephone number. A 20-digit phone number can include outside line codes, access codes, and pauses. The message can include a 30-character facility name plus a 20-character alarm message. Upon receipt of the page, the user can “dial in” to the modem to acknowledge the message. Using PWC\_Remote™ software, which is included with the Telephone Modem (option p/n 190603), a remote user is able to “dial in” to the modem and view any screen and remotely “press” any keypad button just as if they were standing in front of the controller. PWC\_Remote™ software running on the user’s personal computer can “dial in” to any Chief Dispatcher site.

# CHIEF DISPATCHER MODULATING LEAD/LAG CONTROLLERS

## Specifications



### Mechanical

Case Size:	16½" H x 14½" W x 6¾" D
Enclosure Type:	Wall mounted
Case:	7 Slot, (CPU + 6 I/O Slots)
Weight:	55 lbs.

### Environmental

Operating Temp:	32° to 122° F (0° to 50° C)
Storage Temp:	-20° to 150° F (-28° to 65° C)
Humidity Limits:	15% to 95% (noncondensing)
Enclosure:	NEMA 1

### Performance

Accuracy:	0.025% Analog I/O
Resolution:	16 bit input/12 bit output
Microprocessor:	32 bit, 128k EEPROM
Execution Cycle:	Five per second
Time/Date Clock:	(battery backed)

### Operator Control Panel

LCD Graphic Display:	2.9" H x 5.1" W
Keyboard:	Membrane, tactile feedback

### Historical Data (Optional)

Displays:	8 or 40 minute or 2, 8 or 24 hour charts
Memory:	Non-Volatile, 128 MB 48 points every second for 30 days.

### Configuration

Standard Lead/Lag:	Menu style "Fill-In-The-Blanks" setup.
Control Language:	Function block style, 60 functions, 600 Blocks
Security:	2 password levels
Custom Blockware	
Configuration Software:	<b>PWC_Edit™</b> spread sheet based or <b>PWC_Draw™</b> graphical, editor. (Windows PC Required)

### Communication

Control Network:	
Protocol:	Modbus (ASCII or RTU mode)
Speed:	1200 to 38,400 baud
Type:	RS485, optically isolated
Telephone Modem (optional):	
	Internal Card 33,600 baud, RJ-11 Jack, Data and Pagers
Printer Port:	Alarms/Logs, DB25F connector
Programming Port:	
Speed:	9600 to 38,400 baud
Type:	RS232, DB9F connector

### Electrical

Input Power:	120 VAC (+/- 15%), 12 A total, 0.7A internal Built in surge suppressors
Internal Power Supply:	24 VDC @ 300 mADC for external use