

For Single or Multi-System Process Applications

MBC600 SERIES SPECIFICATIONS

GENERAL

The controller shall provide microprocessor based control of a boiler system. Accurately control the level of dissolved solids based on $\mu\text{S}/\text{cm}$ on a timed, held or continuous sample basis and on select models, control the alkalinity of system water in units of pH.

Controller shall also provide:

- Up to four user selectable timers (depending upon model selection) that will operate in any one of four modes.
- A manually entered data collection field with ten user defined fields and units, stored in controller's history.
- Four single-point drum level inputs.
- Multiple security levels.
- One or two point calibration.
- Ability to reset relay "ON" times with date/time stamp.
- Calibration date/time stamp.
- Up to two water meter input capability.
- Alarm powered and dry contact relays.
- Optional 4-20mA input and output capability.
- Alarm LED, relay and callback control.
- Configurable eight line backlit display.
- Convenient keypad menu access, display contrast adjustment and HOA relay control.
- Lockable viewing window.
- Self charging capacitor to maintain time and history for up to two weeks in the event of a power loss to controller.
- EEPROM protection of operating parameters during extended power outages.
- Relay, drum level alarm, general alarm, flow alarm and power status LED's.
- Configuration for conduit connections is standard.
- Remote communications capability via direct serial line or modem connection.

CONTROL FUNCTIONS

All continuously monitored sensor input functions (conductivity and pH) will provide user definable set points for maintaining a specific value within the system. Each set point will have a user definable differential as the control band, programmable high and low alarm points and user defined limit timer for the control function.

CHEMICAL FEED TIMERS

The chemical feed timers shall be user selectable as any one of the following:

- *Percent* - User will be able to select a percent "ON" time of a user defined "cycle" time.
- *Limit* - Timer will run as controller bleeds until a user programmed "limit" time is met or the bleed is satisfied.
- *Percent of Post-Bleed with Limit Timer* - Timer will run for a user defined percentage of the bleed time after bleed is satisfied with a fail safe user set maximum run time.
- *Pulse Timer* - Timer initiated from dry contacting head water meter. User can define timer run time, water meter input and contact accumulation before timer initiation.
- *Disabled* - Timer can be totally deactivated.

REMOTE COMMUNICATIONS

The controller shall have the optional capability of serial communications using PULSAworks software. The serial communications can occur either by direct RS232 port, or remotely via an optional internal modem. PULSAworks allows the user to access real-time system values, remotely change operating parameters, and perform controller diagnostics. The user may download data history files and save files to disk. History files may be viewed and printed in table or graph form. The graph form can be user customized. The optional internal modem allows the controller to perform alarm call back for alarm condition notification to a pager or computer running PULSAworks software.

MBC600 SERIES SPECIFICATIONS

MODELS:

MBC610 - Boiler conductivity controller with one blow down timer, four tagable timers, two water meter totalizer, four single point drum level inputs, one temp. compensated boiler sensor with stainless steel bushing, alarm dry contact and alarm relay.

MBC620 - Dual boiler conductivity controller with two blow down timers, four tagable timers, two water meter totalizers, four single point drum level inputs, two temperature compensated boiler sensors with stainless steel bushings, alarm dry contact and alarm relay.

MBC630 - Triple boiler conductivity controller with three blow down timers, three tagable timers, three water meter totalizers, four single point drum level inputs, three temperature compensated boiler sensors with stainless steel bushings, alarm dry contact and alarm relay.

MBC640 - Boiler conductivity/condensate pH controller with one blow down timer, one pH limit timer, four tagable timers, two water meter totalizers, four single point drum level inputs, one temperature compensated boiler sensor with stainless steel bushing, one pH sensor, alarm dry contact and alarm relay.

STANDARD FEATURES:

MODEL	COND CONTROL	pH	PROG. TIMERS	4-20mA Options ²		LEVEL INPUT ¹	WM INPUT
				OUTPUT	INPUT		
MBC610	1		4	4	4	4	2
MBC620	2		4	4	4	4	2
MBC630	3		3	4	4	4	3
MBC640	1	1	4	4	4	4	2

1 Level inputs are single point.

2. 4-20mA options are not standard, but up to four of each can be added.

OPTIONS: (refer to price book for additional information)

Position	Description
Position 6 MBC60 _ ?	4-20mA Outputs / Inputs
Position 7 MBC600 _ ?	Conductivity Sensor Type
Position 8 MBC600 _ _ ?	pH Sensor Type
Position 9 MBC600 _ _ _ ?	Communications Option
Position 10 MBC600 _ _ _ _ ?	Agency Approvals / Private Label Option

FEATURES/SPECIFICATIONS:

Enclosure	Nema 4X - High Impact Resistant Polystyrene
Power Requirements	90 - 250 VAC @ 50/60 Hz, 100 VA
Control Output	Line Voltage @ 600 VA Per Relay (5 amps @ 120 VAC)
Display (8 line)	64 X 128 Pixels Dot Matrix, Back Lit Graphics Display
Recessed Front Panel Power Switch	Standard
Lockable Viewing Window	Standard
Hi / Lo Alarm Indicator	Standard
10 Bit A/D resolution	Standard
Standard pH Scale	0 - 14 pH
Conductivity Scales	0-500, 0-2,000, 0-5,000, 0-10,000 and 0-20,000 μ S/cm
Front Panel H/O/A Control	Standard
Analog Inputs	Four
Analog Outputs	Four
Digital Level Inputs	Four
Alarm Dry Contact Outputs	Two - NO/NO
Relay Outputs (Powered)	Six - NO/NC (one alarm)
Timers (Tagable)	Programmable
Security Code	Multi-level
Accuracy - At point of measure excluding sensor	+/- 1%
Environment	0 - 125° F -17.8 - 52° C 100% Humidity
Shipping Weight	approx. 20 lbs (9.2 kgs)

DIMENSIONS:

