OctoPro+

User's Guide

Sep-22

Table of Contents

1 General

Thank you for purchasing the Octopus Controls OctoPro+ unit. OctoPro+ is specifically designed for Single Boiler Plant Rooms. It can be configured to perform various functionalities.

Please refer to the order code on your OctoPro+ Nameplate, and the below explanation of the various options, to make sure that the purchased unit is adapted to your application.

OctoPro+	Boiler Management System, supporting Boiler Load Control, Boiler Level Control, Stack Interlock, Automatic Blow Down System, Economizer Monitoring, Feed Pump Control, Feed Tank Temperature and Level Control, Auxiliary Signals Monitoring.	
-PI	Boiler Load Control based on System Pressure, via the included Pressure Sensor	For On-Off, 2-Stage, 3-Stage or 4-20mA Modulation Servomotors
-PR	Boiler Load Control based on System Pressure, via the included Pressure Sensor	for 0-135 Ohm Modulation Servomotors
-TI	Boiler Load Control based on System Temperature, via the included Temperature Sensor	for On-Off, 2-Stage, 3-Stage or 4-20mA Modulation Servomotors
-TR	Boiler Load Control based on System Temperature, via the included Temperature Sensor	for 0-135 Ohm Modulation Servomotors
-LPI	Level Probes for Interlock (Low Water, High Water)	
-LPC	Level Probes for Pump Control (Pump On, Pump Off)	
-LT	Level Monitoring with Level Transmitter	
-LV100	Level Monitoring and 1" Modulated Feed Valve, 3-Way	
-LV125	Level Monitoring and 1.25" Modulated Feed Valve, 3-Way	
-LV150	Level Monitoring and 1.5" Modulated Feed Valve, 3-Way	
-LV200	Level Monitoring and 2" Modulated Feed Valve, 3-Way	
-ST	Stack Temperature Monitoring and Interlock	
-BD050	Automatic BlowDown, TDS sensor and 1/2" Motorised Valve	
-BDT050	Automatic BlowDown, Timer Based and 1/2" Motorised Valve	
-FT050	FeedTank Temperature Sensor, and 1/2” Steam Solenoid Valve	
-FT075	FeedTank Temperature Sensor, and 3/4” Steam Solenoid Valve	
-FT100	FeedTank Temperature Sensor, and 1” Steam Solenoid Valve	
-FT125	FeedTank Temperature Sensor and 1.25” Motorized Valve	
-FT150	FeedTank Temperature Sensor and 1.5” Motorized Valve	
-FL075	FeedTank Level Sensor and ¾” MakeUp Solenoid Valve	
-FL100	FeedTank Level Sensor and 1” MakeUp Solenoid Valve	
-FLP075	FeedTank Level Probes and ¾” MakeUp Solenoid Valve	With Low Water probe
-FLP100	FeedTank Level Probes and 1” MakeUp Solenoid Valve	With Low Water probe
-EC	Economizer Monitoring with (3) Temperature Sensors	

Note : Scan the QR Code on the Nameplate to download the present Guide.

Below you can find an outline of each of the possible OctoPro+ functionalities

1.1 Boiler Load Control Functionality

Based on Measured Value (Pressure for Steam Boilers or Temperature for Hot Water Boilers), OctoPro+ will:

- Shut Off the boiler on Operating Limit Cut-Out, and turn it on again at Cut-in setting.

- Issue Firing rate signal to burner, in order to maintain Setpoint.
- Provide Low Fire Hold Functionality based on Time or Measured Value.
- Provide High Limit Cut Off based on Measured Value.
- Provide Manual Modulation and High-Fire Modulation Limit for Modulating Burners.

Also,

- On-Off, 2-Stage, 3-stage and Full Modulation burners are supported.
- 4-20mA or 0-135 Ohm control motors are supported. (To be specified on Order).

1.2 Boiler Level Monitoring and Control Functionality

For Steam Boilers, OctoPro+ will control water Level, based on signal from a level transmitter or from level probes. OctoPro+ can handle intermittent feed pump operation, or continuous running pumps with modulated feedwater valves.

For Hot Water Boilers, OctoPro+ supports Low Water Cut Off Probe.

1.3 FeedPumps Control Functionality (Steam Boiler)

OctoPro+ will allow selection of Duty/StandBy Feed Pump, and will enable manual/automatic operation of feed pumps.

1.4 Stack Interlock Functionality

OctoPro+ will monitor boiler stack temperature and will actuate a dry Contact if Pre-set limit is exceeded. This contact can either be wired in the burner interlock strings to force a burner shutdown in the case of high stack temperature, or it can be connected to an external alarm device to signal the need for boiler fireside cleaning.

1.5 Automatic BlowDown Functionality (Steam Boiler)

OctoPro+ will perform Automatic BlowDown Scheme as follows :

- At regular time intervals , it will open the surface blowdown valve for a predetermined time, then close it.
- After an idling time(hold time), it will measure the conductivity level (TDS) and compare it to setpoint.
- If found below limit, valve will be kept closed.
- If found above limit, another sample is taken until TDS level drops below limit.

CAUTION: OctoPro+ Automatic Blow Down Functionality is designed to be installed on Surface blowdown connections only. Octopus Controls is not responsible of any consequences of installation on Bottom Blow Down, or in any way contrary to the present recommendation.

1.6 Feed Tank Temperature Control Functionality (Aux2) (Steam Boiler)

When Aux2 input is configured for Feed Tank Temperature Control, OctoPro+ will monitor the Feed Tank Temperature and will open/close the steam preheating valve in order to maintain temperature in the tank near the needed setpoint.

Also, configurable alarms on High And Low Temperatures are provided.

1.7 Feed Tank Level Control Functionality (Aux1)

When Aux1 input is configured for Feed Tank Level Control, OctoPro+ will monitor the Feed Tank Water Level, (through a level transmitter or level probes) and will open/close the make-up valve in order to maintain level in the tank near the needed setpoint.

Also, Low Tank water level Alarm is supported.

1.8 Economizer Monitoring Functionality (Aux 3,4,5)

When Aux3,4,5 inputs are configured for Economizer Functionality, Octopro+ will monitor the Economizer flue gas outlet temperature, as well as the water inlet and outlet temperatures.

1.9 Auxiliary Inputs Functionalities

When not configured for a dedicated function (See above) Aux1 to Aux5 can be freely configured to monitor any auxiliary Analog signal in the BoilerRoom. The Signal Label is freely configurable.

OctoPro+

Installation and configuration

2 Wiring

The below schematics describe the wiring of the various components to the OctoPro+ Panel.

Analog and Digital Inputs are wired to the indicated terminal Numbers on the Terminal Junction Bar.

Relay Outputs are directly wired to the Output Relays, indicated by the Relay Number R1, R2… and the terminals on this relay.

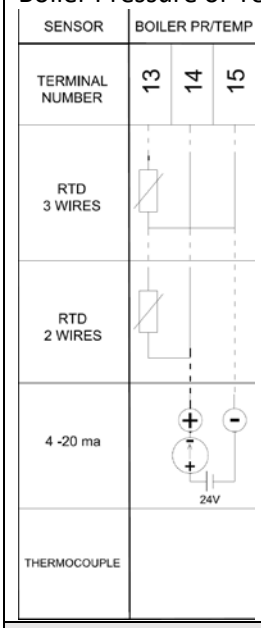
2.1 Main Power

Panel is to be powered with 220V/1ph/50Hz, connected to terminals L,N and G.

2.2 Boiler Load Control

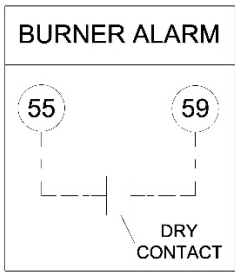
INPUTS

Boiler Pressure or Temperature



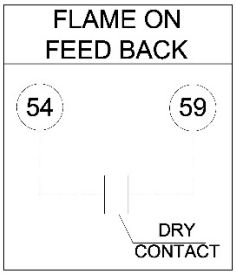
Burner Alarm

In case Burner controller has an output for signaling burner Alarm Condition.

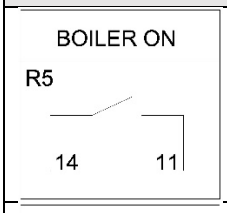


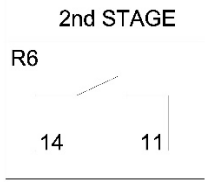
FLAME Feedback

In case Burner controller has an output for signaling Flame Signal Detection.

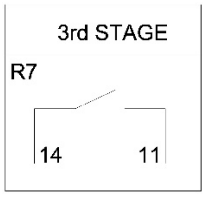


OUTPUTS

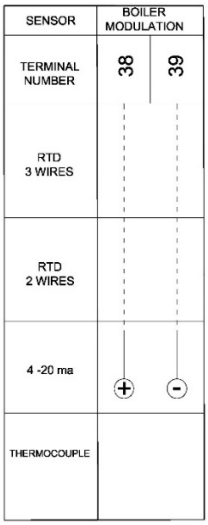




For 2-stage or 3-stage Burners.



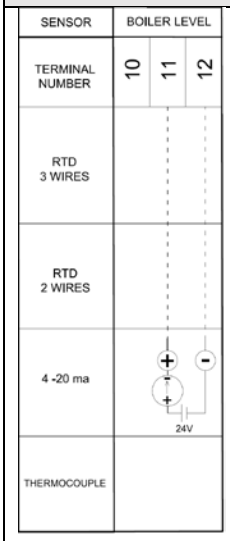
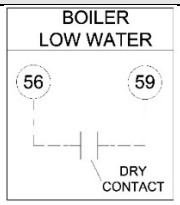
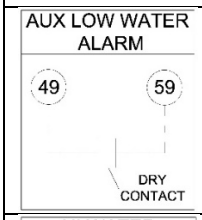
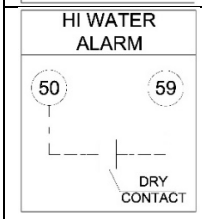
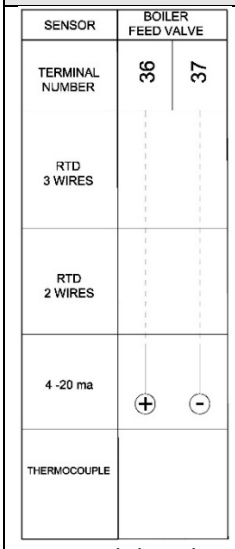
For 3-stage Burners.



For Modulating Burners with 4-20mA

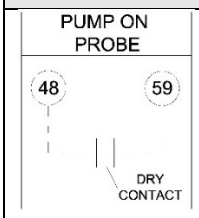
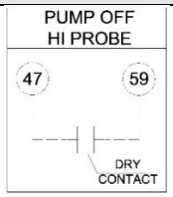
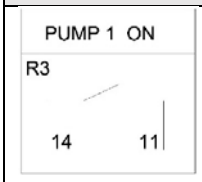
2.3 Boiler Level Monitoring and Control

- CAUTION : Although OctoPro+ is equipped for signaling/handling the Auxiliary Low Water Cut Off functionality, the EXTERNAL functionality of shutting down the burner on extra-low-water should be kept external to the Octopro+, as it should remain in effect even in case of any malfunction of OctoPro+. Octopus Controls is not responsible of any consequences of installation that does not follow this recommendation.

<table>
<tr><td colspan="3">INPUTS</td></tr>
<tr><td rowspan="3"> 
</td><td> 
</td><td>This is the Primary Low Water Probe. Will shut down burner.
For Float Switches with Differential similar to McD&M150S, use these terminals for Low Water CO.</td></tr>
<tr><td> 
</td><td>This is the Auxiliary Low Water Probe. Will shut down burner. See CAUTION above.</td></tr>
<tr><td> 
</td></tr>
<tr><td colspan="3">OUTPUTS</td></tr>
<tr><td> 

For Modulated Feed Valve, 4-20mA</td><td colspan="2"></td></tr>
</table>

2.4 Boiler FeedPumps Control

<table>
<tr><td colspan="4">INPUTS</td></tr>
<tr>
<td> 
</td>
<td>Level receding below this probe level will turn on Feed Water Pump.
For Float Switches with Differential similar to McD&M150S, use these terminals for Pump Control</td>
<td> 
</td>
<td>Level exceeding this probe level will turn off Feed Water Pump.</td>
</tr>
<tr><td colspan="4">OUTPUTS</td></tr>
<tr>
<td colspan="2"> 
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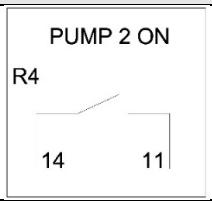
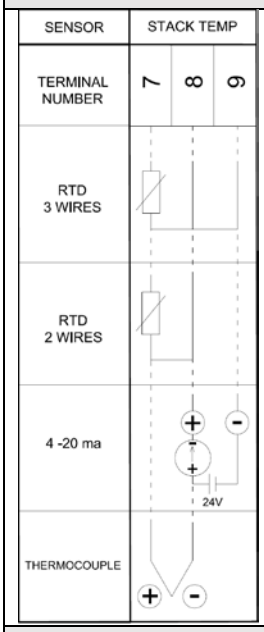
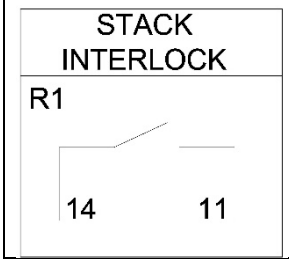
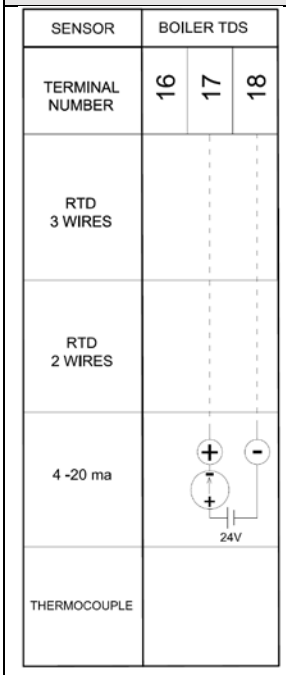
<td colspan="2"> 
</td>
</tr>
</table>

2.5 Stack Interlock

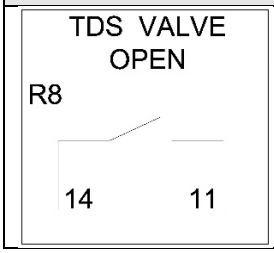
INPUTS			
			
OUTPUTS			
			

2.6 Automatic BlowDown

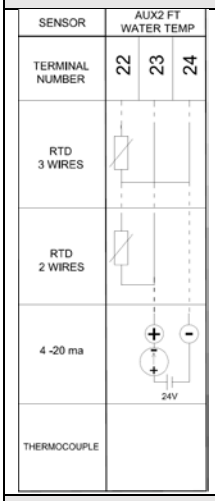
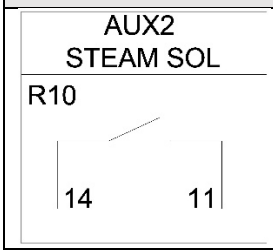
INPUTS



OUTPUTS



2.7 FeedTank Temperature Control

INPUTS			
			
OUTPUTS			
			

2.8 FeedTank Level Control

<table>
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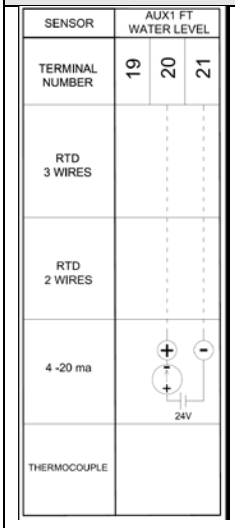
<td rowspan="3"> 
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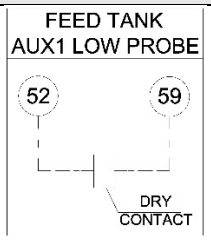
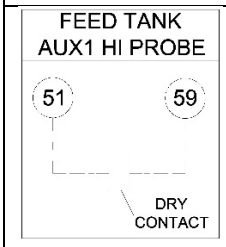
<td rowspan="3"></td>
<td> 
</td>
<td>Level receding below this probe will open Make-Up Valve.</td>
</tr>
<tr>
<td> 
</td>
<td>Level exceeding this probe will close Make-Up Valve.</td>
</tr>
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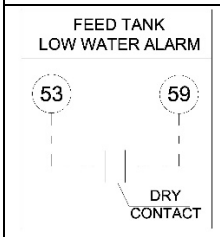
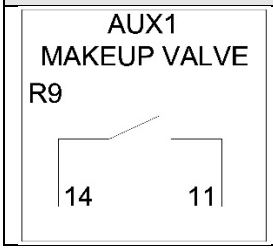
<td> 
</td>
<td>Level receding below this probe will trigger an alarm.</td>
</tr>
<tr><td colspan="4">OUTPUTS</td></tr>
<tr>
<td colspan="2"> 
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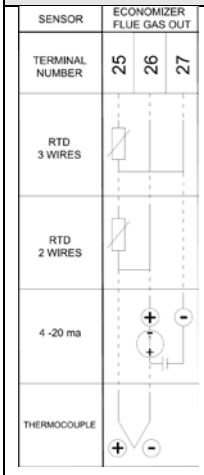
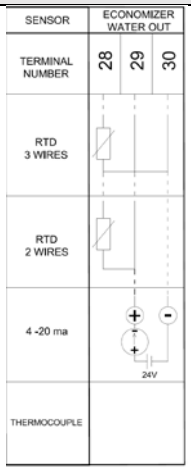
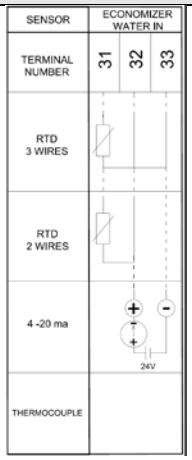
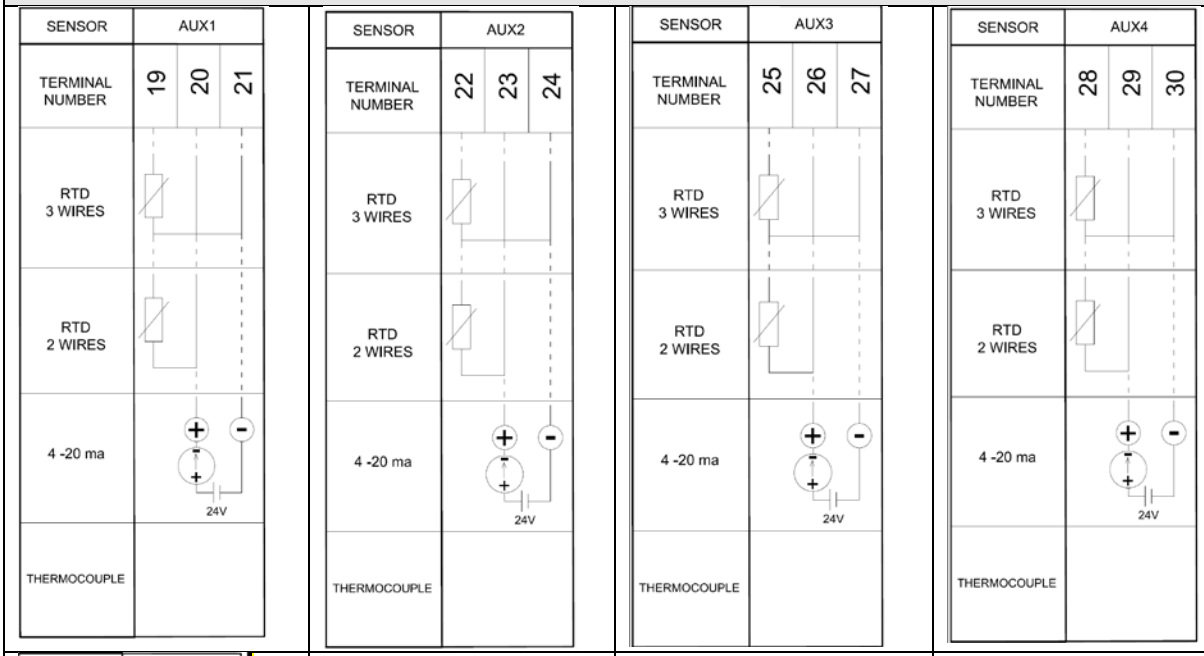
</table>

2.9 Economizer Temperature Monitoring

INPUTS			
			
OUTPUTS			

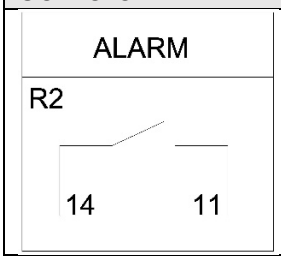
2.10 Auxiliary Inputs

INPUTS



OUTPUTS

2.11 Alarm Output

INPUTS	
OUTPUTS	
	

3 Configuration

3.1 First Startup of the Unit

The unit is powered by lifting the Circuit Breaker inside the Unit Panel.

After a few moments, the main screen will appear on the Display. (The items appearing on the screen may vary depending on the parameters entered in the Configuration- See below).

3.2 Navigation Controls

The Navigation Controls remain at the bottom of the Screen at all times and help navigating into OctoPro+ as follows :

	Will move to Main Boiler Screen (Screen shown above), from any other page.
	Will go to Next/Previous screen in the following order: Boiler – FeedUnit – Auxiliaries – Trend – Configuration – Settings
	Will go the “Configuration” Screen
	Will go the “Trending” Screen
	Allows to Log in as “Operator”, “Supervisor”, or “Master”
	Allows access to Alarms and Events Lists
	Allows direct access to any screen by its name (Under Process Images), Allows access to PID Controller.

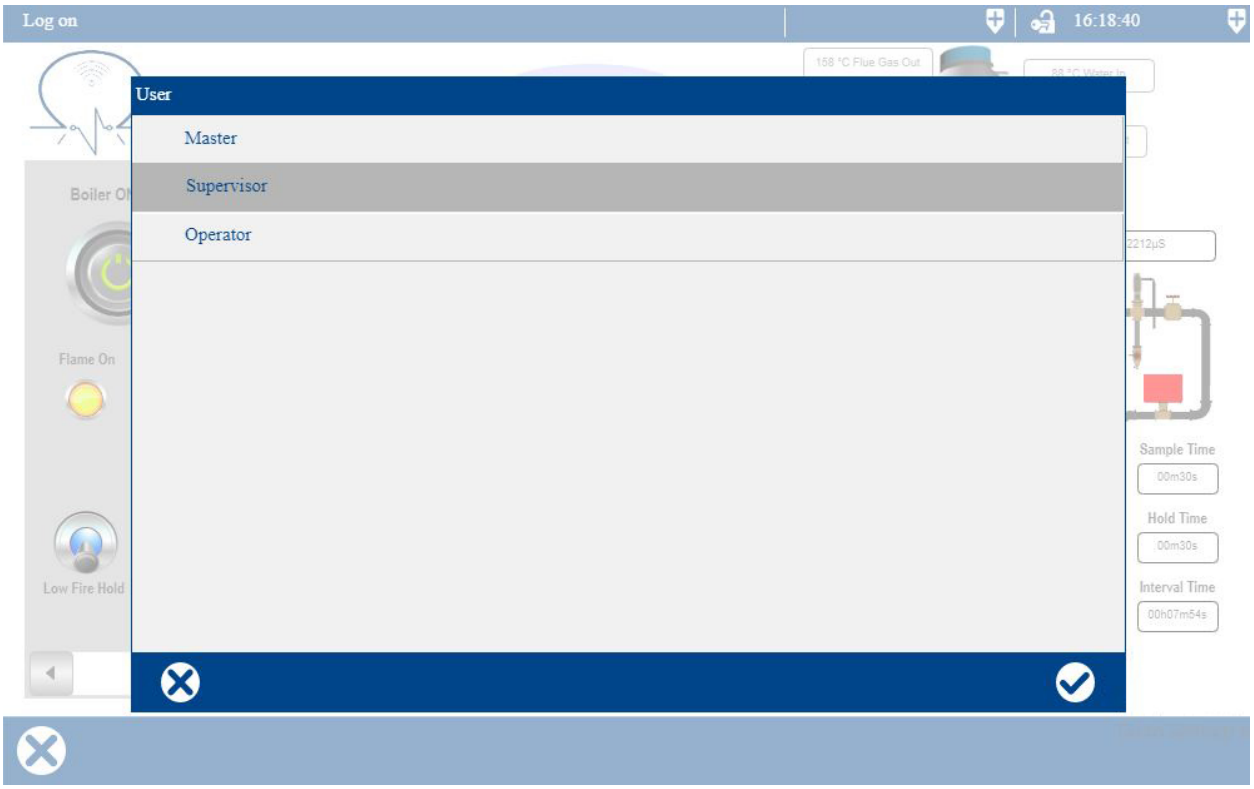
3.3 Access Levels

Octopro+ features 3 access right levels as follows :

Role	Password	Rights
User	None	Monitoring only- Default.
Operator	154	Same as “User” plus Alarm Acknowledging
Supervisor	1712	Same as “Operator” plus access to Configuration Screen
Master	Consult Supplier	Same as “Supervisor” plus access to Settings Screen (Configuration of Hardware/sensors)

Access User Log-On Screen by Pressing  at bottom of screen.

Then Log-On, and select the desired Role, then  . You will be prompted for the password.

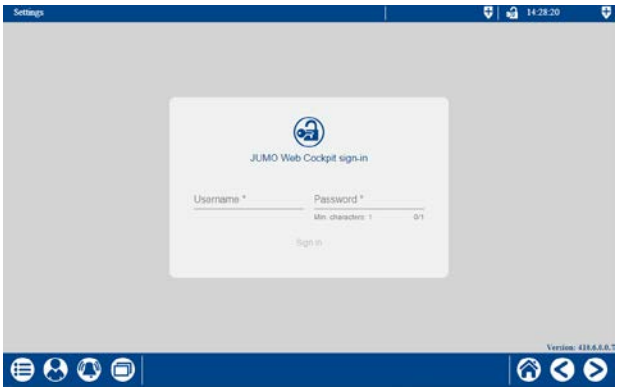


It is the responsibility of any Master/Supervisor/Operator to Log-out using the same screen before leaving the unit, to avoid access rights to be used by unauthorized personnel.

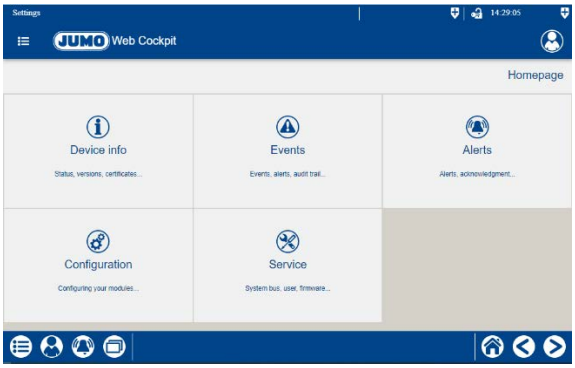
3.4 Settings Screen

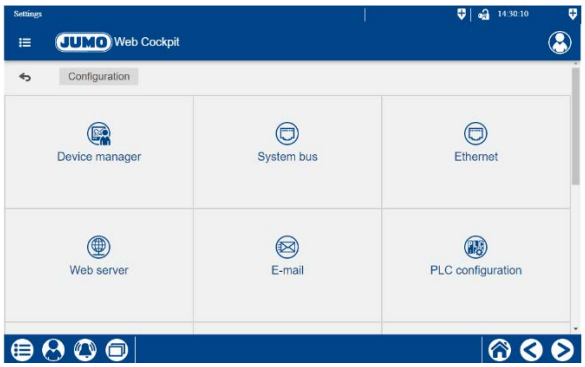
The system will come pre-configured with the sensors and outputs supplied along with the Unit, and this section should only be used in very specific cases, where the sensor or the output were not specified when ordering the unit.

Use this screen for configuration of all the sensors and Outputs that are connected to OctoPro+. The Settings Screen is accessible by going to the Configuration Screen (Press ) then Right Hand Arrow (Press ).
You will be required to Log in as “Master” inside the screen itself. (Consult Supplier for Needed Password).



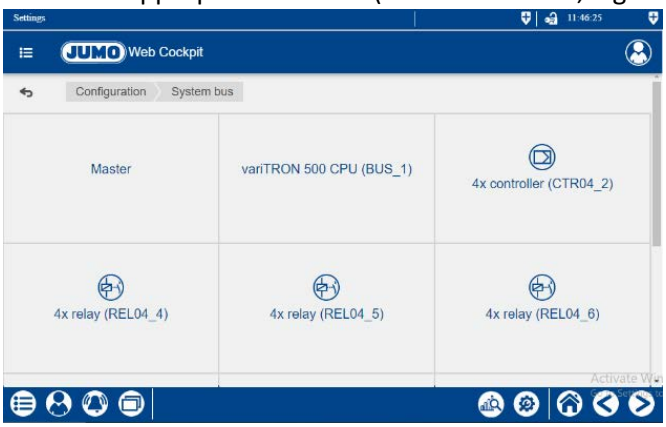
After Entering the password, navigate to “Configuration”, then “System Bus”.



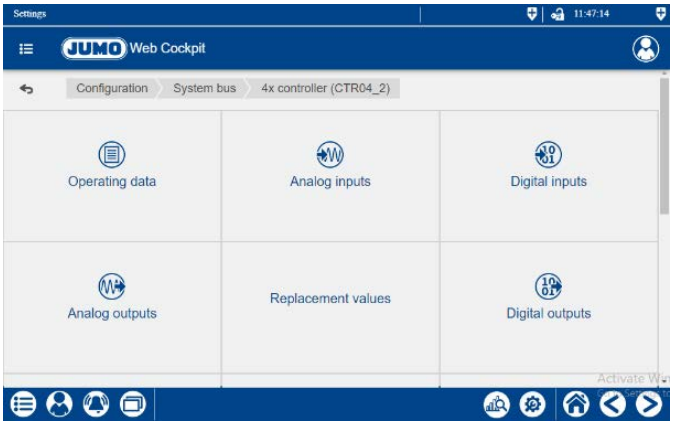


then for each of the sensors/Outputs,

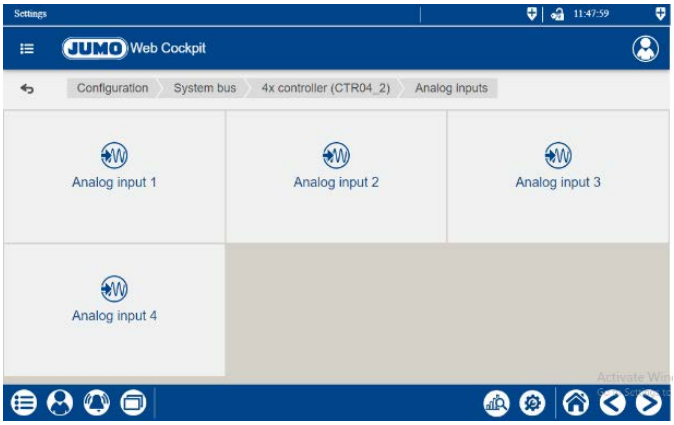
- select the appropriate Module (See Table Below, e.g CTR04_2, REL04_4)



- Select the IO Type (See Table Below, e.g Analog Inputs, Digital Input,etc..)



- Then select the specific I/O (See Table Below, e.g Analog Input 1, Digital Input 2,etc..)



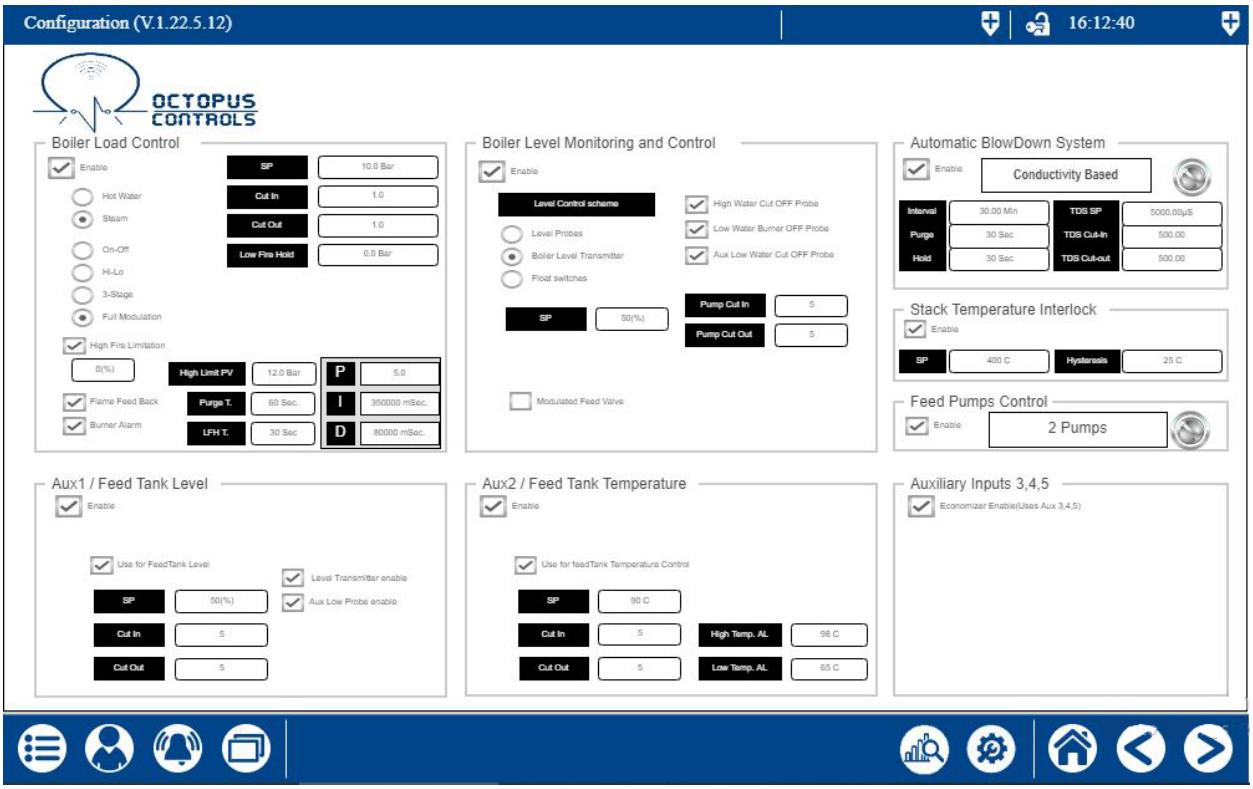
Sensor	Module Number	IO Type	IO #	Sensor Type	Linearization	Measuring Area (Start/End)	Scaling (Start/End)
Boiler Pressure/Temperature	AIN04_7	Analog Input	3	4-20mA	Linear	4 / 20	As per Sensor Range
Boiler Level Transmitter		Analog Input	2				
Stack Temperature	AIN04_7	Analog Input	1				
.TDS Sensor		Analog Input	4				
Aux1 / Tank Level	AIN04_8	Analog Input	1				
Aux2 / Tank Temperature		Analog Input	2				
Aux 4/ Economizer Water Out		Analog Input	4	2-Wire RTD	Pt100	0/100	
Aux 3/ Economizer Gas Out		Analog Input	3				
Aux5/ Economizer Water In	CTR04_2	Analog Input	1				
FeedTank Hi Probe	DIO12_10	Digital Input	5				
FeedTank Low Probe		Digital Input	6				
FeedTank Low Water		Digital Input	7	3-Wire RTD	Pt100	0/100	
Flame On FeedBack		Digital Input	8				
Burner Alarm		Digital Input	9				
Pump On Probe		Digital Input	2				
Pump Off Probe		Digital Input	1				
Low Water Probe		Digital Input	10				
Auxiliary Low Water Probe		Digital Input	3	T/Couple	TE NiCrNiK	0/100	
High Water Probe		Digital Input	4				

Output	Module Number	IO Type	IO #	Output Type
Burner Firing Rate	AOU04_9	Analog Output	2	4-20mA
Modulated FeedValve	AOU04_9	Analog Output	1	4-20mA
Stack Interlock	REL04_4	Relay Output	1	
BlowDown Valve	REL04_5	Relay Output	4	
Pump 1 On	REL04_4	Relay Output	3	
Pump 2 On	REL04_4	Relay Output	4	
Alarm	REL04_4	Relay Output	2	
Boiler On	REL04_5	Relay Output	1	
2d Stage	REL04_5	Relay Output	2	
3d Stage	REL04_5	Relay Output	3	
FeedTank MakeUp Valve	REL04_6	Relay Output	1	
FeedTank Steam Valve	REL04_6	Relay Output	2	

3.5 Configuration Screen

Use this screen to configure the OctoPro+ features, depending on the installed sensors and outputs. The Unit will be preconfigured for the options ordered, but access to this section is needed for setting up the setpoints, differentials, etc…

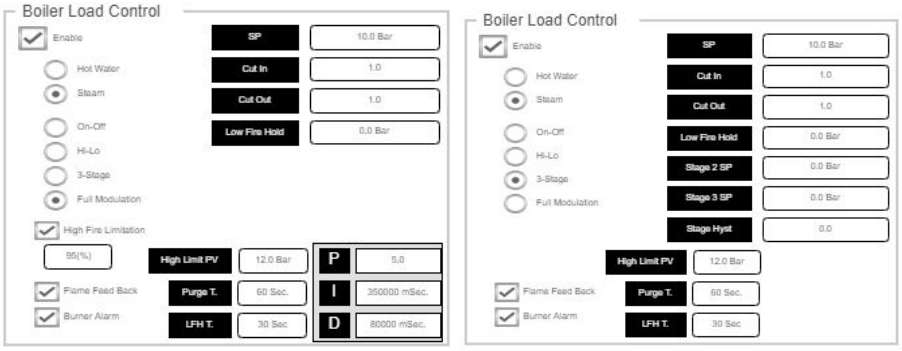
This screen is only accessible if User is logged in as “Supervisor” or “Master”



The available options will vary depending on the settings effected on the unit. Changes in the configuration will be effective immediately.

NB: The title bar of this screen shows the number of the currently installed version of the OctoPro+ software. This number should be referred to when contacting Octopus Controls for support.

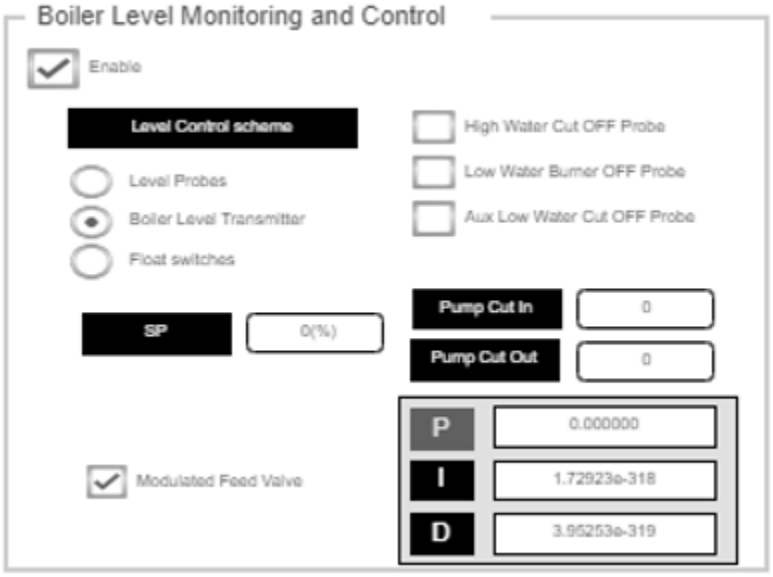
3.5.1 Boiler Load Control



- Select Boiler application as Steam or Hot Water. In Hot Water Mode, process variable unit will be deg.C, while in steam mode, process variable unit will be Bar.
- If Burner Control allows for Dry-Contact "Flame-On" select "Flame Feed Back"
- If Burner Control allows for Dry-Contact "Alarm" select "Burner Alarm"

		Burner Firing Scheme			
		On-Off	2-Stage	3-Stage	Full Modulation
SP	The desired setpoint for the Process variable.	X	X	X	X
Cut-In, Cut-Out	Cut-In and Cut-Out are RELATIVE to the Setpoint (Boiler will shut off at Setpoint+CutOut and will be turned on again at Setpoint-CutIn).	X	X	X	X
Low Fire Hold	The limit above which burner is allowed to go to high fire		X	X	X
Stage 2 SP	The limit at which burner goes from 2d stage to Low Fire – Must be lower than SP		X	X	
Stage 3SP	The limit at which burner goes from 3d stage to 2d stage – Must be lower than Stage 2 SP.			X	
Stage Hysteresis	Hysteresis (Differential) for 2d and 3d stage setpoints		X	X	
P,I,D	Proportional Band, Reset Time, and Derivative Time for PID Boiler Load Controller. I and D should be entered in milliseconds. Autotune function can also be used for automatically setting these parameters. See Section "Auto-Tune".				X
High Fire Limitation	Maximum Firing Rate that is allowed for Full Modulation Burner				X
High Limit	The limit at which High Limit Alarm is triggered. Must be higher than (SP+CutOut)				

3.5.2 Boiler Level Monitoring and Control



Level Control Scheme determines the type of Feedwater Level Control

- Level Probes: Two Level Probes for Pump-On and Pump-Off to control Feed Water Pump
- Float Switch: Float Switch with differential Contact controls Feed Water Pump, and provides Boiler Low water Cut-off functionality (Used with McD&M 150S or similar Float Switches)
- Boiler Level Transmitter: Level Transmitter Output controls Feed Water Pump with the following settings :
    - SP: Level Setpoint
    - Pump Cut-In: Level at which Feed pump is energized
    - Pump Cut-Off: Level at which Feed pump is de-energized
- Modulated Feed Valve- When Selected, Feed Pump is continuously running, and Opening of Feed Water Valve is through a PID Controller with P,I,D settings. These can be set manually or through the Auto-Tune functionality. See “Auto-Tune” Section.

Select the appropriate box if any of the below features is available on the boiler :

- Probe for High water Cut Off
- Probe for Low Water Cut-Off
- Probe for Auxiliary Low Water Cut-Off

3.5.3 FeedPumps Control (Steam Only)

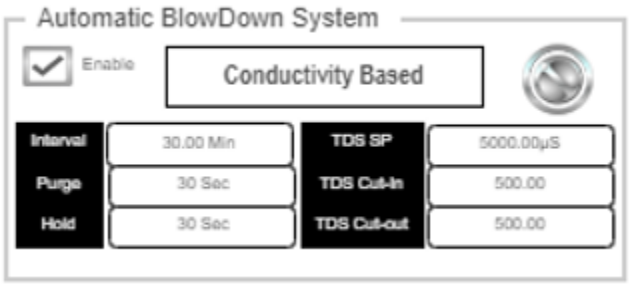
Flip the switch for 1-Pump or 2-Pumps configuration.

3.5.4 Stack Temperature Interlock

When Stack temperature exceeds the Setpoint (SP) configured in this section, an alarm Light will appear on the Display, and an output relay will be closed to signal this High-Stack Temperature condition.

When temperature drops down to Setpoint-Hysteresis, the condition will be cleared.

3.5.5 Automatic BlowDown System (Steam Boilers)

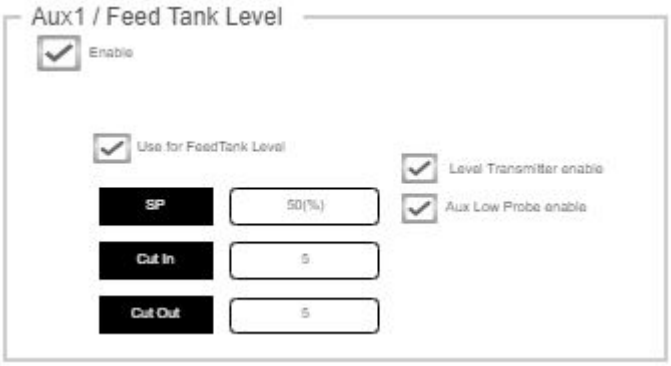


If “Timer Based” is selected, then a blowdown of duration “Purge” is performed at regular time intervals (Interval).

If “Conductivity Based” is selected, then a blowdown of duration “Purge” is performed at regular time intervals (Interval). After a hold time (Hold), conductivity is measured and compared to “TDS SP”(SetPoint). If Conductivity is higher than SP+Cut-In then another blowdown is performed, until the conductivity drops below SP-Cut-Out. In that case, a new cycle will begin again after the pre-set “Interval”.

3.5.6 Aux 1 / Feed Tank Level

To use Aux1 input for Level control of the Feed Tank, use these settings :

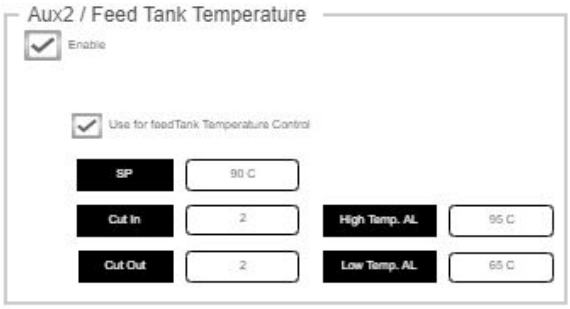


In case Feedtank is equipped with a Low Water Probe, and/or a Level transmitter, tick the corresponding box. In case of a Level Transmitter a Setpoint with a cut-in and cut-out levels can be set for control of the Tank Make-up Valve. Cut-In and Cut-out being relative to the Setpoint.

If this functionality is not desired, Aux1 can be used for another signal in the Boiler Room, which label is freely configurable.

3.5.7 Aux2 / Feed Tank Temperature

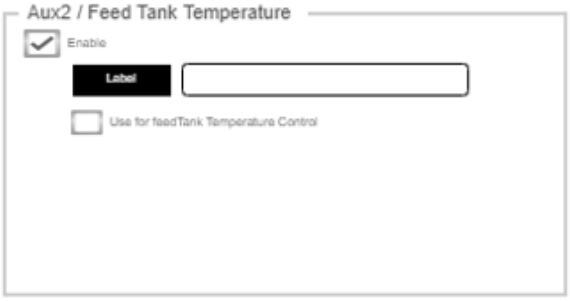
To use Aux2 input for Temperature control of the FeedTank, use these settings :



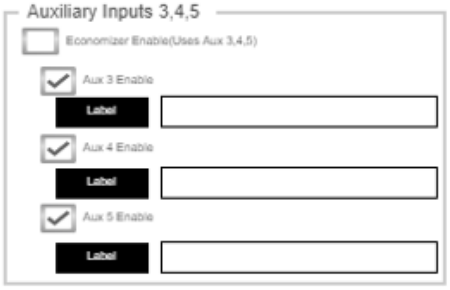
SP is the Temperature Setpoint, with Cut-In and Cut-out being relative to the Setpoint, to control Preheating of the Tank.

Also High and Low Temperature Alarms can be set for this signal.

If this functionality is not desired, Aux2 can be used for another signal in the Boiler Room, which label is freely configurable.



3.5.8 Aux3,4,5 / Economizer Water In, Water Out, Gas Out



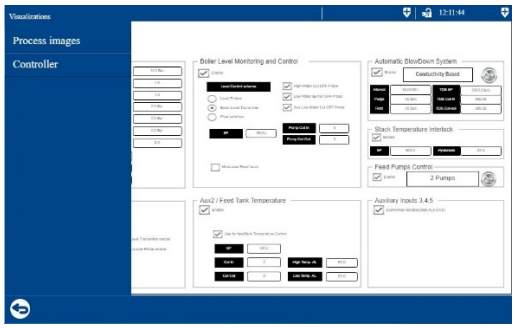
To use Aux 3,4,5 for Monitoring of Economizer temperatures, click the corresponding box in this section.

If this functionality is not desired, Aux3,4,5 can be used for other signals in the Boiler Room, which labels are freely configurable. Of course, in this case, the sensors inputs will need to be configured in the Settings screen. (See “Settings” section).

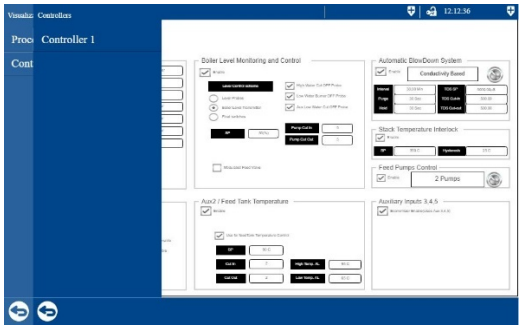
3.5.9 Auto-Tune of PID Controllers (Applies to Boiler Load Control and Boiler Level Control)

In order to Auto-tune either of the Boiler Load or Boiler Level PID Controllers, the following sequence needs to be followed :

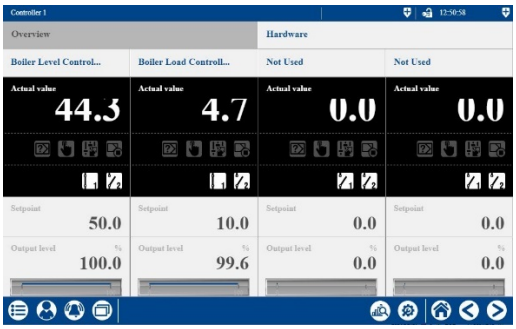
1- Press  then select “Controller”



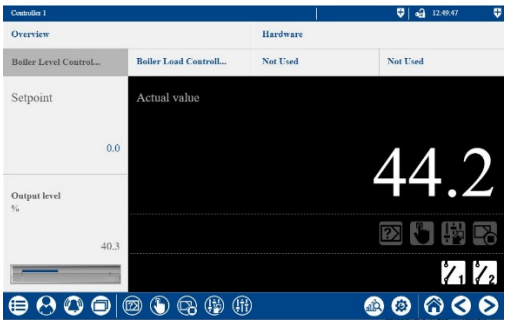
2- Select “Controller 1”

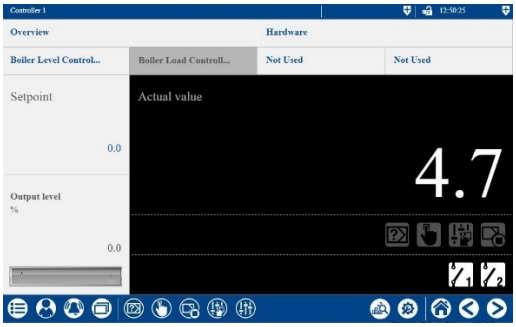


3- The screen now shows the available controllers



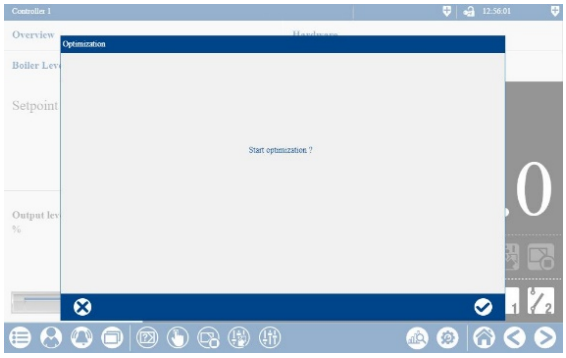
4- Select the desired Controller (Boiler Level Controller or Boiler Load Controller)





5- Make sure to change the setpoint to be the same value as what is entered on the Configuration Screen.

6- Activate Autotune using  , then 



3.6 IP Address Configuration

The OctoPro+ will come with a pre-set IP address used for setting up the unit at factory. In case the OctoPro+ is not connected to any local network, nothing needs to be done. The system will operate standalone.

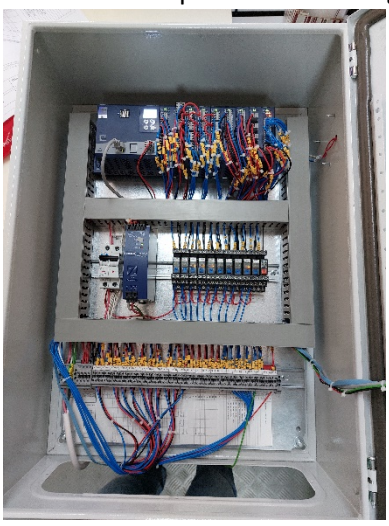
In case you need the OctoPro+ to be connected to a LAN, then your IT Administrator should be able to give you (2) IP addresses, with same network address and different host addresses, example : XXX.YYY.ZZZ.AAA and XXX.YYY.ZZZ.BBB. The below will describe the steps to enter these IP addresses in the OctoPro+.

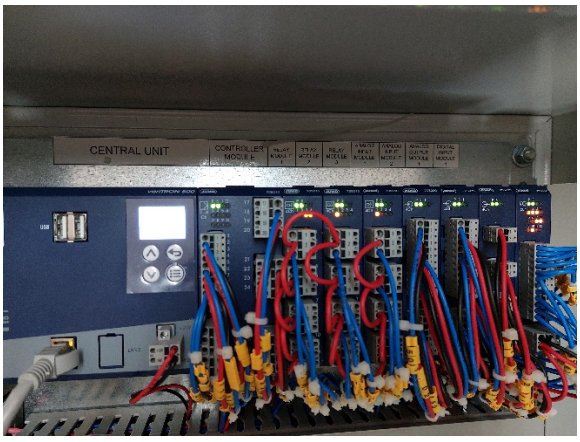
3.6.1 Changing the IP Address of the Display/HMI

1. Tap on the GREY LINE at display top center.
2. Tap on Setting ICON on the top right corner.
3. Enter USERNAME “admin” and PASSWORD ”admin”
4. Tap PROCEED.
5. Tap on SYSTEM SETTING on top left corner.
6. Choose NETWORK from left menu.
7. Tap NETWORK INTERFACES.
8. Tap on EDIT on top right corner.
9. Adjust the IP ADRESS of br0-Bridge referring to your Network IP address (given by your IT Administrator)
10. Tap SAVE on display top center corner and wait for loading to end.
11. Message OPERATION SUCCESSFUL will appear. Tap OK.
12. Choose EXIT from left menu.
13. Tap BACK on top left corner.
14. Tap TWICE on display center.

3.6.2 Changing the IP Address of the Controller (Inside the Panel)

This step involves working directly on the controller itself, inside the Panel.





3.6.2.1 Login Procedure:

1) Press OK/MENU button.
2) Choose USER MANAGEMENT then press OK.

3) Choose LOG IN then press OK.
4) Choose MASTER then press OK.
5) Enter password using UP/DOWN arrows, press OK after each digit. When finished press OK to save and exit.

3.6.2.2 Changing IP procedure:

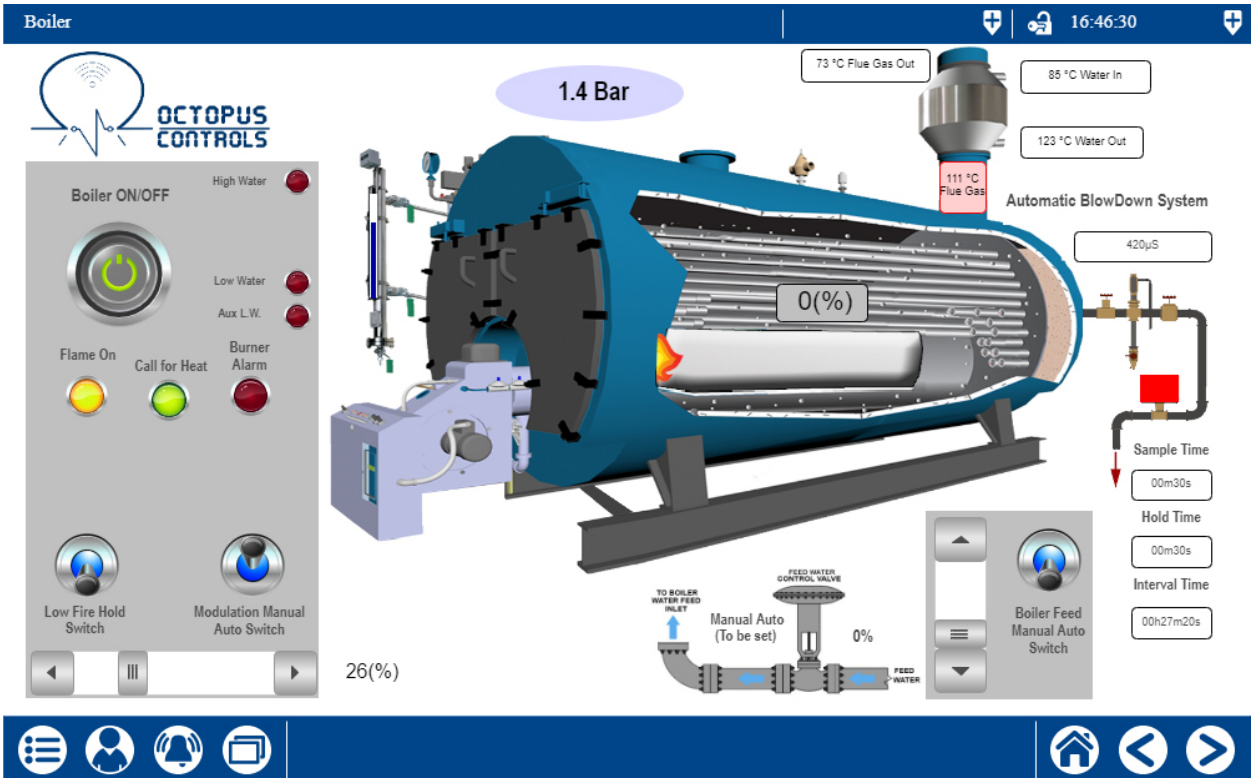
1) Press OK/MENU button.
2) Choose CONFIGURATION then press OK.
3) Choose ETHERNET then press OK.
4) Choose LAN1 then press OK.
5) Choose METHOD then press OK.
6) Choose MANUALLY then press OK.
7) Choose IP ADRESS then press OK.
8) Adjust the IP ADDRESS using UP/DOWN arrows (referring to your Network IP addresses given by your IT Administrator). Press OK after each byte.
9) Press BACK Button, “SAVE SETTING?” message will appear, press OK.
10) Press 3 times BACK button to exit.

OctoPro+

Operation

4 Operation

4.1 Main Screen



- On this screen, all variables and signals related to the boiler can be monitored.
- Only the values and features enabled in the Configuration screen will appear on the screen.
- Low Fire Hold Switch allows to force the burner to Low Fire, regardless of other controls (2-stage, 3-stage or Full Modulation).
- Modulation Manual/Auto switch allows to set burner at a given firing rate, regardless of burner controls (Full Modulation only)
- Boiler Feed Manual/Auto switch allows to fix the Feedwater valve in a fixed position regardless of Boiler Level controls (Modulated Feed Valve only).

4.2 Feed Unit Screen (Steam only)

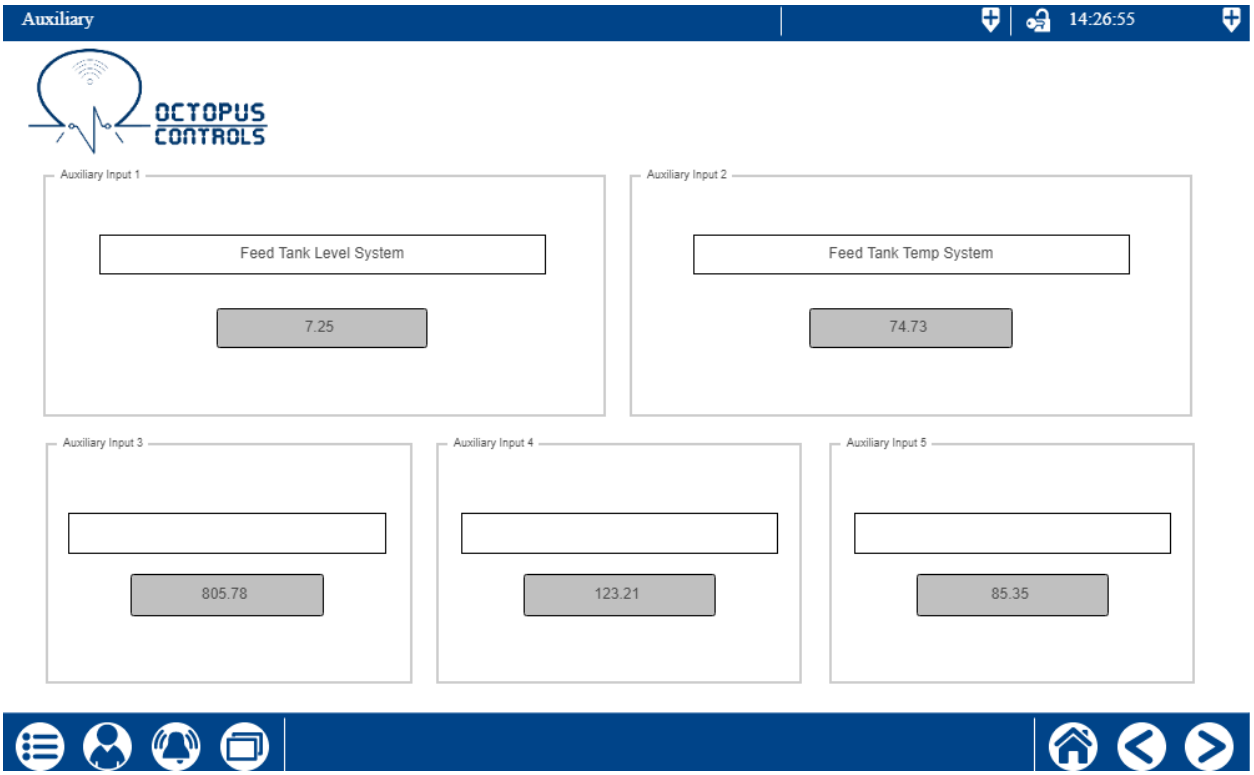
Access this screen by Pressing  then  .

The FeedPump Operation can be changed on the control panel on this screen :

- Hand : Pump is continuously running
- Off : Pump is off all the time
- Auto : Pump is on or off based on feedwater needs of the boiler.

In case of 2-pumps, the Duty Pump is selected also on this screen.

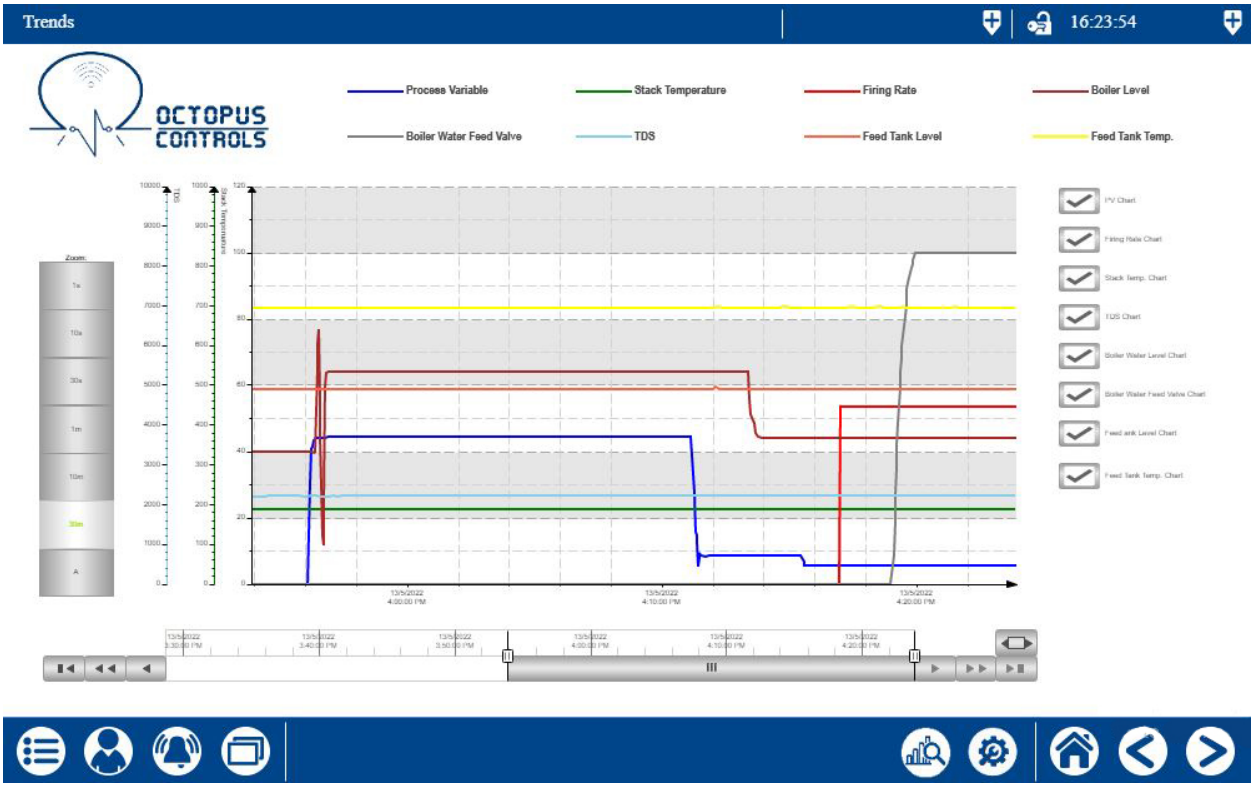
4.3 Auxiliaries Screen



This screen serves to monitor the values of the Auxiliary inputs.

4.4 Trending Screen

This screen is accessed by Pressing  at the bottom of the screen.

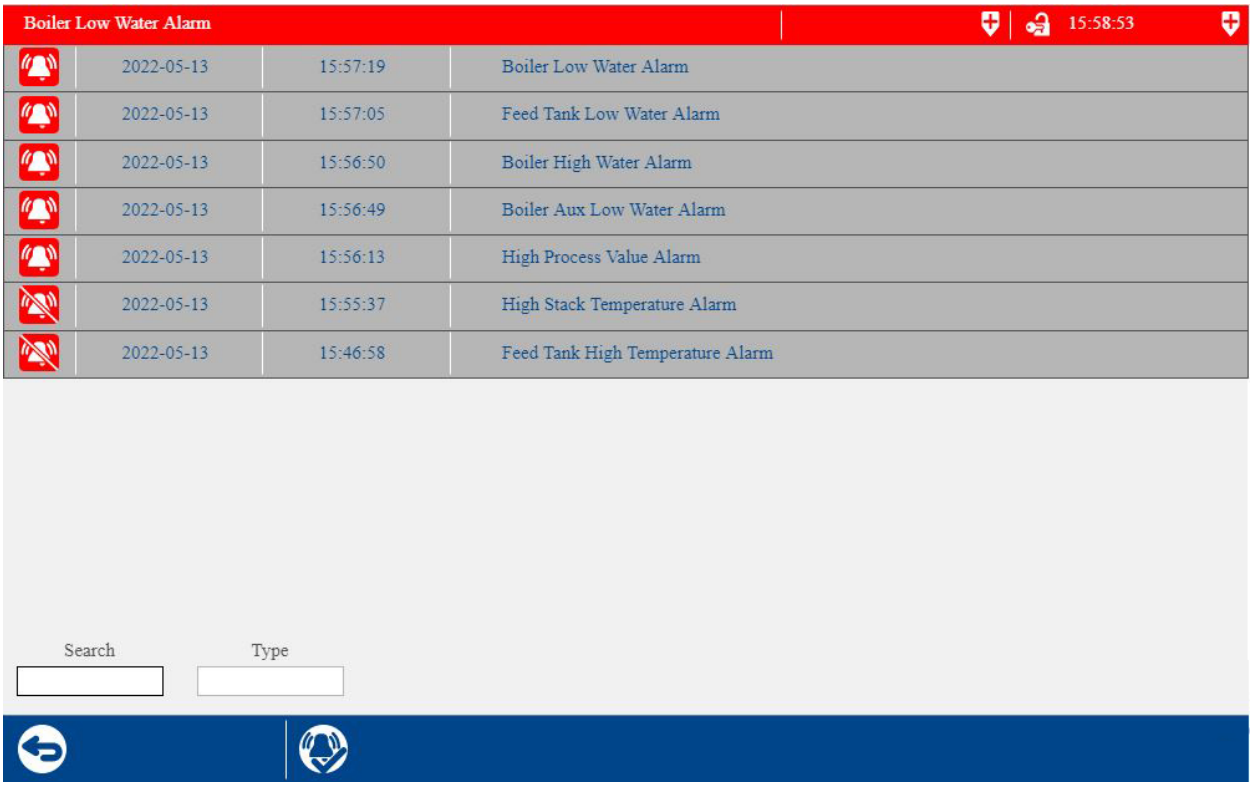


Up to Eight Signals can be shown on this graph, by ticking the appropriate box.

The time-width of the screen can be changed by varying “Zoom”. Logs for the last 6 hours are retained.

4.5 Alarms List

Access this screen by Pressing  then selecting “Alarms List”.



This list will show the currently ACTIVE alarms.

When an alarm situation occurs, it is displayed with a “RED RIBBON” at the top of all the screens, and appears in the Alarm List.

The Alarm can be Acknowledged by pressing  - (Operator Role needed).

Each Alarm can have one of the below statuses:

-  : Alarm condition is present, and not yet acknowledged.
-  : Alarm condition was present, has disappeared but has not been acknowledged.
-  : Alarm Condition is still present, but was acknowledged.
- An Alarm condition that has disappeared and was acknowledged will simply disappear from this list. (But will remain in the Events List, see below).

4.6 Events List

Access this screen by Pressing  then selecting “Events List”.

This list will show each event with its date and time stamp.

Events include Changes done by the operator/user, alarm conditions (when alarm appears, when it disappears, when it is acknowledged).

5 Support

For Support email us at info@octopuscontrols.net