

MAIN MENU/HOME SCREEN OVERVIEW

Inputs	
Sensor (S11)	3038 $\mu\text{S/cm}$
Temp (S12)	77.1°F
Generic AI (S21)	30.5%
Generic AI (S22)	37.9%

List of possible Inputs:
 Contacting Conductivity
 Electrodeless Conductivity
 Temperature
 pH
 ORP
 Disinfection
 Generic
 Transmitter/AI Monitor
 Fluorometer
 Flowmeter, Analog Type
 DI State
 Flow Meter, Contactor type
 Flow Meter, Paddlewheel type
 Feed Monitor
 Counter
 Virtual Input
 Corrosion Rate
 Corrosion Imbalance

Outputs	
On/Off (R1)	Off
Flow Timer (R2)	Off
Flow Timer (R3)	Off
Manual (R4)	Off

List of possible Outputs:
 On/Off control mode
 On/Off Disturbance control mode
 Flow Timer control mode
 Bleed & Feed control mode
 Bleed Then Feed control mode
 Percent Timer control mode
 Biocide Timer control mode
 Alarm Output mode
 Time Proportional control mode
 Flow Proportional control mode
 Pulse Proportional control mode
 Pulse Proportional Disturbance control mode
 Intermittent Sampling mode
 Manual control mode
 PID control mode
 Dual Setpoint mode
 Timer control mode
 Probe Wash control mode
 Spike control mode
 Lag Output control mode
 Target PPM
 PPM Volume
 Flow Meter Ratio control mode
 Volumetric Blend control mode
 Counter Timer
 Analog Output, Retransmit mode
 Analog Output, Proportional control mode
 Analog Output, PID control mode
 Analog Output, Manual mode
 Analog Output, Flow Proportional mode
 Analog Output, Disturbance Mode

Alarms	
List of all Active Alarms	

HOME SCREEN (example)

Flowswitch (D1) No Flow	
CCond (S11)	3041 $\mu\text{S/cm}$
Temp (S12)	77.0°F
Flowswitch (D1)	No Flow

MAIN MENU

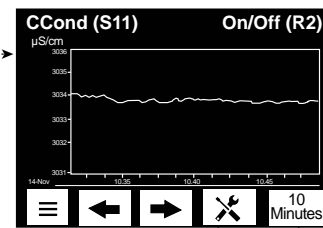
Main Menu 09:19:01 14-Mar-2017			
Inputs	Config		
Outputs	HOA		
Alarm	Graph		

To HOME SCREEN

Config	
Global Settings	
Security Settings	
Ethernet Settings	
Ethernet Details	

Additional Config Settings:
 WiFi Settings
 WiFi Details
 Remote Communications (Modbus)/BACnet
 Email Report Settings
 Display Settings
 File Utilities
 Controller Details

> HOA			
R1	R2	R3	R4
R5	R6	R7	R8
Hand	Off	Auto	↶

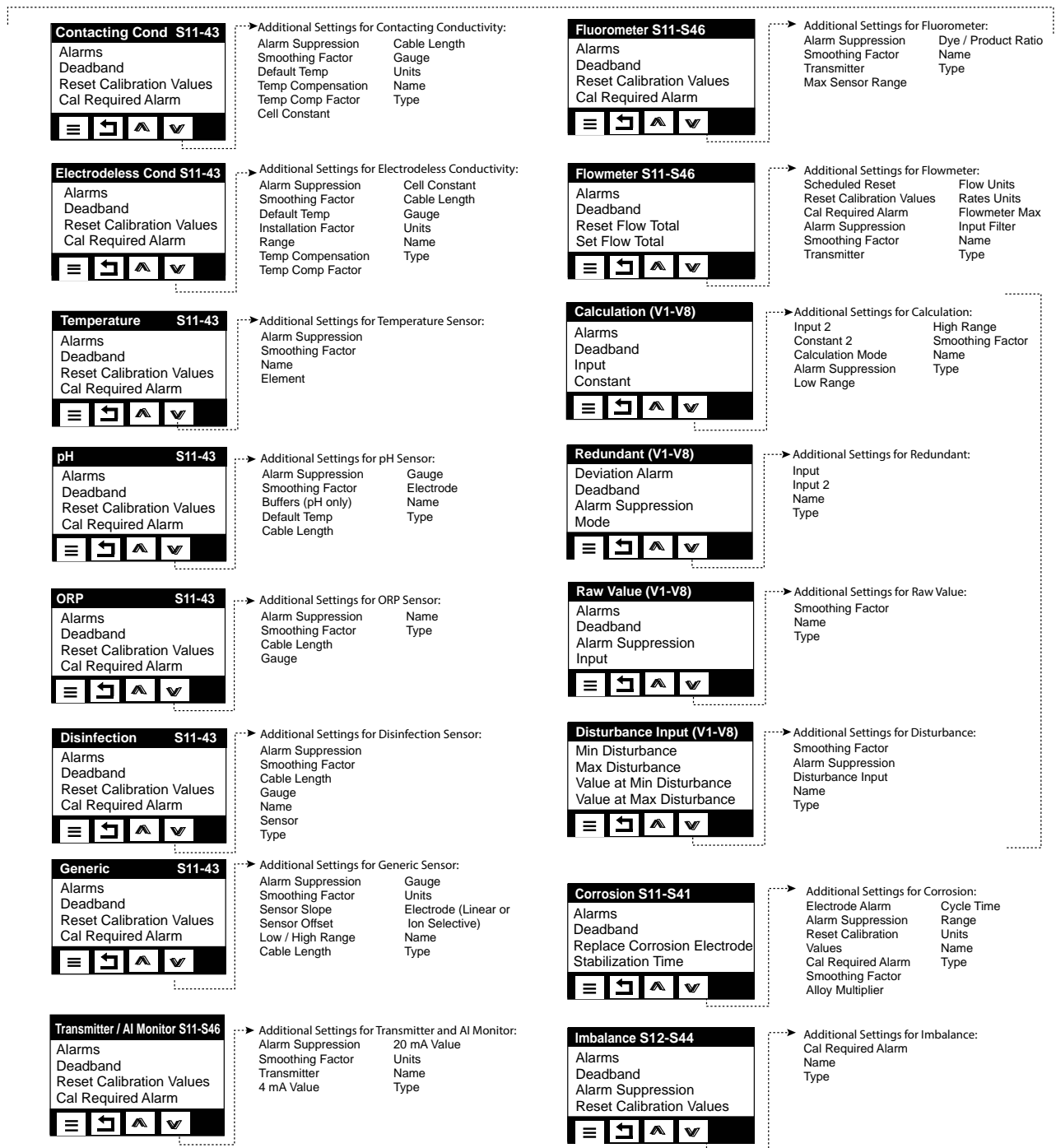
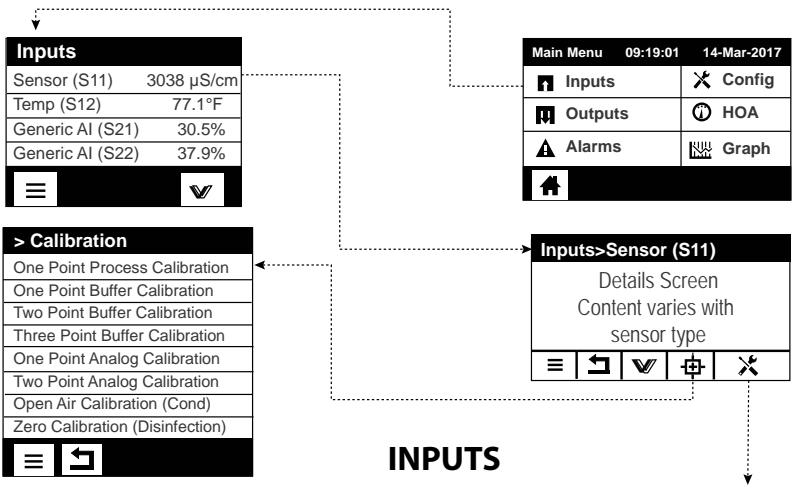


Graph Settings	
Sensor	
DI Relay	
Low Axis Limit	
High Axis Limit	

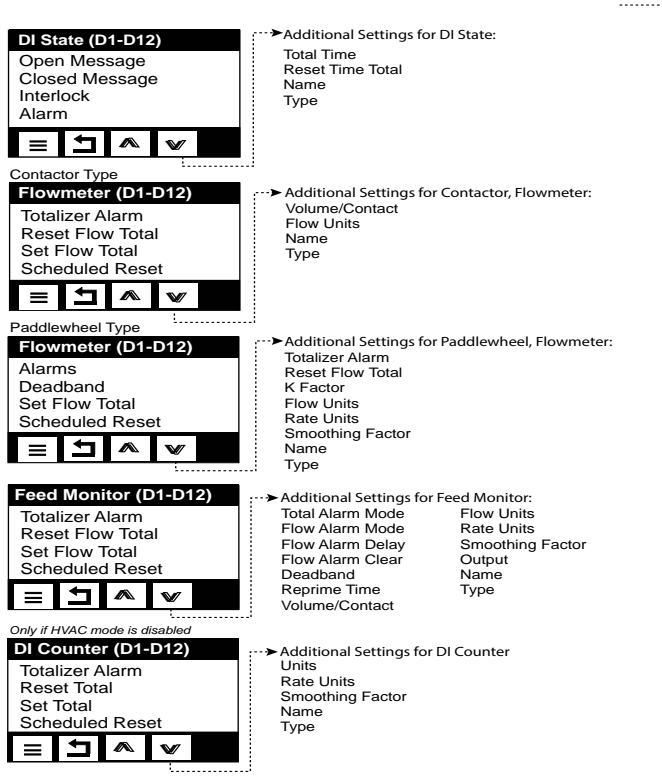
Additional Graph Settings:
 Time Range

Time Range	
10 Minutes	
30 Minutes	
1 Hour	
2½ Hours	

More possible settings:
 8 Hours 1 Week
 12 Hours 2 Weeks
 1 Day 4 Weeks
 ½ Week



INPUTS



DIGITAL INPUTS

RELAY OUTPUTS (R1-R8) and VIRTUAL OUTPUTS (C1-C8)

(CONTINUED ON NEXT PAGE)

Outputs

On/Off (R1)	Off
Inhibitor (R2)	Off
Flow Timer (R3)	Off
Manual (R4)	Off

Main Menu 09:19:01 14-Mar-2017

Inputs	Config
Outputs	HOA
Alarms	Graph

Outputs>On/Off (R1)

Details Screen
Content varies with output type

On/Off (R1-R8)

HOA Setting
Set Point
Deadband
Duty Cycle Period

Additional Settings for On/OFF Mode:

Duty Cycle	Minimum Relay Cycle
On Delay Time	Hand Time Limit
Off Delay Time	Reset Time Total
Output Time Limit	Input
Reset Output Timeout	Direction
Interlock Channels	Name
Activate with Channels	Mode

Flow Timer (R1-R8)

HOA Setting
Feed Duration
Accumulated Volume
Output Time Limit

Additional Settings for Flow Timer Mode:

Reset Output Timeout	Flow Input
Interlock Channels	Flow Input 2
Activate with Channels	Name
Minimum Relay Cycle	Mode
Hand Time Limit	
Reset Time Total	

Only if HVAC mode is enabled

Bleed & Feed (R1-R8)

HOA Setting
Feed Time Limit
Output Time Limit
Reset Output Timeout

Additional Settings for Bleed & Feed Mode:

Interlock Channels	Bleed
Activate with Channels	Name
Minimum Relay Cycle	Mode
Hand Time Limit	
Reset Time Total	

Only if HVAC mode is enabled

Bleed then Feed (R1-R8)

HOA Setting
Feed Percentage
Feed Time Limit
Reset Timer

Additional Settings for Bleed then Feed Mode:

Output Time Limit	Reset Time Total
Reset Output Timeout	Bleed
Interlock Channels	Name
Activate with Channels	Mode
Minimum Relay Cycle	
Hand Time Limit	

Percent Timer (R1-R8)

HOA Setting
Sample Period
Feed Percentage
Output Time Limit

Additional Settings for Percent Timer Mode:

Reset Output Timeout	Name
Interlock Channels	Mode
Activate with Channels	
Minimum Relay Cycle	
Hand Time Limit	
Reset Time Total	

Only if HVAC mode is enabled

Biocide Timer (R1-R8)

HOA Setting
Event 1 (through 10)
Repetition
Week
Day
Start Time
Duration

Additional Settings for Biocide Timer Mode:

Bleed	Activate with Channels
Prebleed Time	Minimum Relay Cycle
Prebleed To	Hand Time Limit
Cond Input	Reset Time Total
Bleed Lockout	Name
Add Last Missed	Mode
Interlock Channels	

Alarm (R1-R8)

HOA Setting
Alarm Mode
Select Alarms
Output

Additional Settings for Alarm Mode:

Interlock Channels	Reset Time Total
Activate with Channels	Name
Minimum Relay Cycle	Mode
Hand Time Limit	

Time Prop (R1-R8)

HOA Setting
Set Point
Proportional Band
Sample Period

Additional Settings for Time Prop Mode:

Output Time Limit	Input
Reset Output Timeout	Direction
Interlock Channels	Name
Activate with Channels	Mode
Minimum Relay Cycle	
Hand Time Limit	
Reset Time Total	

Only if HVAC mode is enabled

Int. Sampling (R1-R8)

HOA Setting
Set Point
Proportional Band
Deadband

Additional Settings for Intermittent Sampling Mode:

Sample Time	Min Relay Cycle
Hold Time	Hand Time Limit
Maximum Blowdown	Reset Time Total
Wait Time	Cond Input
Output Time Limit	Trap Sample
Reset Output Timeout	Name
Interlock Channels	Mode
Activate with Channels	

Manual (R1-R16)

HOA Setting
On Delay Time
Off Delay Time
Output Time Limit

Additional Settings for Manual Mode:

Reset Output Timeout	Name
Interlock Channels	Mode
Minimum Relay Cycle	
Hand Time Limit	
Reset Time Total	

Only if Pulse Relay Type

Pulse Prop (R1-R8)

HOA Setting
Set Point
Proportional Band
Minimum/Maximum Output

Additional Settings for Pulse Prop Mode:

Maximum Rate	Input
Interlock Channels	Direction
Activate with Channels	Name
Minimum Relay Cycle	Mode
Hand Time Limit	
Reset Time Total	

Only if Pulse Relay Type
Only if HVAC mode is disabled

PID Control (R1-R8)

HOA Setting
Set Point
Gain
Proportional Gain

Additional Settings for PID Control Mode:

Integral Time	Input Maximum
Integral Gain	Gain Form
Derivative Time	Output Time Limit
Derivative Gain	Reset Output Timeout
Reset PID Integral	Interlock Channels
Minimum Output	Activate with Channels
Maximum Output	Minimum Relay Cycle
Maximum Rate	Hand Time Limit
Input	Reset Time Total
Direction	Name
Input Minimum	Mode

Dual Setpoint (R1-R8)

HOA Setting
Set Point
Set Point 2
Deadband

Additional Settings for Dual Setpoint Mode:

Duty Cycle Period	Minimum Relay Cycle
Duty Cycle	Hand Time Limit
On Delay Time	Reset Time Total
Off Delay Time	Input
Output Time Limit	Direction
Reset Output Timeout	Name
Interlock Channels	Mode
Activate with Channels	

Only if HVAC mode is disabled

Timer Control (R1-R8)

HOA Setting
Event 1 (through 10)
Repetition
Hourly

Additional Settings for Timer Control Mode:

Week	Interlock Channels
Day	Activate with Channels
Events Per Day	Minimum Relay Cycle
Start Time	Hand Time Limit
Duration	Reset Time Total
Add Last Missed	Name
Output Time Limit	Mode
Reset Output Timeout	

Probe Wash (R1-R8)

HOA Setting
Event 1 (through 10)
Repetition
Hourly

Additional Settings for Probe Wash Mode:

Week	Hold Time
Day	Interlock Channels
Events Per Day	Activate with Channels
Start Time	Minimum Relay Cycle
Duration	Hand Time Limit
Input	Reset Time Total
Input 2	Name
Sensor Mode	Mode

Spike Control (R1-R8)

HOA Setting
Set point
Spike Set point
Deadband

Additional Settings for Spike Control Mode:

Duty Cycle Period	Direction
Duty Cycle	Interlock Channels
Event 1 (through 8)	Activate with Channels
Repetition	Minimum Relay Cycle
Week	Hand Time Limit
Day	Reset Time Total
Start Time	Name
Duration	Mode
Input	

Not available for virtual outputs

Lag Control (R1-R8)

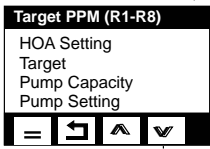
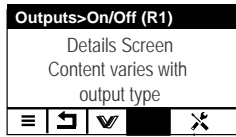
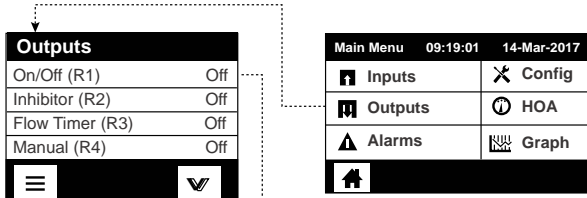
HOA Setting
Lead
Wear Leveling*
Wear Cycle Time*

Additional Settings for Lag Control Mode:

Activation Mode*	Activate with Channels
Set Point	Min Relay Cycle
Set Point 2	Hand Time Limit
Deadband	Reset Time Total
Delay Time*	Name
Output Time Limit	Mode
Reset Output Timeout	
Interlock Channels	

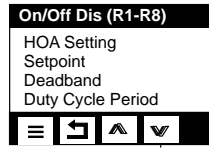
* See section 5.3.18

RELAY OUTPUTS (R1-R8) and VIRTUAL OUTPUTS (C1-C8) Continued



Additional Settings for Target PPM Control Mode:

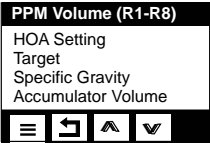
Specific Gravity	Reset Time Total
Accumulator Volume	Flow Input
Reset Timer	Flow Input 2
Output Time Limit	Cycles Input
Reset Output Timeout	Low Cycles Limit
Interlock Channels	Disturbance Input
Activate with Channels	Name
Min Relay Cycle	Mode
Hand Time Limit	



Additional Settings for On/Off Dis:

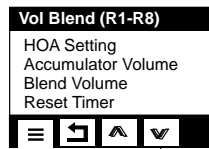
Duty Cycle	Hand Time Limit
On Delay Time	Reset Time Total
Off Delay Time	Input
Output Time Limit	Direction
Reset Output Timeout	Disturbance Input
Interlock Channels	Name
Activate with Channels	Mode
Minimum Relay Cycle	

Not available for virtual outputs



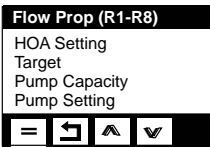
Additional Settings for PPM Volume Control Mode:

Reset Timer	Reset Time Total
Output Time Limit	Flow Input
Reset Output Timeout	Flow Input 2
Interlock Channels	Cycles Input
Activate with Channels	Low Cycles Limit
Minimum Relay Cycle	Name
Hand Time Limit	Mode



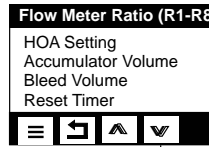
Additional Settings for Vol Blend:

Output Time Limit	Reset Time Total
Reset Output Timeout	Flow Input
Interlock Channels	Disturbance Input
Activate with Channels	Name
Minimum Relay Cycle	Mode
Hand Time Limit	



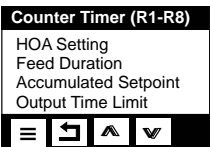
Additional Settings for Flow Prop Control Mode:

Specific Gravity	Reset Time Total
Maximum Rate	Flow Input
Output Time Limit	Cycles Input
Reset Output Timeout	Low Cycles Limit
Interlock Channels	Name
Activate with Channels	Mode
Hand Time Limit	



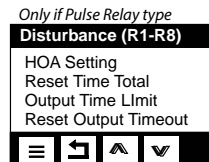
Additional Settings for Flow Meter Ratio:

Output Time Limit	Makeup Meter
Reset Output Timeout	Makeup Meter 2
Interlock Channels	Bleed Meter
Activate with Channels	Bleed Meter 2
Minimum Relay Cycle	Disturbance Input
Hand Time Limit	Name
Reset Time Total	Mode



Additional Settings for Flow Timer Mode:

Reset Output Timeout	Input
Interlock Channels	Name
Activate with Channels	Mode
Minimum Relay Cycle	
Hand Time Limit	
Reset Time Total	



Additional Settings for Disturbance:

Min Output	Primary Output
Max Output	Disturbance Input
Interlock Channels	Trigger Input
Activate with Channels	Activated
Hand Output	Trigger Mode
Hand Time Limit	Name
Max Rate	Mode

ANALOG OUTPUTS (A11-A44) and VIRTUAL OUTPUTS (C1-C8)

Retransmit (A11-A44)

HOA Setting
4 mA Value
20 mA Value
Hand Output

Additional settings for Retransmit Mode:
Error Output
Reset Time Total
Input Name
Mode

Manual Control (A11-A44)

HOA Setting
Interlock Channels
Activate with Channels
Minimum Relay Cycle

Additional Settings for Manual Control Mode:
Hand Time Limit
Reset Time Total
Name
Mode

Prop Control (A11-A44)

HOA Setting
Set Point
Proportional Band
Min Output

Additional Settings for Proportional Control Mode:
Max Output
Output Time Limit
Reset Output Timeout
Interlock Channels
Activate with Channels
Hand Output
Hand Time Limit
Reset Time Total
Off Mode Output
Error Output

Input Direction
Name
Mode

Flow Prop (A11-A44)

HOA Setting
Target
Pump Capacity
Pump Setting

Additional Settings for Flow Prop Control Mode:
Specific Gravity
Output Time Limit
Reset Output Timeout
Interlock Channels
Activate with Channels
Hand Output
Off Mode Output

Error Output
Reset Time Total
Flow Input
Cycles Input
Low Cycles Limit
Name
Mode

Only if HVAC mode is disabled

PID Control (A11-A44)

HOA Setting
Set Point
Gain
Proportional Gain

Additional Settings for PID Control Mode:
Integral Time
Integral Gain
Derivative Time
Derivative Gain
Reset PID Integral
Min Output
Max Output
Max Rate
Output Time Limit
Reset Output Timeout
Interlock Channels
Activate with Channels

Hand Output
Hand Time Limit
Off Mode Output
Error Output
Reset Time Total
Input Direction
Input Minimum
Input Maximum
Gain Form
Name
Mode

Not available for virtual outputs

Lag Output (A11-A44)

HOA Setting
Lead
Reset Time Total
Output Time Limit

Additional settings for Lag Output Mode:
Reset Output Timeout
Wear Leveling
Wear Cycle Time
Name
Mode

Disturbance (A11-A44)

HOA Setting
Reset Time Total
Output Time Limit
Reset Output Timeout

Additional Settings for Disturbance:
Min Output
Max Output
Interlock Channels
Activate with Channels
Hand Output
Hand Time Limit
Off Mode Output
Error Output
Primary Output

Disturbance Input
Trigger Input
Activated
Trigger Mode
Name
Mode

CONFIG MENU

HOME SCREEN (example)

▲ Flowswitch (D1) No Flow	
CCond (S11)	3041 μS/cm
Temp (S12)	77.0°F
Flowswitch (D1)	No Flow

Main Menu 09:19:01 14-Mar-2017	
Inputs	Config
Outputs	HOA
Alarms	Graph

Config	
Global Settings	
Security Settings	
Ethernet Settings	
Ethernet Details	

Additional Config Settings:

- WiFi Settings
- WiFi Details
- Remote Communications (Modbus/BacNet)
- Email Report Settings
- Display Settings
- File Utilities
- Controller Details

Global Settings	
Date	
Time	
Name	
Location	

Additional Global Settings:

- Global Units
- Temperature Units
- Alarm Delay
- HVAC Modes
- Language

Security Settings	
Controller Log Out	
Security	
Local Password	

Ethernet Settings	
DHCP Setting	
Controller IP Address	
Network Netmask	
Network Gateway	

Additional Ethernet Settings:

- DNS Server
- TCP Timeout
- VTouch Status
- LiveConnect Status
- Update Period
- Reply Timeout

Ethernet Details	
Alarms	
DHCP Status	
Controller IP Address	
Network Netmask	

Additional Ethernet Details:

- Network Gateway
- DNS Server
- MAC Address
- Last VTouch Data
- Last VTouch Config

WiFi Settings	
WiFi Mode	
SSID	
Key	
Gateway Connection	

Additional WiFi Settings:

- DHCP Setting
- Controller IP Address
- Network Netmask
- Network Gateway
- DNS Server
- Ad-Hoc SSID
- Ad-Hoc Security
- Ad-Hoc Key
- SSID Broadcast
- TCP Timeout
- Temporary Ad-Hoc
- Begin Temporary
- Ad-Hoc Mode
- Ad-Hoc Time Limit

WiFi Details	
Alarms	
Last VTouch Data	
Last VTouch Config	
Live Connect Status	

Additional WiFi Details:

- WiFi Status
- Signal Strength
- RSSI
- WiFi Channel
- DHCP Status
- Controller IP Address
- Network Netmask
- Network Gateway
- Security Protocol
- DNS Server
- BSSID/MAC Address
- FCC ID
- IC ID

Remote Communications	
Comm Status	
Data Format	
Data Port	
Verbose Logging	

Additional Remote Communications:

- Device ID
- Network

Display Settings	
Home 1	
Home 2	
Home 3	
Home 4	

Additional Display Settings:

- Home 5
- Home 6
- Home 7
- Home 8
- Adjust Display
- Key Beep

File Utilities	
File Transfer Status	
Data Log Range	
Log Frequency	
Export Data Log File	

Additional File Utilities:

- Export Event Log
- Export System Log
- Export User Config File
- Import User Config File
- Restore Default Config
- Software Upgrade

Controller Details	
Controller	
Product Name	
Serial Number	
Controller Board	

Additional Controller Details:

- Software Version
- Power Board
- Sensor Board #1
- Software Version
- Sensor Board #2
- Software Version
- Sensor Board #3
- Software Version
- Sensor Board #4
- Software Version
- Last Data Log
- Digital Inputs
- Software Version
- Network
- Software Version
- Battery Power
- Processor Temp
- Controller Temp 1
- Controller Temp 2
- Relay Board Temp
- Network Temp
- Processor Temp
- I/O Card 1 Temp
- I/O Card 2 Temp
- I/O Card 3 Temp
- I/O Card 4 Temp
- Network Temp
- DI Temp
- +12 Volt Supply
- +5 Volt Supply
- +3.3 Volt Supply
- LCD Bias Voltage
- LCD Supply

Email Report Settings	
Report #1 through #4	
Email Addresses	
Email Server	
SMTP Server	

Report #1-4 Settings:

- Report Type
- Email Recipients
- Repetition (Datalog/Summary Reports)
- Reports Per Day (Datalog/Summary Reports)
- Day (Datalog/Summary Reports)
- Day of Month (Datalog/Summary Reports)
- Report Time (Datalog/Summary Reports)
- Log Frequency (Datalog Report)
- Alarm Mode (Alarms Report)
- Select Alarms (Alarms Report)
- Alarm Delay (Alarms Report)

Additional Email Report Settings:

- SMTP Port
- From Address
- ASMTMP Username
- ASMTMP Password