

USER'S GUIDE

SYNC Omega Device Configuration Software



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1. Introduction

SYNC by Omega is a device configuration and management software platform for qualifying Omega Smart devices. It allows users to configure device runtime parameters, view process values, export data, and allows you to efficiently set your devices to operate under your preferred preferences. SYNC does not support long-term process value storage. We recommend Omega Enterprise Gateway (OEG) software for long-term data logging and analytics. OEG web client is platform independent.

SYNC can be installed on Windows 10. The minimum hardware requirements for server installation are: Dual core: CPU 2.4 GHz or up; Memory: 4 GB or higher; Hard drive: 250 GB or higher.

1.1. Licensing

SYNC is free to all customers who use Omega devices. The software is governed by Omega's EULA and is also subject to open-source licensing. Please see **Appendix A: EULA** for more information.

1.2. Use Scenarios

SYNC is the premier device configuration software for Omega Smart products. The use scenarios for the software are outlined below:

1.2.1. Device Configuration

SYNC provides a universal interface for the efficient configuration of qualifying Omega devices. For further information regarding a specific Smart Core device, users should refer to the device User's Manual.

1.2.2. Short-Term Data Graphing

Under certain circumstances, users may want to capture device process values to ensure that the device configuration is done correctly. SYNC supports short-term data trend viewing and export. For long-term data capture, consider using Omega Enterprise Gateway.

2. Installation

The SYNC zip file contains the installer package for the software. Follow these steps to complete the installation process:

Step 1: Unzip and open the SYNC file downloaded from the Omega website.

Note: Included in the installer package are the SYNC Application Files, .msi installer file, User's Manual, Release Notes, License and Copyright Notice, and End User License Agreement.



Figure 1: SYNC Installer

Step 2: Click the SYNC.msi file (Figure 1) and proceed through the setup (Figure 2) to launch SYNC for the first time.

Note: A desktop shortcut icon of SYNC (**Figure 2**) is created after the installation. This shortcut will launch the software after the initial installation.



Figure 2: SYNC Setup and desktop icon

2.1. Windows 7 and USB Interface Installer

For Windows 7 users who will be connecting an IF-001 USB Smart Interface cable or a Platinum USB Interface to SYNC, an **OmegaVCP.inf** text file needs to be installed by copying the text file into your **C:/Windows/inf/** folder. The OmegaVCP.inf file is included in your installer package.

Important: It is **required** for Windows 7 users to install the OmegaVCP.inf file to properly connect a USB interface to SYNC configuration software. Administrator access is required to install this file to your computer.

3. Navigating SYNC Configuration Software

3.1. Menu Tabs

SYNC has two menu interfaces:

- Configure Device: Allows you to configure your software adjustable devices.
- Capture Data: Provides short-term data logging features.



Figure 3: SYNC UI Overview

The blank Configure Device interface is the first view you see after SYNC is launched. Once a device is connected, you will see an interface like the one displayed in **Figure 3**.

3.2. Device Auto Detection

Omega Smart devices will be automatically detected once they are plugged in to the computer running the SYNC software. For instructions on how to connect a specific device to SYNC, please refer to the user documentation associated with that device.

Note: The Configure Device menu tab interface may look differently than the one displayed in Figure 3 depending on the product that is connected.

3.3. Manually Add or Delete Device Buttons

Clicking the **Add Device** icon **(Figure 3)** will lead to a wizard that guides you through the process of adding a device to SYNC. Ensure SYNC is running on a Windows OS computer before continuing. Connect the device to a computer and select the appropriate communication interfaces.

Step 1: Click on the ^T icon located on the top left of the SYNC interface.

Step 2: Proceed through the Add Device Wizard..

Step 3: Configure the communication parameters for the device.

| Select Communication 8 | Warface | | Add Device Wand | 94 | × |
|-------------------------|---|--------|--|--|-------|
| Please ensure that part | anates consetly match what are on device Note physical convection type must match selected | | Select Communication Rease ensure the dev | Interface ice parameters correctly match the settings below | |
| Command Tenanut | 500 | 1 | RS403 + | Note physical convection type must match selected | |
| Device Address | 1 | | Baudfune | 115200 | - 41 |
| Device IP or Part | CONI | | Command Tanaout | 500 | |
| Command Timeout | | | Datalits | 8 | |
| The maximum time in mi | illisecand for waiting response. | - | Device Address | 1 | - |
| | | | Device IP or Port | COMI | |
| | | | Farity | Odd | |
| | | | Stupers | One | . + |
| | | | BaudRate The baud refe: 115200, 4 | 4000, 9600, 14230, 38400, 57600 | |
| | i Bask Fielde | Carval | | | |

Figure 4: USB and RS485 Communication Interface

Please refer to your device User's Manual for other communication interface setting options if default settings are not applicable.

The device can be deleted by clicking the Delete icon (Figure 3).

3.3.1. Communication Interface

Set the communication parameters for the connected device.

Note: The connection type and parameters must be accurate for a proper connection to be established. Failure to accurately setup communication parameters may result in communication errors.

- Connection Type: Select the type of connection between the Platinum device and the computer.
- **Command Timeout:** The maximum time (in milliseconds) for a command to be completed before the command is aborted.

Note: The default command timeout is 500 milliseconds. It is recommended that this section be left unchanged to avoid communication errors.

• **Device Address:** If the Layer N Smart Interface is part of a network, enter the Network Address here. The default network address is 1 for most devices.

Note: The default Device Address is 1.

- Device IP or Port: The COM port on the computer that the device is connected to.
- BaudRate: Controls the bits per second.
- DataBits: The number of bits in each character sent.
- **Parity:** A means of checking the correctness of a character by adding an extra bit to the character and setting the value based on all the other bits in the character.

• StopBits: The number of bits used to indicate the end of the character.

When the user has completed setting the communication parameters for the device, click Finish.

3.4. List of Devices

This section of the interface lists all the devices connected to SYNC. For each connected device, the assigned name and the product name will be displayed. The device name consists of COM port, device address, and model. Users can switch between devices in the list to configure or capture data.

You may right click the device to Rename and Refresh your device. Users may choose to refresh the device this way should a quick device reboot be necessary.

3.5. Device Attributes

The Device Attributes list will appear when you click on a device from the Device List section (Figure 3).

3.6. Configuration Panel

The configuration of connected devices takes place in the **Configuration Panel**. The Configuration Panel settings and parameters will vary depending on the product that is connected. The configuration panel displays the software adjustable parameters of the Omega device.

3.7. Measurement Value Panel

The Measurement Value Panel displays the value that the device has been configured to measure. Alarm status and active zone status are indicated in colors:

- Black: A normal reading is being displayed.
- Red: An alarm condition has been triggered.
- Gray: The reading zone has been disabled.

Note: For more information on how to set alarms on your device, see the section titled Setting Alarms.

3.8. System Settings

The System Settings icon ** allows the user to customize the Behaviors and Display Units of SYNC.

| Sehaviors Display Units | System Settings | | | |
|------------------------------|----------------------|--------|------------|--------|
| | Refuencies Diractory | Urits. | | |
| | Weight | 8 | + Pessar | Fe |
| | Temperature | c | * Ros | Unin + |
| | Voltage | 100 | + Current | A + |
| Data Update Rate 2000 🖨 (mi) | Resistance | ohn | + Tese | 4 + |
| | Pequency | H2 | + Length | m + |
| | Volume | b) | + Velocity | m/s + |
| | | | | |
| OF | Cancel | | | |

Figure 5: Data Update Rate and Display Units UI

The **Behaviors** tab (**Figure 5**) manages the **Data Update Rate**: the frequency at which the system pulls information from the device in milliseconds. The **Display Units** tab (**Figure 5**) allows the user to globally customize the units of measure displayed for various values.

Note: The sensors are permanently set to measure SI units. By changing the **Display Units** on SYNC, you are only changing the units displayed on SYNC, not in the sensor itself. Not all configurable global settings that are available for Smart Probes will be available for PID Controllers and Process Meters.

3.9. Reconnect

The **Reconnect** button ______ attempts to connect devices that may not have been auto-detected.

3.10. Auto Scan Settings

The Auto Scan Settings button allow the user to choose what devices are detected when SYNC auto scans for connected devices or when the Reconnect button is clicked. To add a device to the auto scan list, drag the device category from the Supported Devices Column to the Auto Scan column. To remove a device from the auto scan list, drag the device category from the Auto Scan Devices column to the Supported Devices column. Once you have finished customizing your settings, click Close.

3.11. Update Devices

The **Update Devices** button updates the device library for the listed device categories. The update requires an Internet connection and requires SYNC to restart to detect the new devices.



Figure 6: Auto Scan Settings

4. Configuring Smart Probes and Other Compatible Sensing Devices

SYNC allows users to configure qualifying Smart Probes and Wireless Devices. To configure these settings, you must have a Smart Probe or Wireless Device connected to SYNC. Click on the Smart Probe or Wireless Device you would like to customize from your **List of Devices**.

The **Configuration Tabs** allow the user to switch between the device Inputs, Outputs, and Settings interface. Refer to the device specific User's Manual for the software adjustable inputs, outputs, and settings available on your device.

- Inputs: Displays configuration options for device inputs
- **Outputs**: Displays configuration options for device outputs.
- Settings: Displays configuration options for the device settings and system functions.

| 1000 | Oppose Device | Settings . | | | Device, HERDCOM |
|------------|---------------|------------|--|--|-----------------|
| Type PECEL | (+) | | | | |
| 10%.0 | - | | Anna Sont Stan Parameter Song Song Song Song Song Song Song Song | in the second se | |
| ingadi - | | | NO:0 IN1:0 | DIN | |
| (helped) | OFF | | | et OFF | |

Figure 7: SYNC Inputs Configuration UI

4.1. Inputs

To configure the inputs of your sensing device, begin by navigating to the **Inputs Configuration Tab** and select your **Input Type** from the drop down. Settings are adjusted on an interface that allows for full configuration of the device as seen in **Figure 7**.

4.1.1. 4 to 20 mA Process Input Sensing Device - Unit Conversion w/ Gain & Offset

Compatible 4 to 20 mA process input sensing devices that are connected to SYNC can be scaled and configured to report accurate sensor readings in the Omega Link Cloud and Omega Enterprise Gateway dashboard user interfaces. To configure and scale the 4 to 20 mA process input of a compatible, connected, sensing device follow the steps below:

| Sensor RHPX-RH | | |
|---|--|---|
| * Sensor | | |
| Name | RU-IPX-FUH | |
| Measurement Type | MILLIM/P | |
| Advanced Scaling | | |
| Unit | SRH | |
| Global Display Unit | | |
| Lock | ×. | |
| Scaling | Gains5. Ottsett-10 | |
| Apply Scaling | | |
| Gain | 5 | |
| Offset | (-10) | |
| Device Range/Type | | |
| Type | 0-24 mA | v |
| | | |
| Offset | | |
| Offset of linear interpol Make sure the globel d | ation. Valid when apply scaling checked. splay unit is the same as the sensor unit when applying the offset | |
| | Apply Settings | |

Figure 8: SYNC Advanced Scaling

- Step 1: From the Inputs tab, click the Advanced Scaling check box to enable it and display the advanced scaling options.
- Step 2: Provide a name to the sensor in the Name text box (16-character limit) and enter the unit of measure associated with the device in the Unit text box (4-character limit).
- Step 3: Click the Global Display Unit check box to disable the option.
- Step 4: Click the Scaling sub-menu drop down and click the Apply Scaling check box to display and edit the Gain and Offset text boxes.
- Step 5: Navigate to a 4 to 20 mA Scaling Calculator at the following url: https://omegaupdates.azurewebsites.net/calcPage.htm
- Step 6: Enter the Sensor Minimum and Sensor Maximum process range values associated with the 4 to 20 mA sensor into the calculator and click Calculate.
- Step 7: The calculator will then provide Gain and Offset values as a result.
- Step 8: Back on SYNC configuration software, enter the newly received Gain and Offset values under the Scaling drop down from Step 3.
- Step 9: Click Apply Changes to finalize and save the changes to the sensor.

When the configured 4 to 20 mA sensor is added to either an Omega Enterprise Gateway or Omega Link Cloud, the sensor values will display according to the configurations.

4.1.2. Setting Alarms

SYNC allows users to set alarm conditions that notify the user when said conditions are met. The alarm

feature is only available on qualifying products. The alarm icon \clubsuit is located to the right of the input name in the configuration interface. Clicking the alarm icon will take you to the Define Alarm dialog box as seen in **Figure 8**.

| + 🗉 | Condition: Sensor: | | High Threshol | d | Duration (s) | | |
|---------|-----------------------|--------|-------------------|-------|--------------|-----------------|---------|
| Alarm_1 | Input0 Above | • | 25 | for | 0 | | |
| | Action: | | | | | | |
| | Transmit Notification | | | | | | |
| | Turn On | Outpo | 40 | • | | | |
| | Charige • | Transm | ission interval t | 0 | 0 💽 (s) | | |
| | Recovery: | Dura | tion (s) | | | | |
| | Clear Alarm 🔹 🖌 | fter | 0 And | Reset | | Transmission is | nterval |

Figure 9: Defining an Alarm through SYNC

Once the conditions for your alarm have been set, click the Plus icon to add the alarm to your list of active alarms, and click **Save** to finalize.

4.2. Outputs

To configure the outputs of your Wireless Device or Smart Probe, begin by navigating to the Outputs Configuration Tab. Settings are adjusted on an interface that allows for full configuration of the device.

4.2.1. Configuring ON/OFF Control

Note: Only devices that specifically offer digital outputs may configure ON/OFF Control or PWM.

To configure ON/OFF Control on a device, navigate to

the **Output** configuration tab and click on the icon located to the right of the available outputs. Clicking the icon will open the **Define ON/OFF Control** dialog box as seen in **Figure 9**. Choose the Input with the active alarm that you would like to control and set your preferred parameters. Once the ON/OFF Control parameters have been set, click **Save** to finalize the settings.

| Inputs | | Setpoint | | | |
|---------|--------------|----------|--------|-------|--|
| Input0 | | 0 | | | |
| Output | Control Acti | ons | DeadBa | hered | |
| Output0 | Reverse | - | 0 | * | |

Figure 10: Configuring On/OFF Control

Warning: ON/OFF Control configurations will be erased if the **Input Type** is changed. If the Input Type is changed, ON/OFF Control parameters must be redefined.

4.3. Device Settings

The system functions may vary depending on the device connected.

- Sensor Setting: Controls the transmission interval of the device.
- **Reset User Hours:** Resets the user hours to zero as displayed in the Device Attributes.
- Load Configuration: Allows the user to load a previously configured .json file to your device via Omega SYNC.
- Firmware Update: Allows the user to upload and update the firmware of the device.
- Update Current Time: Syncs the sensor time with the current time displayed on your computer.
- Save Configuration: Allows the user to save the current configuration on Omega Sync as a .json file.
- Rename Device: Allows the user to rename the device.
- Factory Reset: Resets the device to its factory settings.
- Set Passwords: Protects the SYNC configuration of your device behind a password. Once a password has been set, unplug the device and plug it back in to implement the password protection.
- **Data Logging Options:** When the device data log is full, the user may choose to overwrite the oldest data and continue logging new data or stop logging new data once the data log memory is full.
- Apply Interval: Sets the transmission interval of your sensing device.
- **Refresh Interval:** Reads and displays the current transmission interval that may have been changed by sensor alarms.

Note: Some additional functions not listed here may be device exclusive. For more information on these functions, refer to your device User's Manual.

| | Sensor Setting | 5 | |
|--------------------------------|---------------------|----------------|------------------|
| Ianamission Interval (hhimmos) | 10001 1000 | Apply Interval | Refresh Interval |
| Current Time | 10/22/2020 09:50:37 | Update Curr | ent Time |
| User Hours | 119 | Reset User | Hours |
| Load Configuration | Save Configuration | Rename | Device |
| Factory Reset | Firmware Update | Data Loggin | g Options |
| Reset (D | | | |

Figure 11: SYNC UI Device Settings

5. Omega Link Smart Device Password

Note: It is not required to set a password for your Omega Link Devices.

Some Omega Link Smart devices, such as Smart Probes and Wireless Smart Interfaces (such as the IF-006), allow users to lock the SYNC configuration features behind a password. When a Smart Probe is attached to an IF-006 with a matching password, the IF-006 will allow the probe data to be sent to the Omega Link cloud when integrated into an Omega Link ecosystem.

Caution: Both passwords (Interface and Probe) must match to successfully connect to the Omega Link Cloud. Devices with mismatched passwords will not have cloud access. After 3 failed login attempts, the device will power cycle before you can retry.

When setting a password, if both passwords do not match, users will have the option to automatically update both passwords to match. Once a password is set, users will be required to log in to that device before they are able to make changes to the configuration.

To set a password for your Omega Link Wireless Smart Interface, navigate to the **Device Settings** tab of the SYNC interface.

Step 1: From the Device Settings Tab, click Set Password under Interface Settings or Sensor Settings, depending on which you wish to configure first.

| | Interface Settings | |
|----------------|-----------------------|---------------------|
| Interface Type | Omega Sub GHz 915 MHz | Additional Settings |
| User Hours | 0 | Reset User Hours |
| Set Password | Factory Reset | Firmware Update |

Figure 12: Interface/Device Settings in SYNC

| | Configuration Password New Password: | | |
|--|---|--|------------|
| Step 2: Create a password and click Save Password. | Save Password | Clear Password | |
| | If your sensor is pas here to enable com | sword protected, enter th munication to the Cloud | e password |

Figure 13: Device Password Configuration

| into | | ~ |
|---|---------------------------|----------------|
| Do you want to Update the Inte | rface Password as well?? | |
| If the Interface Password does n not be sent to the Cloud. | ot match the Sensor Passw | vord data will |
| | | |
| | 1 | 1 |

Step 3: If your passwords do not match, you will be able to sync them now.

Figure 14: Password synchronization between interface and device

6. Configuring PID Controllers and Process Meters

Important: The following information only applies when connecting qualifying PID Controllers and Process Meters. Not all configurable global settings that are available for Smart Probes will be available for PID Controllers and Process Meters.

| 546C - VEREZIEN | £ | | | | | | | - 0 × | |
|--|---------------|---|--|------------------------------|--|---|----------------|--------------------|--|
| Sansing Incredicile in | tionat of Th | ings - | | | 1444 | Configu | re Device | ine Capture Data | |
| + = 0 | 0 | Q | Inputs Outputs An | runciators Setpo | clints PID Rem | p&Soek Alams D | evice Settings | Pletinum | |
| Device ID CONSTITUENT CONTENT CONSTITUENT CONTENT Services version 142.0 Base Dutput version 120.0 Base Dutput version 100.0 System Status 22110000 Base Made ID18 An Made ID18 | | PBI Control 1 Control Actions Adoptive Control Death Missimum Love (N) Maximum High (N) Cartery Other (N) Deatlored *Turving Propertional Cart Integral Gain Deatvacture Sain Max Rate (noi) Auto Turve Timeout Ise | Revenue 561 -100 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 0000 | PED Control 2 Control Actions Adaptive Control Tractile *Bounds Minimum Lose (N) Maximum High-(N) Control Office (N) Desiblend *Toming Proportional Can Integral Can Derivative Dain Main Tatin (Intel Auto Turin Timeout Intel | Reserve 22 -100 100 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 | | | |
| Ny ST Addess See Address | 1 | | Control Actions Reverse, Direct, Reverse/Dire | tation | | Cantral Actions Revene, Dent, Revene Donth actions | | | |
| | | | Setpoint 1 | Setpoint 2 | Process | -0.3 | | eah 145 | |
| | | 5.0 | 0.0 | | 010 | × | aley -79.9 | | |
| | | | 194 | Rat | 384 | Det | Dianilby | Pavet | |
| | | | Callegen | 144 | Manual Central | Latin Reset | Post Reset | Valuy Beat | |
| Dec. | ter long tarr | n data Joggin | PID Output Status PID 1.0% PID 2.0% | Remp/Souk Status Institue | Aurilliary Input 04 | Annunciators 0 | | Alartsa III III | |

Figure 15: PID and Process Controller SYNC UI

SYNC allows users to configure qualifying PID Controllers and Process Meters (CN6xx, DP6xx, etc.) To configure these settings, you must have a PID controller or Process Meter connected to SYNC. Click on the PID Controller or Process Meter you would like to customize from your **List of Devices**. PID Controller / Process Meter settings are adjusted on an interface that allows for full configuration.

6.1. Reading and Control

SYNC provides an interface at the bottom of the screen that allows users to configure the operating mode of the Platinum controller.

6.1.1. Operating Modes

The six control buttons (Wait, Run, Idle, Stop, Standby, and Pause) may be selected to change the operating mode of the device.

6.1.2. Run Mode Options

The Run Mode option buttons (**Peak, Valley, and Latch Reset**) mimic the functionality found in the Platinum Run Mode. The Peak and Valley buttons include Peak/Valley values. Pressing either will clear the current value. Clicking the Latch Reset button resets the latched alarms.

6.1.3. Calibrate

The Calibrate button allows users to set the calibration parameters for process values. 1-point, 2-point, and Ice Point calibration are supported.

| S Process Value Calibration | 1 | | | - | | × |
|--|--|-------------------------|---|---|--|-----------------------|
| None | 1 Point | | 2 Point | E | ICE Poin | t |
| Low | SET SET | High | × | SET | | |
| | Offset 0 | Gain | 1 | | | |
| Two points calibration is use Live Scaling. (1) To apply low value. (2) To apply high tem value | ed to correct skewed m v temperature, enter it perature, enter it into t | into the b he box an | nt of linear system. I ox and then press th d then press the 'SET | t should t e 'SET' bu I' button i | be perform atton for the for the hig | ned as ne low h |
| | | | | | Clos | ie |

Figure 16: Process Value Calibration

6.1.4. TARE

The TARE button is only enabled when the input is set to process. Clicking the TARE button will set the current weight reading to 0.

6.1.5. Manual Control

The Manual Control button operates like the OPER/MANL option on the Platinum Controller. Selecting this button will open a separate window for manually setting the Input Value or Control Value; the unit will be placed into IDLE mode. Selecting the Output option sets the Control Output and any outputs configured as PID may be set from 0 - 100% of full power. Selecting the Input Option generates a 'pseudo input' within the range defined by the Input Range value. The Disable option disables both the Input and Output functions.

| | | | | 100 | 195 |
|--------------------------------------|--|--|----|-------|----------|
| 10 Point Linearization | | | | | |
| Number of Points | 2 | | | | 4 |
| | * Data Point 0 Input Reading * Data Point 1 | Input (0) Reading (0) 0 Capture Input Input (100) Reading (100) | ŧ | | CINICIN. |
| | Input Reading | 100 100 | | | an lan |
| | | Captore opo | n. | | |
| Number of Points Number of points | | | | | |
| | | | OK | Cance | e. |

Figure 17: Process Input Linearization

6.2. Inputs

Under the Inputs tab, users can configure the type of process input connected to the Platinum controller, set the reading filter, and configure additional settings based on the type of process input.

6.2.1. Thermocouple

When the Process Input option is set to the thermocouple option, users may choose the thermocouple type from the TC dropdown. The reading filter may be configured by clicking the corresponding dropdown.

6.2.2. RTD

When the Process Input option is set to the RTD option, users may choose the RTD wire number and type connected to the Platinum device. The reading filter may be configured by clicking the corresponding dropdown.

6.2.3. Process

When the Process Input option is set to the Process option, users may select the process range, type, and configure the scaling settings. The reading filter may be configured by clicking the corresponding dropdown.

6.2.4. Range

The following process ranges are supported:

| 4-20 mA | ± 1.0 V |
|---------|----------|
| 0-24 mA | ± 0.1 V |
| ± 10 V | ± 0.05 V |

6.2.5. Range Sub-Types

Some process range options also allow for range sub-types to be configured to Single-Ended Voltage, Differential Voltage, or Ratiometric Voltage.

6.2.5.1. Scaling Types

Scaling types can be changed between Manual and Live. Live adds a Capture Enable and Disable button that allows users to capture the current value for high or low inputs.

6.2.5.2. Scaling Settings

The following scaling values and settings can be configured: Low Input, Low Reading, High Input, High Reading.

6.2.5.3. Input / Output Scaling

Scaling operations translate source (input) signals to scaled output signals using a linear translation defined by a SLOPE (or gain) and an OFFSET. As shown below, (X1, Y1) and (X2, Y2) define two points on a line with a certain SLOPE and OFFSET. Knowing the SLOPE and OFFSET determines the OUTPUT value for any given INPUT value using this equation:

Output = Input X SLOPE + OFFSET, where

GAIN = (Y2 - Y1) / (X2 - X1)

OFFSET = Y1 - (GAIN * X1).

If (X2 - X1) == 0, the GAIN is set to 1 and the OFFSET is set to 0.

For MANUAL scaling the two points are entered directly, as values, in the "Manual Settings" screen area.



Figure 18: Input Output Scaling graph

6.2.5.4. Linearization

Platinum supports 10-Point Linearization in process input. The 10-point linearization enters up to 10 Reading/Input value pairs and is used to internally calculate 10 gain/offset parameters.

| Process Input Lineari | eess Input Linearization art Linearization ber of Points 2 | | | | |
|--------------------------------------|--|--|----|------|--------|
| 10 Point Linearization | | | | | |
| Number of Points | 2 | | | | 0 |
| | * Data Point 0 Input Reading | Input (7) Reading (7) 0 0 Capture Input | | | (0)(0) |
| | * Data Point 1 Input Reading | Input (100) Reading (100) 100 100 | | | 0.0 |
| | | Capture Input | | | |
| Number of Points Number of points | | | | | |
| | | | ок | Cane | əl |

Figure 19: Process Input Linearization

6.2.6. TARE Options

TARE can be enabled, disabled, or set to remote. When enabled, the TARE button will be selectable.

6.2.7. Thermistors

When the Process Input option is set to the Thermistors option, users may choose the thermistor type from the corresponding dropdown. The reading filter may be configured by clicking the corresponding dropdown.

6.3. Outputs

| SINC - V1.8.2.2116 | 4 | | | | | | | - | D X | | |
|--|---|-------|---------------------------|------------------------------|-------------------------------------|---------------|----------------|------------|-------------|--|--|
| Sensing Incredible Ir | nternet of T | hings | | | | Ei Con | figure Device | 🖿 Capt | ure Data | | |
| + = < | > 0 | Q | Inputs Outputs | Annunciators Setpo | oints PID Ramp | & Soak Alarms | Device Setting | 5 | Platinum | | |
| - Partners | | | Output1 | | Output! | Output! | | | | | |
| 1 Contraction | 00012410 | 8 | Contraction of the second | | Output Type | SPST Relay 1 | SPS7 Relay 1 | | | | |
| | | | Output2 | | Mode | Ott | | | + | | |
| | | | Output3 | | | | | | | | |
| | | | Output4 | | | | | | | | |
| Device ID Femware version | ever D 07634902 means version 1.40.6 | | Output5 | | | | | | | | |
| Bootloader version Base Output version System Status | 12.0.0 10.0.0 22110004 | | Output6 | | Output Type Available output typ | | | | | | |
| Port/IP Address Bus Address | COMP | | Setpoint 1 | Setpoint 2 | Process | | | Peak 145 | | | |
| | | | 5.0 | 0.0 | | -0.3 | | Valley -79 | 9 | | |
| | | | Wall | Rati | ide . | Ske | Bandy | | Paue | | |
| | | | Calibration | TAR | Manual Control | Latch Reset | Peak Reset | V | alley Reset | | |
| | OIG for long term data logging | | | Ramp/Soak Status Inactive | Auxilliary Input 04 | Annunciators | Outputs | Alarms | | | |

Figure 20: Controller Outputs SYNC UI

The Platinum controller supports 6 outputs, and each output configuration may be refreshed or updated independently.

The "Output Mode" selection assigns the output to a specific mode of operation and defines which parameters apply and enables the corresponding control blocks. The state of each output is shown on the main screen.

Available outputs modes are:

- OFF output is turned off
- PID output is set to output PID control value
- ON.OFF output is set to On or Off based on setpoint value
- ALARM1 output is linked to alarm1
- ALARM2 output is linked to alarm2
- RAMP ON output is linked to PID control ramping stage
- SOAK ON output is linked to PID control soaking stage
- PID 2 output is set to output PID 2 control value.
- SENSOR ERROR output is turned on if there is a sensor fault
- OPEN LOOP output is set on when the control loop is open

Note: Only valid parameters/options for the selected mode will be enabled when the user switches output mode.

6.4. Annunciators

| SVNC - V1.8.2.2119 | £ | | | | | | | - 0 | × |
|--|------------------------------|-------------|---|------------------------------|---|-----------------|----------------|--------------|------|
| Sensing Incredible In | ternet of Th | ings | | 1.12 | | Con | figure Device | Capture Dat | a - |
| + = < | 0 | Q | Inputs Outputs | Annanciators Selp | oints P1D Ram | p & Soak Alarms | Device Setting | Plat | inum |
| Tation Constraints | 006-C24-EP | | Annunciator 1 | | Annunciator 1 Disabled | Selected Mode: | | | |
| | | | Annunciator 2 | | Alarm 1 Alarm 2 | | | | |
| | | | Annunciator 3 | | SPST Relay 1 DCPulse 1 85 CPV /80 | | | | |
| | | | Annunciator 4 | | SE, ON (SE) RAMP, ACTIVE | | | | |
| Device ID Ferrivare version | 07634902 1.4.0.6 | | Annunciator 5 | | SOAK, ACTIVE SENSOR, ERRO | c | | | |
| Bootisader version Base Output version System Status | 1.20.0 1.00.0 22110009 | | Annunciator 6 | | OUTPUT_ERAC | 4 | | | |
| Run Mode Port/IP Address Bus Address | COM7 | | Setpoint 1 | Setpoint 2 | Process | | | Peak 145 | |
| | | | 5.0 | 0.0 | | -0.: | 3 | Valley -79.9 | |
| | | | Wat | Ret | ide | Sky | Standay | Faute | |
| | | Calibration | TARE | Manual Control | Latch Fleset | Peak Reart | Valley Rassil | ŧ | |
| OEG for long term data longing | | | PID Output Status PID 1: 0% PID 2: 0% | Ramp/Soak Status Inactive | Auxiliary Input 04 | Annunciators | Outputs | Alarms | |

Figure 21: Controller Annunciators SYNC UI

Platinum annunciators appear on the front display and are activated based on the state of the Alarms and Outputs. A total of 6 annunciators are supported by the controller. The user can select an annunciator number to change the annunciator mode.

The Platinum Configurator extends the annunciator options to trigger the annunciator based on individual RE.ON or SE.ON states including 'any RAMP' or 'any SOAK' status.

Available Annunciator Modes:

- Disabled The annunciator is disabled.
- Alarm1 The annunciator is linked to Alarm1.
- Alarm2 The annunciator is linked to Alarm2.
- SPST Relay1 The annunciator is linked to SPST Relay1.
- DCPulse1 The annunciator is linked to DCPulse1.
- Isol DCPulse1 The annunciator is linked to isolated DCPulse 1.
- Isol DCPulse2 The annunciator is linked to isolated DCPulse 2.
- RE.ON The annunciator is linked to RE.ON state.
- SE.ON The annunciator is linked to SE.ON state.
- Ramping The annunciator is active when PID control is in ramping stage.
- Soaking The annunciator is active when PID control is in the soaking stage.
- Sensor Error The annunciator is active when the sensor is in a fault state.
- Output Error The annunciator is active when the output is in a fault state.

6.5. Setpoints

| SVNC - V1.8.2.2119 | 4 | | | | | | | - 🗆 X | |
|---|---------------|---------------|---|------------------------------|-------------------------|---|---|---------------------------------------|--|
| Sensing Incredible I | nternet of Th | ings | 11 | 1 | | Conf | igure Device | 🖿 Capture Data | |
| + = < | > 0 | Q | Inputs Outputs | Annunciators Selpe | ints PID Ram | p&Soak Alarms | Device Setting | Platinum | |
| Patient cell?rise | 006-C24-DP | | Setpoint 1 Setpoint Modes Setpoint 1 | Absolute 5 | A. | Setpoint 2 Setpoint Modes Setpoint 2 (Absolute) Deviation Setpoint (=/ | Abushute 0 0 | • • • • • • • • • • • • • • • • • • • | |
| Vevice ID 07634902 Immeany version 1.4.0.6 Introductor version 1.2.0.0 Iaxe Output version 1.0.0.0 yotem Statys 22110009 Jun Micde IIDUS | | | Setpoint Modes Atsulute, Famule, Ramp | & South | | Setpoint Modes Absolute, Deviation The setpoint value is user when setting up for heat | I with Alarm functions / Cool Control Mode | and with un/off control | |
| Port/IP Address Bus Address | COM7 | | Setpoint 1 | Setpoint 2 Process | | | | Peak 145 | |
| -91.03005 | | | 5.0 | 0.0 | | -0.3 | | Valley -79.9 | |
| | | | Wat | Rat | hite | Stop | Dandy | Pause | |
| | | | Calibration | THE | Manual Control | Latch Reset | Peak Reset | Valley Reset | |
| | for long term | n data loggin | PID Output Status PID 1: 0% PID 2: 0% | Ramp/Soak Status Inactive | Auxilliary Input 0.4 | Annunciators | Outputs | Alarma | |

Figure 22: Controller Setpoints SYNC UI

The Setpoint configuration screen sets the mode for Setpoint 1 and Setpoint 2. On the Platinum Configurator, the setpoint mode may be easily set. Setpoint 1 mode on the Platinum is set by enabling the Ramp & Soak or Remote Setpoint functions.

Setpoint 2 mode may be set to either Absolute or a Deviation (+/-) from setpoint 1. The value displayed on the device readings interface of the main screen will be the effective value.

Example: (Setpoint 2 Deviation mode)

Setpoint 1 = 100.0

Setpoint 2 Deviation value = 5

Effective Setpoint 2 value = 105

6.6. PID

| SHIC-VELLENIN | | | | | | - 0 × | |
|--|--|---|--|--|--|-------------------------|--|
| Sensing Incredible Internet of Things | | | Sec. 1 | Configur | e Device | 🐜 Capture Data | |
| + = • 2 @ | Inputs Outputs Ann | uncitions Setp | cints PID Ram | p&Scelk Alarms De | wice Setting | s Platinum | |
| Control of the second of the | PBD Control 1 Control Actiants Activities Control Enable +Bolmuns Low (Se Maximum High (SE) Canton Othert (N) Deateand 4 Turing | Reverse 521 -180 180 0 0 | 00000 | PD Control 2 Control Actions Adaptive Control Evanle *Bounds Minimum Control Meximum High (N) Control Officer (N) Control Officer (N) Control Officer (N) Control Officer (N) | Revenue 5/f. -190 190 0 0 | | |
| Device ID D1634800 Romates version 1.42.65 Buildweitr emsion 1.22.00 Base Dutput version 1.00.0 System Status 22110008 Ran Miscle ID18 Myster Adamesi CD18 | Propertienel Gain Integral Gain Derivative Salin Mare Rain (min) Auto Turne Timeout (sed) | 1 0 0 300 2.00 Clea | entegne | Proportioned Care Integral Gain Derivative Care Mare Fate (suin) Auto Turne Timeout (sel) | 1 0 0 800 Auto Tunie | Oter Hegel | |
| las Addess 1 | Centrel Actions Reverse, Dent, Reverse/Direct Settpoint 1 | tactions Setpoint 2 | Process | Control Actions Revene, Denct, Revene/Direct | t Actions | Pisak 145 | |
| | 5.0 | 0.0 | | -0.3 | | Valuy -78.0 | |
| | TH . | Rut | ade . | 2me | Daniby | Faune | |
| Dis far long term data i | FID Output Status FID Output Status FID 1 0% FID 2 0% | tamp/Souk Status Inactive | Manual Contra AuniZiary Imput C4 | Annunciators O | Post Reset | Valey Bealt Martinis | |

Figure 23: PID and Process Controller SYNC UI

The PID configuration screen sets the PID control parameters and initiates an Autotune cycle. The user can use this dialog to adjust PID parameters for both PID 1 and PID 2.

If the **Auto Tune** button is selected the system will start an AUTOTUNE cycle and the status/input value is shown on the main screen. Once the cycle is complete, the REFRESH button may be used to review the calculated P, I, and D values.

The calculated PID Output power is shown on the main screen. Following an Autotune cycle select the Refresh button to update the new P, I, and D parameters.

Note: Before initiating an Autotune cycle, ensure that the appropriate output has been configured for PID control.

6.7. Ramp and Soak

| SVINC - V1.8.2.2119 | 6 | | | | | | | | | | | - | D X |
|--------------------------------------|-------------------|----------------|--------------------|-------------------------|------------------|--------------------|--------------|---|-------------------|---------------|------------------|------------------|------------------|
| Sensing Incredible In | derived of T | hings | | | | | | £1, | | - | Configure D | Nevice 🛛 🗎 Ca | pture Data |
| + = 0 | 0 | Q | Inputs | Outputs | Annuncial | ors Setpoi | nts PID | Ramp & Soak | Alartis Devic | e Setti | ngs | | Platinum |
| The second | | | Profile | to Load | 18 4 | tart Profile | 1. | amp/Soak Cont | PDI DH | • | Import | Export | |
| 0601-00 | 006-028-08 | 2 | Double (| ics each cell | to estit profile | s or profile seg | - | | | | | | |
| | | | Fruilles | Seg. Num | Track Mode | End Action | Linked Fruit | to Profile/ a | tamp Time(Mummod) | Ramp Event | Tempoint | Sout TimeDdumers | a South Event |
| | | | | | 1000 | 809 | | . 10 | 00/10/00 | | | 00.10:00 | |
| | | | | · · · · · · | | | | 3/0 | 00.10.00 | | .0. | 00/10/00 | CT 1 |
| Device ID | evice ID 07624902 | | | | | | | 3.0 | 00/10/00 | - 63 | | 00-10-00 | - CE |
| Booficadar version | 12.00 | | | | | | | 5/4 | 20.10181 | - 13 | . 8 | 00.10.00 | |
| Base Output version System Status | 1000 | | | | | | | 5/8 | 001000 | | 1 | 00.19:00 | 0 |
| Run Mode Port/P Address | IDLE COMP | | Setpoint | 1 | 5 | rtpoint 2 | | Process | | | | Peak 145 | |
| Buz Address | 1 | | 5 | .0 | | 0.0 | | | | | | Valley -79.9 | |
| | | | 1 23 | that | | Ret | | itte | Ing | | Ter | 8y | Paus |
| | | | ć. | loater | | and. | M | amust Control | Latch Head | | Peak R | net i | alary Advant. |
| | or long bei | in data loggin | PD Ove PD PD | 5, 0% 3, 0% 3, 0% | Kamp/S | cak Status athe | Autiliary | Annu Annu Annu Annu Annu Annu Annu Annu | ocators Quepa | | Aama 10 11 11 | | |

Figure 24: Ramp and Soak SYNC UI

The Platinum controller supports up to 99 Ramp and Soak profiles each supporting up to 8 ramp/soak segments. The ramp and soak profiles may be daisy-chained together using a profile LINKING option.

The Ramp & Soak Control section programs the overall Ramp and Soak control, including enabling the Ramp & Soak mode. Start the profile to use the tracking mode, and a number of segments in each specific profile; and the action to be taken at the end of the profile.

The Profile select control selects which profile data is to be displayed. The time format is maintained and displayed as hours:minutes:seconds. The time values may be adjusted using the Device Settings tab.

6.8. Alarms

| DHKC-V18220164 | 2 | | | | | | | - 0 X |
|---|---|-------------------|--|--|-------------------------------------|---|---|----------------------------|
| Sensing Incredible Int | errent of T | Nings | | | | | Configure Device | Re Capture Data |
| + = 0 | 0 | Q, | Inputs Outputs A | nnunciators Setpoir | rts PID Ramp & Soak | Alarms Device Set | togs | Platinum |
| Device ID Formular version Rootlaate version Base Output version Base Subjut version Rate Notput version | 07524802 1426 1226 2211000 RU4 0041 1 | | Alarm Crue - Alarm Settings Alarm Modes Alarm Cators - Alarm Cators - Alarm Cators - Alarm Cators - Alarm Cators - Alarm Cators - Alarm Setting - Alarm Setting - Cathodian Canted Cru Delay - Of Delay - Actuation Canted - Cathodian Control - Actuation Control - Actuate Power On Actuate Power On | OFF ABSOUTE UNLACH RED 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | * | Alarm Ton Alarm Settings Alarm Modes Aboot An Deviation Inth Options Alarm Caliens Adverte Seturem High High-Righ Totols Anti-Attion Constall On Delay Activation Constall On Delay Activation Constall Activation Constall On Delay Activation Constall On Delay Activation Constall Construction Activation Constall Construction Activation Construction Alarm Modes CH Alarma, Brane, H-Lares B | OFF ABDOLINT UALACH AMINA Lass 0, High 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | - + - - - - |
| In Addres 1 | | Setpoint 1 5.0 | Setpoint 2 0.0 | Process | -0.3 | Dendy | Peak 145 Valley -79.9 | |
| | | | Calbular | Tald | Based Cartest | Latin Revel | Paul Read | Valley Reset |
| OFE N | long ter | m idata loggi | PID Output Status PID 1: 0% PID 2: 0% | Ramp/Soak Status Viactive | Austiliary Input Annu 54 III III | noators Outputs | Aams IIII IIII | |

Figure 25: Alarms SYNC UI

The Platinum controller supports 2 alarm control blocks. The state of each alarm is shown on the main screen. The user can change the alarm mode and set alarm parameters/options using the provided interface as shown above.

6.9. Device Settings

| SVNC-VIEZ2119 | 6 | | | | | | | | | | | | - 🗆 X | |
|---------------------------------------|--|--|----------------------|-----------------------------------|--|----------------------------------|--------------------|---|------------------------------------|---------------|--|--|--------------|--|
| Sensing Incredible In | ternet of 1 | hings | | | | | | | | | Configure Devi | er 🐞 | Capture Data | |
| + = < | 0 | Q | Inputs | Outputs | Annunciators | Setpoints | P/D | Ramp & Scal | k Alams | Device Setti | 995 | | Platinur | |
| | | | | | | | | Device | Settings | | | | | |
| Call Date to | 001-024-02 | | | Corre Besel | Bandt OMB Power AC mantalatiens Secial laardOutput 1917 | lå Etheret Relay, DC Pulse | × | Mode Primary Display sart Dulgat Version Simart Outgut | e controllar e ticher e Nuti | | Caser Size Second Display and Output Version Notated Output | 1/8 DN None 13.10 Notated Analo | | |
| Device ID | | | | Save Configuration | | | Load Configuration | | | Factory Reset | | | | |
| Fermulae version Bootbader version | Invite ID 01614902 Innuare vention 1426 Icottoder vention 1200 | Display, Excitation, Safety Options Commun | | | | | | unitations | | | | | | |
| Base Output version System Status | 1868 | 0 | Setpoin | 41 | Setp | oint 2 | | Process | | 0.7 | | Peak 145 | | |
| Nun Mode Port/IP Address | COM7 | | 5 | 0.0 | | 0.0 | | | | | -0.3 | | | |
| But AND HIS | lui Addess Y | | | | | Let . | | 10 St. | | Nat Davidy | | 123 | Paula | |
| (| | | 6 | albular | | ne. | | arust Curitual | 5.4 | A Fasel | Feat Dead | | Valey Reset | |
| OEG for king term data logging | | | PID OU PIC PIC | Apur Status 2 5: 0% 2 2: 0% | Ramp/Soak Iteda | Status | Auxilliar) GA | y Input Ann | uncators | Cutputs | Alarris IIII IIII | | | |

Figure 26: Device Settings SYNC UI

The Device Settings tab displays the device characteristics and allows users to save and load configurations, initiate a factory reset of the device, and configure the display, excitation, safety options, and communications.

6.9.1. Save Configuration

Allows the user to save the Platinum controller configurations as a .txt file.

6.9.2. Load Configuration

Allows the user to load a .json or .txt Platinum controller configuration.

6.9.3. Factory Reset

The Factory Reset button erases all previous configurations and sets the Platinum controller back to its default settings.

6.9.4. Display, Excitation, Safety Options

The Display, Safety, and Excitation control screen has been grouped into one miscellaneous control screen. Each of the sub-groups may be individually refreshed or updated.

Output Break Detect may be enabled if the output is set to a non-OFF mode. Once the break detection is enabled, the deviation and timeout parameters will be used for detection. The user can turn on latch output error option if they want to have the output error stay on when an error occurs.

| Desireal Points Display Color Units Brightmais Time Format | detan Getten GELCRUS | - | Safety Modes Power On Mode | Sec.me | |
|--|----------------------------|---|--|--|-----------------------|
| Display Color Units Brightmain Time Format | GREEN CELOUS | | Power On Mode | Resume | |
| Units Brightmess Time Format | CBLOWS | | | | |
| Brightmein Time Format | Print and a second | | Oper Run Mode | Keturn To Wait | |
| Time Format | : HOGH | | Setpoint Limits | | |
| a second of proceedings. | AMPER | | Line Limit | -1000 | |
| 000000000000000000000000000000000000000 | 0.0004 | | High Limit | 2000 | |
| Negltry Color | 1000000000000 | | Sensor Loop Break | | |
| Normal colors: Green (factory default), Red, Amber | | | Break Timeout | 60 | |
| Excitation | | | Break Detect | | |
| Station . | | | Open Detert | 8 | |
| et als | | | Latch Sensor Birtur | 8 | |
| Voltage | | | * Litch | | |
| 5V, 10V, 12V, 24V, 0V(b) | crutien off) | | Latch Output Error | 8 | |
| | | | Power On Mode Requires confirmation balo (1)Program runs automatic (2)The unit powers on and (1)Programs runs automati | ere numeric automatically at a ply at startup, the displays Run, cally at startup regardless of | tertup perious ste |

Figure 27: Display, Excitation, Safety Options SYNC UI

6.9.5. Communications

| USB Coreil | | Rhemet Corers | | | Selal Earen | | |
|--------------------------------------|---------|---|------------|----|---------------------------|---------|---|
| · Canton Optimus | | * Comm Optional | | | * Control Options | | |
| Patrony | MEERVE | Robert | ONTICA | (* | Publish. | CMELA | |
| Analisia Moster | 852 | Madicus Masire | 872 | | Midfact Mater | 1012 | |
| -Orraga Modes | COMMEND | Orwya Madeo | (Chinning) | | Oriega Montos | COMMAND | |
| Address | 1 | Alters | 18 | | Addres | t | |
| Certinens Record | | * Continuous Record | | | * Continuous Recard | | |
| Services | (3) | Terrington | 0.01 | | Similar | 100.04 | |
| Separates | Shirt | Separator | SPACE | | Separator . | 39903 | |
| Tele . | 1 | April 1 | 1 | 10 | Rate | 1 | |
| Status. | luter . | 1845vr | failer | | Salus | Take . | |
| traing | Top | feating | That. | | Analing | Test | |
| Part | lute - | Feek | farm. | | Peak | lane - | |
| talks | Talsa | inter- | Calue . | | Value. | Salar | |
| 2018 | Tale | 248 | Tatla . | | Units . | Tata | |
| | | | | | · Secul Parameters | | |
| | | | | | Serial Million | #5/22 | |
| | | | | | daut fare | 18200 | |
| | | | | | July | Catel | , |
| | | | | | Data No. | 1.0m | |
| | | | | | ling bis | 0w | |
| Andreads | | Protocols Constant Mandham | | | Protocols Conservation | 2000 | |
| and a second | | Contract of the local division of the local | | | Partie annual | | |

Figure 28: Communications window SYNC UI

The Platinum controller supports 3 COMM channels: USB, Ethernet, and Serial. USB is standard on all products.

Each COMM channel supports either Omega or Modbus protocol. Within the Omega protocol, a variety of communication parameters are presented to the user. Within the Modbus protocol, both Modbus RTU and Modbus ASCII formats are supported. The serial channel supports a variety of data formats and transmission speeds. The configuration options group will be disabled if the module is not supported or is the module that is currently connected.

Important: The channel used by the Platinum Configurator must be configured for Modbus RTU, Modbus TCP/IP, or Modbus ASCII. Following a Factory Default (F.DFT) selection the device will revert to Omega Protocol.

The Serial channel has additional parameters allowing the setting of baud rate, parity, stop and start bits. Changing these values while connected through a serial channel will result in a loss of communications. When connecting to the device, if the Platinum Configurator is connected using a USB connection and the USB/MODBUS RTU options are selected the device USB configuration will be automatically reconfigured. For all other connection options the device must be set to match the Platinum Configurator connection options

7. Capture Data Interface

The Capture Data interface provides a chart that displays real-time data from connected devices. Additionally, the Capture Data interface contains the following features:

| Extract Data | Z | Extracts data from the device data logger. |
|-------------------------|---|---|
| Start/Stop Recording | | Toggles the real-time data display to on/off. |
| Export Data to CSV File | B | Gathers the data that has been recorded or extracted and saves it in a .CSV file. |

Disabling all of the variables for a particular graph will cause the graph to be hidden, allowing the second graph to fill the entire graph area. The X-axis shows the sample count. Operating the auto-refresh at 1-second intervals results in the X-axis showing 1-second intervals.

Use zoom, pan, and fit to view charts. Both charts are synchronized on X-axis. Adjust maximum charting window. It is the max data windows that can be shown on the screen.



Figure 29: Capture Data SYNC UI

Note: Data will be reset if the user switches to the Configure Device interface. The SYNC Data Capture feature is for short-term data logging. For long-term data logging, we recommend Omega Enterprise Gateway software.

SYNC provides four ways to navigate the Capture Data Interface:

| Zoom by Rectangle | Ð | Allows the user to left click and drag the mouse across the graphed data to create a rectangle that will be zoomed in on. |
|----------------------------|---|--|
| Zoom by Middle Mouse Wheel | Ē | Allows the user to zoom in and out of the graphed data using the middle mouse wheel. This only applies to users have a mouse with the necessary mouse wheel feature. |
| Pan by Left Mouse Button | Ġ | Allows the user to left click and drag on the graphed data to navigate in the direction of the mouse. |
| Reset | X | Resets the graphed data to the original position. |

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR <u>WARRANTY</u> RETURNS, please have the following information available BEFORE contacting OMEGA:

- 1. Purchase Order number under which the product was PURCHASED,
- 2. Model and serial number of the product under warranty, and
- 3. Repair instructions and/or specific problems relative to the product.

FOR **<u>NON-WARRANTY</u>** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

- 1. Purchase Order number to cover the COST of the repair,
- 2. Model and serial number of the product, and
- 3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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