Centurion™ C5 Quick Start Guide

If the Centurion Controller and Display Modules are already installed, skip the Installation section and go to the section titled **Before Starting the Equipment for the First Time**.

Installation

The following instructions will guide you through installing the Centurion C5 controller, display and additional communication modules.

For wiring connections, please open the appropriate Installation Manual file on the white thumb drive provided.

No special cables are required. The Centurion system is designed for use within a weatherproof enclosure only.

Basic Components Include:

- Centurion™ C5 Controller Module
- M-VIEW® Display Module

Optional Components Include:

- MX4-R2 (Interchange Communication Control Module)
- MX5-R2 (Interchange Communication Control Module)

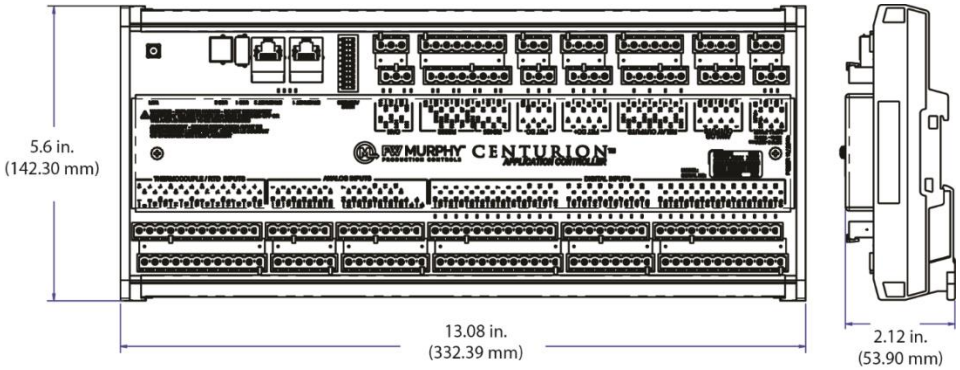
Before installing the product, inspect each item for damage which sometimes occurs during shipping.

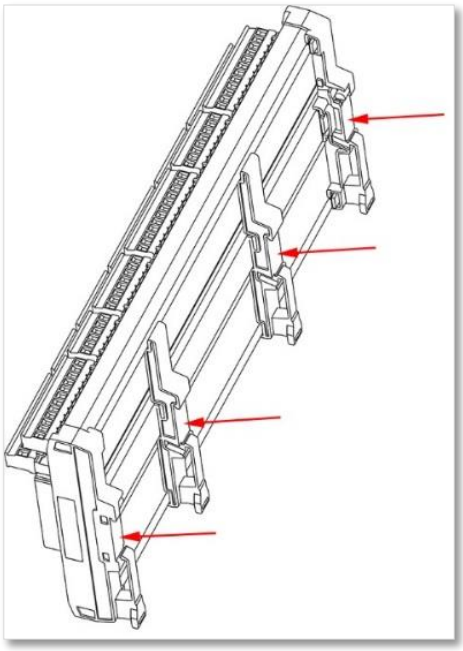
Centurion C5 Controller Module

The Centurion Module Controller must be mounted in an enclosure meeting the requirements of IP54 or greater according to the intended use and environmental conditions in accordance with standard UL 60529 and only accessible by use of a tool.

- Operating Temperature 40° to 185° F (-40° to +85° C)
- Pressure 80 kPa (0,8 bar) to 110 kPa (1,1 bar)
- Air with normal oxygen content, typically 21% v/v
- Temperature Class T4
- “ic”: intrinsic safety, (for EPL Gc)
- Increased safety, (for EPL Gc)

The Centurion Controller can be mounted vertically or horizontally on a standard DIN rail.





Attach the four clamp-type feet along the bottom of the controller to the DIN rail. We recommend installing rail stops to prevent sliding.

Optional: MX4-R2 / MX5-R2 Modules

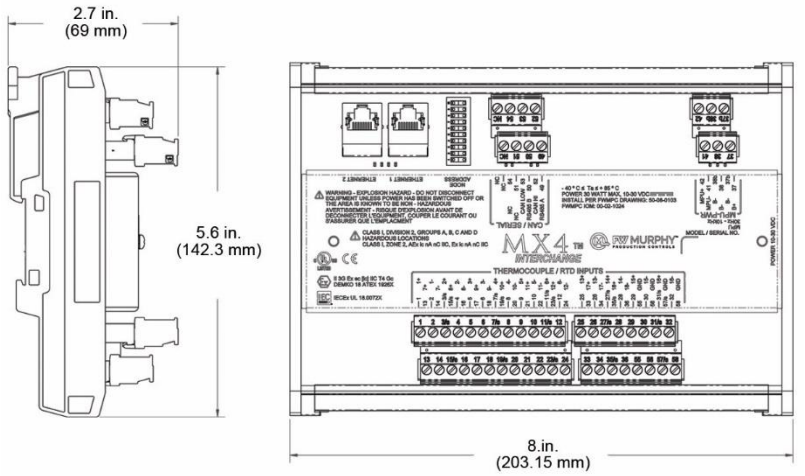
The module must be mounted in an enclosure meeting the requirements of IP54 or greater according to its intended use and environmental conditions in accordance with standard UL 60529 and only accessible by the use of a tool.

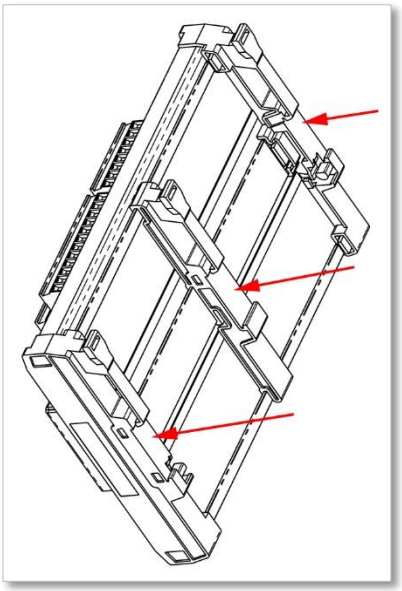
- Pressure 80 kPa (0,8 bar) to 110 kPa (1,1 bar)
- Air with normal oxygen content, typically 21% v/v
- Temperature Class T4
- “ic”: intrinsic safety (for EPL Gc)
- Increased safety (for EPL Gc)

The modules can be mounted vertically or horizontally on a standard DIN rail.

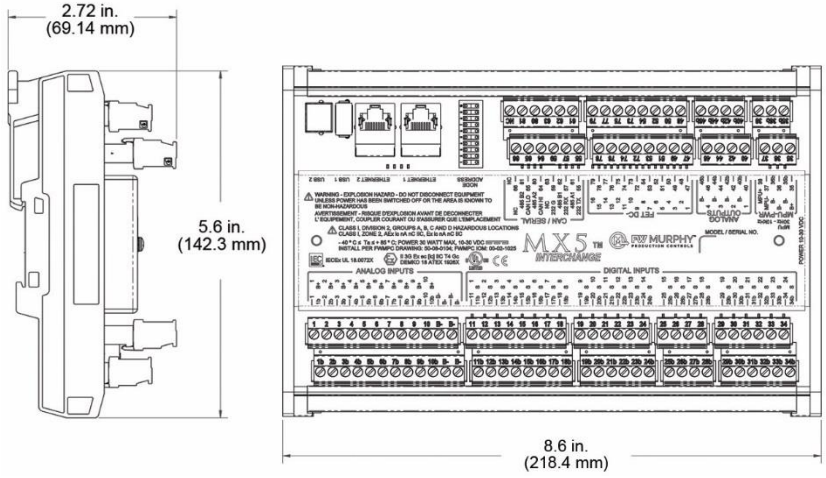
Attach the three clamp-type feet along the bottom of the controller to the DIN rail. We recommend installing rail stops to prevent sliding.

Dimensions MX4-R2



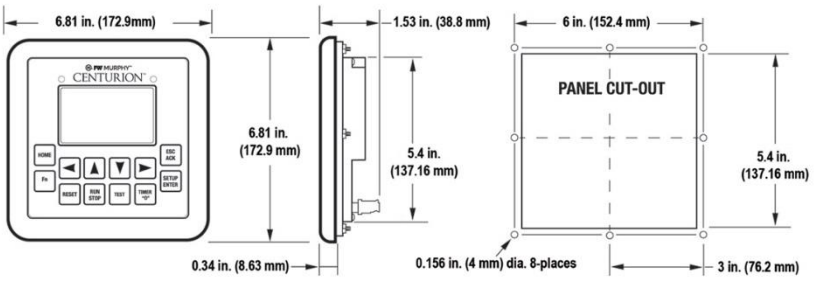


Dimensions MX5-R2

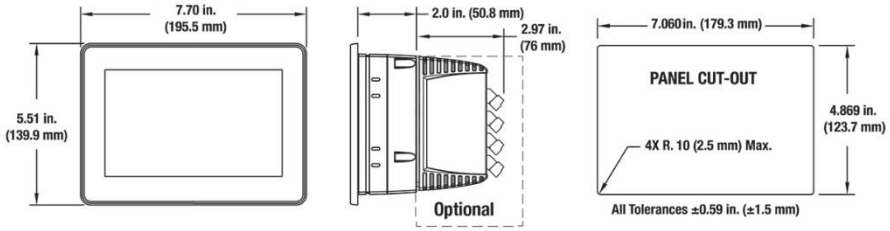


M-VIEW Display Dimensions

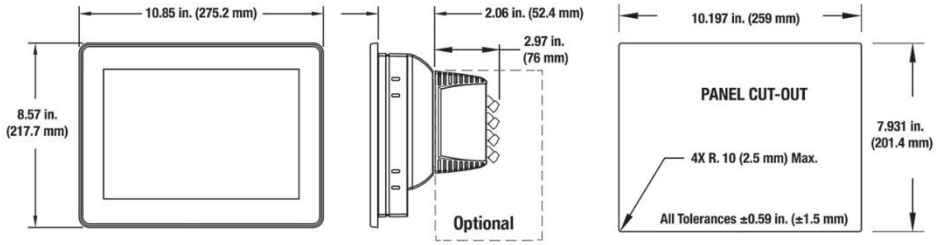
MV-5



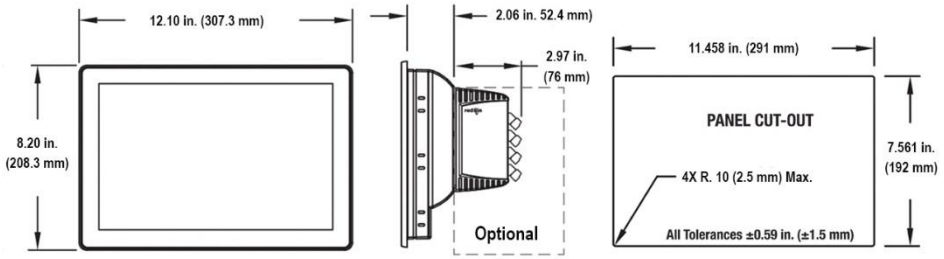
MV-7T

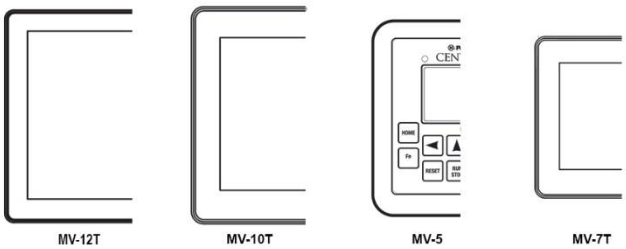


MV-10T



MV-12T





Install the Display

Prepare the Panel – All M-VIEW Models

The suitability of the enclosure is subject to investigation by the local authority having jurisdiction at the time of the installation.

1. Determine the location of the display on the customer-supplied flat or enclosed panel. Plan the display mounting for easy wiring and access.
2. Measure the specified dimensions shown in the diagram of the screen side. Doing so will ensure there is adequate real estate to provide clearance for the front edges of the housing to mount flush against the outside surface of your panel. The cut-out measurement will be smaller.
3. Use the diagram to measure and mark the specified dimensions shown in the panel cut-out diagram. This is your cut-out measurement.
4. Cut the hole in the panel following your marks matching the diagram as a guideline.

   > **NOTE:** Check for clearance fit of controller in the cutout before proceeding with drilling mounting holes.

5. If applicable, drill holes where indicated for the mounting screws.

MV-5-C Display

> **NOTE:** The Centurion MV-5-C display can be mounted in the same fastener holes and cutout as the Centurion C4 display.

1. Inspect the gasket on the back side of the display making sure it's secured to the display and aligned with the mounting studs.
2. Insert the MV-5-C display back side first, from the front side of the panel.

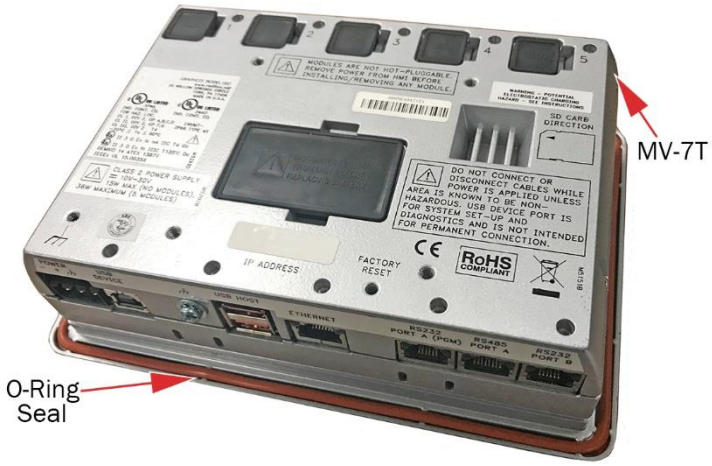
3. Ensure there is adequate clearance for the edges of the display housing and the back of the case is flush against the outside surface of your panel.
4. If thread lock is desired for your application, apply blue polycarbonate compatible thread lock to the threads of the mounting studs. It is not a requirement of installing Centurion C5.
5. Install the locknuts to each mounting stud from the back side of the panel to secure the MV-5-C housing.
6. Use an x-pattern to evenly tighten the locknuts to 8 in. lbs. (0.9 Nm). Do not overtighten.
7. Ensure there is a good seal between the controller, the gasket and the mounting panel.

M-VIEW Touch Series Displays

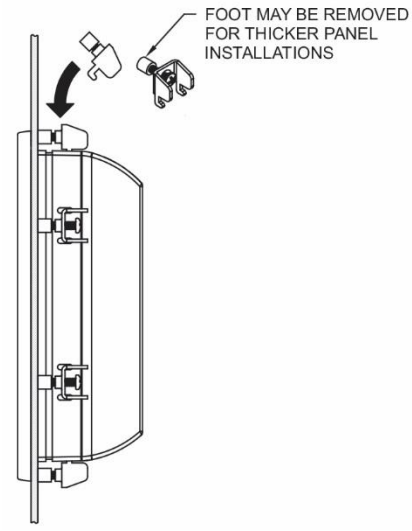
Through-Panel Mount

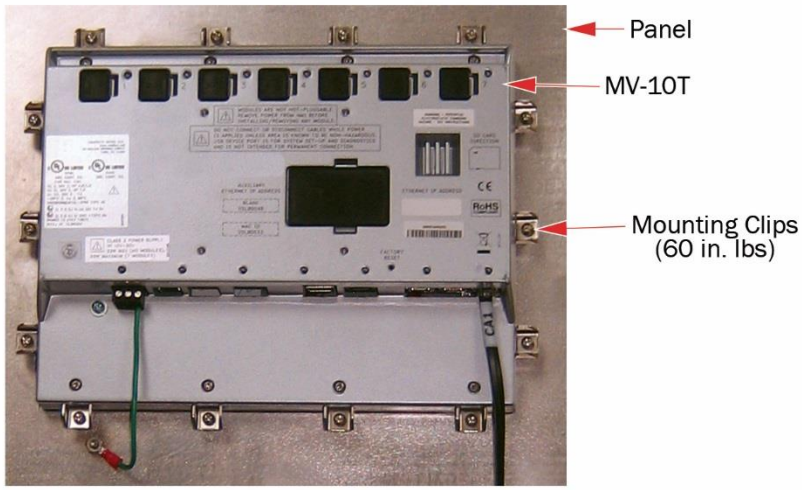
Once the cutout is prepared in the panel, the display can be mounted in the cutout and secured with mounting clips.

1. Inspect the O-ring on the display and ensure it is free from any nicks and properly secured in position.



2. Insert the display back side first from the front side of the panel.
3. Ensure that there is adequate clearance for the edges of the display housing and the back of the case is flush against the outside surface of your panel.
4. Install the mounting clips with screws from the back side of the panel to the display housing and panel.
5. Tighten the mounting clips to 60 in. lbs. (10.5 Nm) evenly for uniform gasket compression. Do not overtighten.





6. Ensure there is a good seal between the controller and the mounting panel.

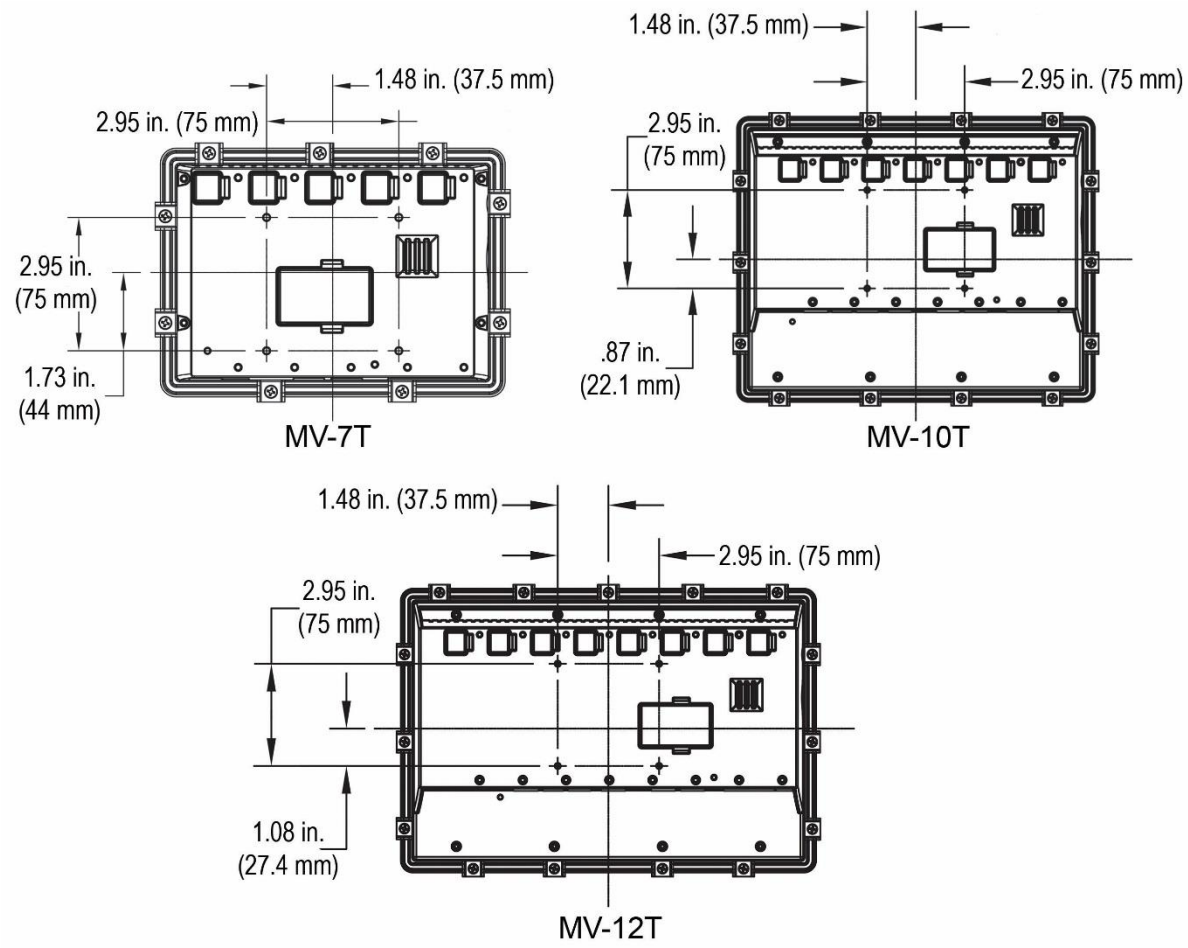
Stand Mount

Four mount-tapped screw holes (M4 x 0.7, 5 mm deep) are located on the rear of the panels for stand or wall mounting.

MV-7T

MV-12T with stand mount

Tapped Screw Hole Locations



Communications and Security Access

The display module is a highly integrated operator interface specially programmed to complement and support the Centurion controller. The primary purpose of the display is to:

- View controller operational information
- View/edit controller operational parameters
- Send commands to controller, such as stop, edit and reset

Display Passwords – All M-VIEW Models

Once you have entered using the default password, we recommend you change passwords for better security. Refer to your M-VIEW Operators Manual if further details are needed.

There are two separate levels of passwords to accommodate security needs.

- Operator / Standard password - includes access and some editing except the Super User Menu.
- Super User password - includes access and editing to the Super User Menu in addition to the Standard password features.
- Default passwords are Operator-164; Super User-133.
- Your password access times out three minutes after the editing session is exited.

> **NOTE:** If a pop-up message or password screen for login is displayed asking for security access, you may log in from there.

Log In – MV-5-C Display

1. From the Home Screen / Landing Page, press the Setup / Enter key to access the Password screen. The edit cursor rests on the far right digit. Example 0000<u>0</u>.
2. Press the Up / Down arrows to add a number value.
3. Press the Left / Right arrow to move the edit cursor to the next digit and so on.
4. Press Setup / Enter to save, once all numbers are placed. Example 0016<u>4</u>.

Log In – MVIEW Touch Displays

1. Touch the Setup / Enter icon to access the Setup Menu. Touch the Log On icon.
2. Touch the green arrow to enter the User Name screens.
3. Use the keyboard to enter a user name (op or super). Touch the green arrow to enter the password screen.
4. Use the keyboard to enter a password Touch the green arrow to enter.

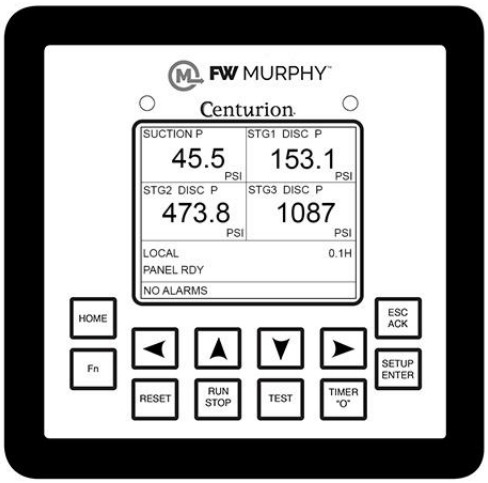
Before Starting the Equipment for the First Time

If you are using an M-VIEW Touch Series Display, skip this procedure and go to the next procedure titled **Setup – M-VIEW-Touch Series Display**.

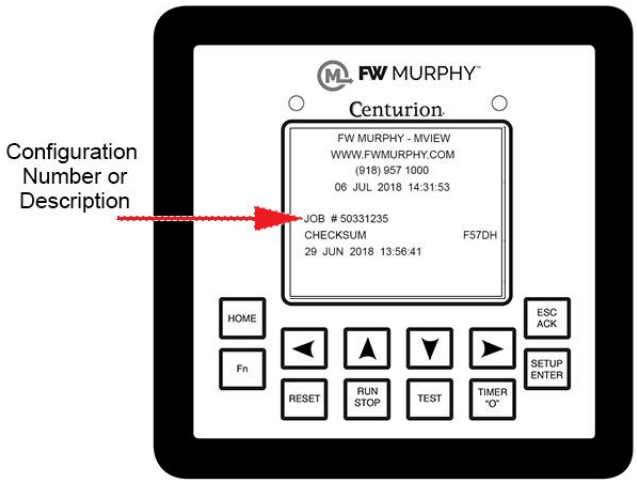
Setup – MV-5-C Display

Read and follow steps in the order listed.

1. Locate the system drawing inside the panel and verify its drawing number matches the sticker on the lower front panel.
2. Locate the legend of the drawing and find the configuration description. Record this description.
3. Power up the Centurion System.
    a. Allow time for the display to boot up and land on the Home Screen / Landing Page, approximately 15 seconds.



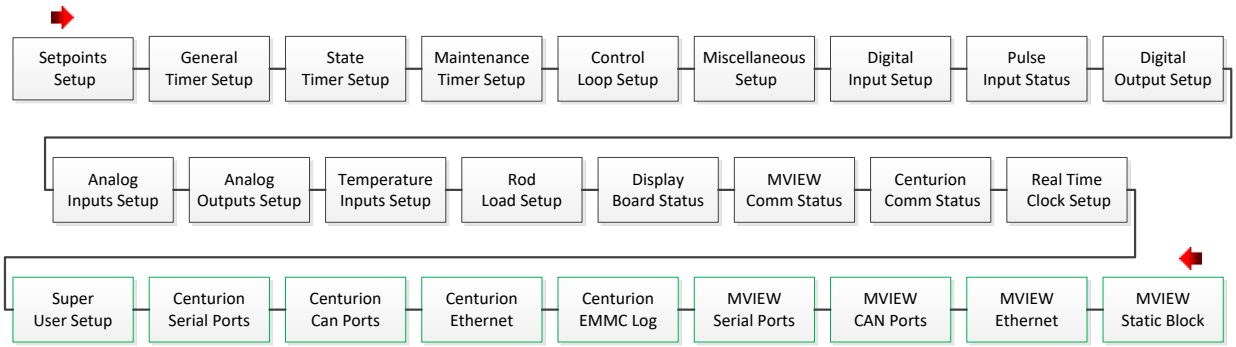
    b. From the Centurion Home Screen / Landing Page, touch the Arrow key to scroll left until you find the screen FW Murphy – MVIEW screen.
    c. Verify that the configuration description matches the one you previously recorded from the drawing legend.



4. Press the Setup Enter key to open the Password screen.
    a. Use the Arrow keys to enter your password. Default passwords are: Operator-164; Super User-133. If further details are needed, see Display Passwords.
5. Once the password is entered, the display opens the Setpoints Setup screen. Use the right and left Arrow keys to find the screen you want to view / edit.

Map of the Setup Screens for MV-5-C Display

>Home/Setup Enter Key/Password/Setpoints Setup/Arrow Key scroll to screen<



6. Open the following list of screens to verify or change the factory settings as needed for your site location.
    a. We suggest you record these values in the Sequence of Operation. This gives you a reference of any changed settings from the factory default.
    b. Select and enter each active item on the screen and verify its set values.
        i. Edit values as needed using the active Arrow keys.
        ii. Press the Setup / Enter key to change or accept the value.
        iii. Press the ESC / ACK key to go back one page without change.
        iv. Record any changes.
        v. Repeat these steps until all screens listed below are verified for your site location.
            - Setpoints Setup
            - Control Loop Setup
            - Analog Input Setup
            - General Timer Setup
            - State Timer Setup
            - Temperature Inputs Setup
            - Rod Load Setup

7. Start the unit.
    a. Clear any Alarms Class A (always armed) faults from the system. On the display, the Unit State will read Panel Ready if no Class A shutdown condition exist.
    b. Press and hold the Run/Stop key on the display for 2 seconds. This will initiate the start cycle. Depending on your configuration, the Centurion will send signals to possibly prelube the equipment, check pre-starting permissives and then signal the driver to start the equipment. Confirmation of running may be in the form of RPM signal or digital switch input feedback. Once running signal is confirmed, the Centurion will be in a running condition. Class B and S lockout timers will begin timing to faults that require time lockout. Additional warmup and load permissives will be monitored as configured for the package prior to enabling any load control.
    c. After all preload permissives have been achieved, such as oil or water temperatures, and possible minimum warmup times, the Unit State will read Loaded and will continue until the stop button is pressed, RPM is lost or a fault condition exist.

Faults, Stops and Alarms

Normal Stop

When a normal stop is issued and the unit is running, the system will start a normal shut-down sequence.

1. To issue a normal stop, press and hold the Run Stop key on the display for 2 seconds.
2. On the display, the Unit State will read Cooldown, and the Cooldown state delay will begin timing (if configured).
3. After the Cooldown is completed, the Unit State will read Stopping.
4. When everything has been recognized as back to normal the Unit State will read Panel Ready.

Fault Shutdown

The Centurion will continually monitor for Fault or ESD shutdown events which require the equipment to stop immediately or prevent it to start.

On the display, the Unit State will read Shutdown and the Alarm/Shutdown banner on the bottom of the screen shows the shutdown message in a firstout fashion, and the LED on the upper part of the display will illuminate red.

The cause of the event is recorded and can be viewed on the Shutdown History screen with time and date of occurrence.

1. The Shutdown History screen displays information of the fault.
    a. <Centurion Home Screen / FN / Shutdown History>
2. The Shutdown Snapshot screen displays the values of the unit running at the time a fault occurred.
    a. <Centurion Home Screen / FN / Shutdown History / Right Arrow to scroll >
3. Once the corrections are made, clear the Shutdown condition by pressing the Reset key on the display.
4. Always make corrections on the unit before attempting to restart the equipment.

Alarms

- If an alarm condition is detected, the Alarm/Shutdown banner on the bottom of the screen shows the active alarm messages in the system, and the LED on the upper part of the display will illuminate amber. Alarms may be configured as self-clearing or as requiring acknowledgement. Self-clearing alarms will auto clear if no longer present. Alarms requiring acknowledgement will persist until the ACK key is pressed.
- You can view up to 20 active alarms on the Active Alarms screen.
    - <Centurion Home Screen / FN / Active Alarms>
- Press the ESC ACK key to acknowledge the Active Alarm.

User-Configurable Screens

The Centurion has (9) user-configurable pages of (4) types. The Centurion Configuration Tool software allows users to configure up to nine (9) screens with controller input signal groupings. Possible custom screen types may include:

a) Custom Line by Line allows users to display process data in a list format with description and value.

b) Custom Gage allows user to display four (4) most important pieces of data on a 2 x 2 table in larger font.

c) Custom Control Loop allows user to display Control Loop functions. The control output will be displayed as a percentage of the range.

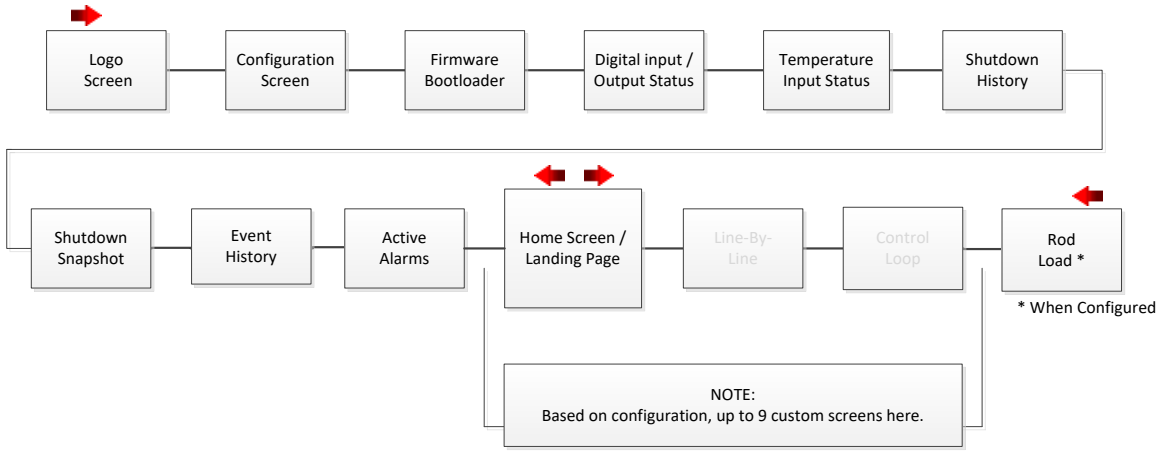
d) Custom Generic Register allows user to display up to 20 items on a page that can be mapped to the Centurion Modbus map and given a label.

For more information on configuring the optional screens through the Centurion Configuration Tool, please refer to the Configuration Tool Quick Start Guide.

Map of Operational Screens, MV-5-C Display

From the Home Screen/ Landing Page, use the left and right arrows to view the Operating Screens. A password is not required to view these screens.

Some screens are application specific and may not be used.



Setup – M-VIEW Touch Series Displays

Read and follow steps in the order listed.

1. Locate the system drawing inside the panel and verify its drawing number matches the sticker on the lower front panel.
2. Locate the legend of the drawing and find the configuration description. Record this description.
3. Power up the Centurion System.
    a. Allow time for the display to boot up and land on the Home Screen / Landing Page, approximately 15 seconds.
    b. If Centurion has integrated EICS displays enabled, the System View will be the initial power up view. Touch the screen on the Centurion side to open its Home screen in full-screen view with active icons.

System View as the Home Screen / Landing Page

Centurion Home Screen / Landing Page

    c. From the Centurion Home screen, touch the Arrow icon to scroll left until you find the Software Version Information screen.
    d. Verify that the configuration description matches the one you previously recorded from the drawing legend.

    e. Touch the Home icon to return or touch the Setup Enter icon and continue to the next step.

4. Open the following list of screens to verify or change the factory settings as needed for your site location.
    a. We suggest you record these values in the Sequence of Operation. This gives you a reference of any changed settings from the factory default.
    b. From the Home screen, touch the Setup Enter icon to open the Setup Menu screen.

    c. From Setup Menu screen, touch the Setpoints icon to open it. Open and verify the set values under the Blue (active) icons. Touch a value to change it. Touch X to go back one page or the Menu icon to go back to Setup Menu screen.
        i. Once verification and changes are made and recorded, return to the Setup Menu screen and open another screen from the list below. Repeat these steps to verify the set values under the remaining screens listed.

- Setpoints
- Control Loop
- Analog Inputs
- General Timer
- State Timer
- Temperature Inputs
- Rod Load Setup

> **NOTE:** For screen specific help, press the  Information icon to view information about the items and settings available on the displayed page.

5. Start the unit.
    a. Clear any Alarms Class A (always armed) faults from the system. On the display the Unit State will read Panel Rdy if no Class A shutdown condition exist.
    b. Touch and hold the Run Stop icon on the display for 2 seconds. This will initiate the start cycle. Depending on your configuration, the Centurion will send signals to possibly prelube the equipment, check pre-starting permissives and then signal the driver to start the equipment. Confirmation of running may be in the form of RPM signal or digital switch input feedback. Once running signal is confirmed, the Centurion will be in a running condition. Class B and S lockout timers will begin timing to faults that require time lockout. Additional warmup and load permissives will be monitored as configured for the package prior to enabling any load control.
    c. After all preload permissives have been achieved, such as oil or water temperatures, and possible minimum warmup times, the Unit State will read Loaded and will continue until the stop button is pressed, RPM is lost or a fault condition exist.

Faults, Stops and Alarms

Normal Stop

When a normal stop is issued and the unit is running, the system will start a normal shut-down sequence.

1. To issue a normal stop, touch and hold the Run Stop icon on the display for 2 seconds.
2. On the display, the Unit State will read Cooldown, and the Cooldown state delay will begin timing (if configured).
3. After the Cooldown is completed, the Unit State will read Stopping.
4. When everything has been recognized as back to normal, the Unit State will read Panel Ready.

Fault Shutdown

The Centurion will continually monitor for Fault or ESD shutdown events which require the equipment to stop immediately or prevent it to start.

On the display, the Unit State will read Shutdown, and the Alarm Shutdown banner will appear on most operating screens.

The cause of the event is recorded and can be viewed on the Shutdown History screen with time and date of occurrence.

1. The Shutdown History screen displays information of the fault. Touch the Book icon for troubleshooting.
    a. <Centurion Home Screen / FN / Shutdown History>
2. The Shutdown Snapshot screen displays the values of the unit running at the time a fault occurred.
    a. <Centurion Home Screen / FN / Shutdown History / Right Arrow to scroll >
3. Once the corrections are made, clear the Shutdown condition by touching the Reset icon on the screen.
4. Always make corrections on the unit before attempting to restart the equipment.

Alarms

If an alarm condition is detected the Alarm Shutdown banner on the bottom of the screen shows the active alarm messages in the system. Alarms may be configured as self-clearing or as requiring acknowledgement. Self-clearing alarms will auto clear if it's no longer present. Alarms requiring acknowledgement will persist until the ACK key is pressed.

1. Select Alarms from the Active Alarms screen. (This screen displays up to 20 active alarms.)
    a. <Centurion Home Screen / FN / Active Alarms>
2. Touch the ESC ACK icon to acknowledge the Active Alarm.

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c) Custom Control Loop allows user to display Control Loop functions. The control output will be displayed as a percentage of the range.

d) Custom Generic Register allows user to display up to 20 items on a page that can be mapped to the Centurion Modbus map and given a label.

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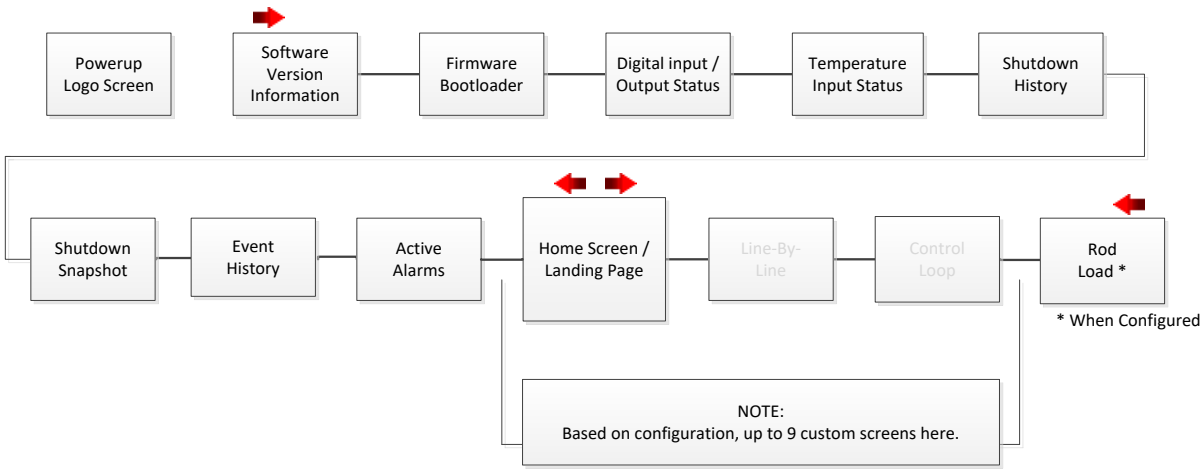

FW MURPHY PRODUCTION CONTROLS

SALES, SERVICES & ACCOUNTING
4646 S. HARVARD AVE.
TULSA, OK 74135

MANUFACTURING
2151 RANDON DYER ROAD
ROSENBERG, TX 77471

5757 FARINON DRIVE
SAN ANTONIO, TX 78249

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FW MURPHY CONTROL SYSTEMS & SERVICES
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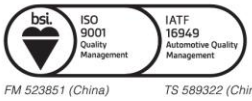
FM 668576 (San Antonio, TX - USA)
FM 668933 (Rosenberg, TX - USA)



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