

Dresser™ MC3 Guardian and Nexus Electronic Volume Corrector

Installation, Operation, and Maintenance Manual



MC3

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1 Installation Preparation

Warning

Before installation, confirm that the transducer range is within the MAOP (Maximum Allowable Operating Pressure) of the meter on which the corrector will be installed.

Tip: Some training videos are available on the MC3 Support Center on the dresserutility.com site at dresserutility.com/support-center/.

1.1 Installation Size Considerations

Verify that the selected installation location provides sufficient space for the corrector and meter. If applicable, allow additional space for any attached devices.

Leave sufficient space around the corrector and meter to allow access to the display, AMI/AMR device, pressure piping, antenna for modem communication, and cable access for testing.

1.2 Environmental Considerations

Table 1: MC3 Operating Ranges

Operating/Storage Temperature	-40°F to 140°F (-40°C to 60°C)
Humidity	Up to 95% sustained non-condensing
Standards Met	UL 121201
	UL 61010-1
	UL 60086-4
	EN61000-4-2 – Severity Level 4
	EN61000-4-3 – Severity Level 3
	FCC Part 15, Class A
Ingress	Type 4X Enclosure with IP 66 Rating

Verify that the location where the corrector and meter are installed will remain within these ranges.

Ensure the corrector and meter remain level within 1/16 inch per foot (5 mm/m) in any direction, side-to-side and front-to-back.

1.3 Electromagnetic Compatibility

To ensure that the performance specifications are not significantly affected by electromagnetic (EMC) interference, ensure that:

-
- All conductors are adequately shielded using braided screens, and these screens are terminated as recommended in this manual.
 - Except where stated otherwise, the length of external connections should not exceed 9.57 ft (3 m).
 - If equipment is not approved by Dresser and is connected to the MC3, it is the operator's responsibility to ensure that the equipment is installed and operated in a manner that ensures the system complies with the relevant EMC standards.
 - Anti-static precautions must be taken when the MC3 is opened for installation or maintenance to protect against static damage.
-

1.4 Safety Considerations

Warning

Follow your company guidelines and industry-accepted practices to reduce the risk of severe injury or death. Other safety considerations are provided below:

- This equipment is designed to operate at temperatures between -40°F and 140°F (-40°C and 60°C). Before going on-site for installation or maintenance, ensure that you wear proper safety equipment and are properly dressed for the worksite environment.
- The gas meter must be either put into bypass or completely shut down at the inlet and outlet.
- Beware of sharp surfaces and potential pinch points while installing, maintaining, and repairing equipment. Use proper personal protective equipment (PPE) and procedures.
- If equipment is installed/serviced/maintained at elevated heights, follow proper safe site work practices to prevent fall and drop hazards.
- For installations in confined spaces, allow adequate room to handle products and equipment safely without causing bodily strain. Also, verify that proper ventilation is in place to maintain a breathable atmosphere.

1.5 Certification Standards

This MC3 is certified to Hazardous Area Classification Class 1, Div 2, Groups A, B, C, and D – Temperature Rating T4.

1.6 Safety Requirements

Adhere to the following safety requirements during installation:

-
- MC3 installations must meet specific requirements before beginning. Following any National Codes of Practice dealing with nonincendive (C1D2) safe installations is essential. All C1D2 safe circuits must be segregated from C1D2 circuits. The transducers in the MC3 are C1D2-safe.
 - In line with the C1D2 Safety Certifications, the MC3 must only be powered by an approved Dresser battery pack. External power must follow the safe installation requirements for C1D2 areas.
 - Connection of any non-C1D2 safe equipment must be adequately assessed. Dresser is not responsible for the system's overall safety.
 - The serial IrDA may also be connected to a laptop computer for commissioning and reading data if the laptop is used outside a hazardous area.
 - Laptop computers are generally not safe to use in hazardous areas. Therefore, before using an uncertified laptop in a hazardous area, a gas test should be performed to prove that no potentially hazardous gas mixture exists in the area. If this is not possible, the laptop must not be used in the hazardous area.
 - The laptop computer must be powered by batteries alone, which must be incapable of supplying more than 25 Volts. No connection is to be made to an external supply (such as a charger), even if it is non-operational. The presence of the connection itself can create hazardous conditions.
 - The temperature probe is only suitable for use at atmospheric pressure and must, therefore, be used in conjunction with a thermowell that can withstand the line pressure.
 - All wires connected to the circuit board must have at least 0.25 mm (1/100 inches) of insulation. Dresser Utility Solutions should provide the customer with all internal or external cables to the MC3 unit.
-

2 Corrector Installation

2.1 Installing Magnetic Volume Shaft

The MC3 has a magnetic shaft that senses volume from the meter. If the MC3 is shipped from the factory with the meter installed, the magnetic shaft is installed correctly. If the MC3 is shipped as Assembly #400, the magnetic shaft is enclosed in a plastic bag within the MC3 carton and must be installed in the port corresponding to the Series B meter size for which the MC3 is intended.

- Figure 1 shows the magnetic shaft port locations for Dresser 8C through 56M meters. Insert the magnetic shaft into the correct port for the corresponding meter, as indicated by the labels on the meter adapter plate on the neck of the corrector.

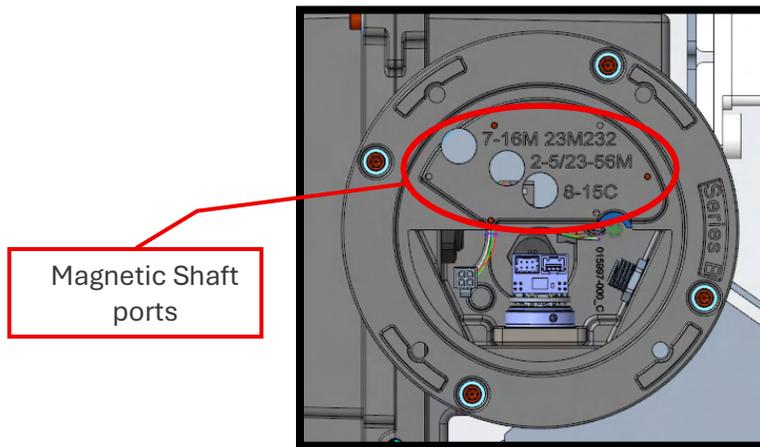


Figure 1: Meter adapter plate and magnetic shaft positions

2.2 Perform the following steps to install the magnetic volume shaft in the correct position:

1. Verify that the plate is for the correct series, such as Series B, as indicated by the label on the edge of the plate.
2. Verify that the correct magnetic shaft is being used, as designated by the magnet's color; for example, the Series B magnet is blue.
3. Based on the meter model, identify the correct location on the plate for the magnetic shaft, as indicated by the plate's labels.
4. If applicable, remove the input shaft from the incorrect port by hand by turning it counterclockwise.
5. Insert the magnetic shaft's housing end into the correct port and turn it clockwise by hand until it is hand-tight.

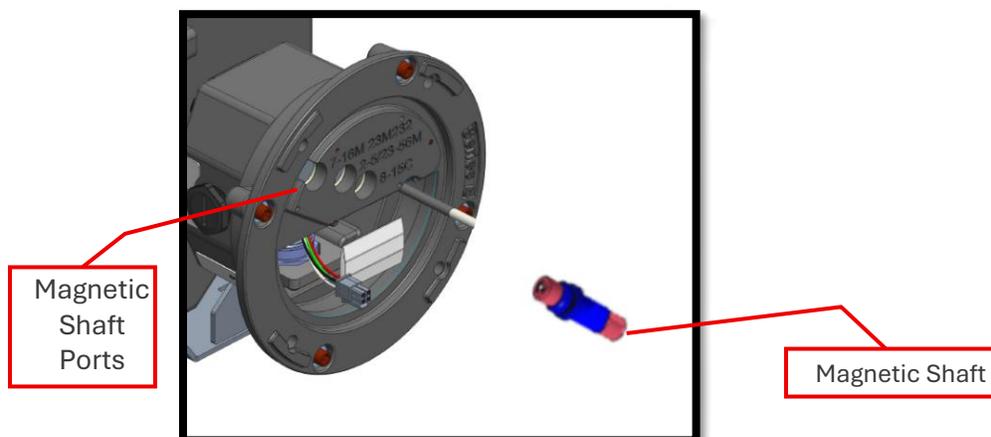


Figure 2: Install Magnetic Shaft

6. Install the corrector onto the meter by performing the steps in section 3.

3 Installing MC3 on the Dresser Series B Meter

Perform the following steps to install the magnetic volume shaft in the meter. Before installation, the corrector's meter adapter plate position can be modified if necessary to connect to the meter end cover, ensuring the screen is upright and facing outward.

3.1 Parts and Tools for Installation

The following equipment is needed to install the MC3 onto a meter. Contact Meters Technical Services for more information on these tools and parts or for assistance with this installation.

Table 2: Parts and Tools for MC3 to Series B Meters

Item	Part or Tool	Description
1	Torque screwdriver with 90-degree angle adapter and 5/32" bit	To set torque on bolts
2	Ratchet with 5/32" bit (optional)	
3	5/32" L-style Allen wrench or hex screwdriver	Fits screws on meter adapter plate
4	9/64" L-style Allen wrench or hex screwdriver	Fits screws on MC3 corrector body case and internal
5	Gasket	Dresser P/N 062629-130
6	Four (4) #10 screws	Dresser P/N 011951-004
7	Four (4) #10 lock washers	Dresser P/N 000310-009
8	Desiccant pack	Dresser P/N 060337-003

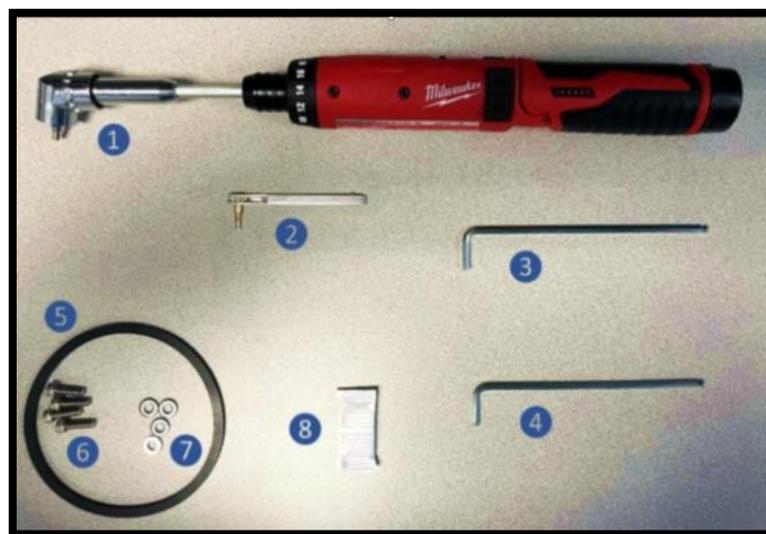


Figure 3: Installation Parts and Tools Examples

3.2 Installing the Corrector

1. If the meter is to be installed in the top inlet (vertical) configuration (refer to Figure 4), the MC3 does not need to be modified and is ready for installation.

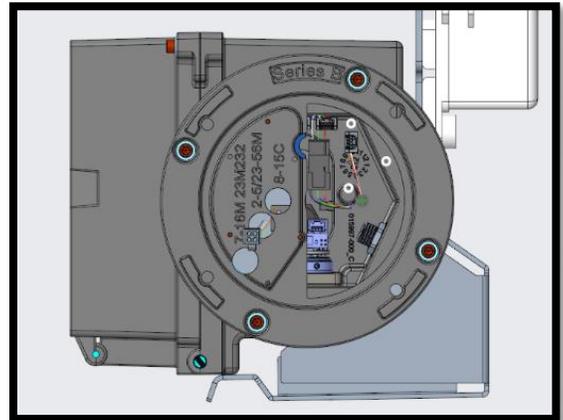


Figure 4: Top (Vertical) inlet configuration

2. If the meter is to be installed in the side inlet (horizontal) configuration (refer to Figure 5), adjust the corrector's meter adapter plate position by performing the following steps:

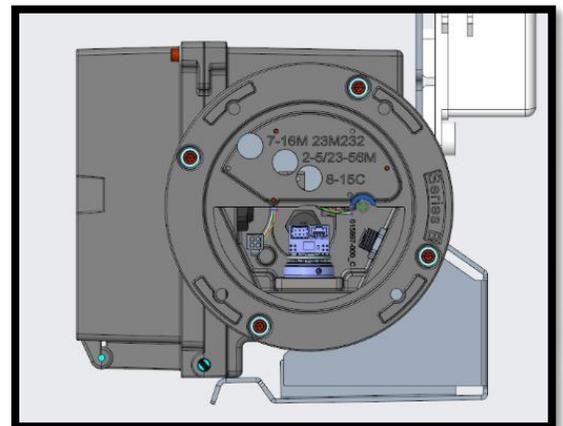


Figure 5: Side (Horizontal) inlet configuration

- a. Use the 9/64" Allen or hex wrench to remove the four (4) screws and their washers from the inner edge of the meter adapter plate (refer to Figure 6). Remove the adapter plate.

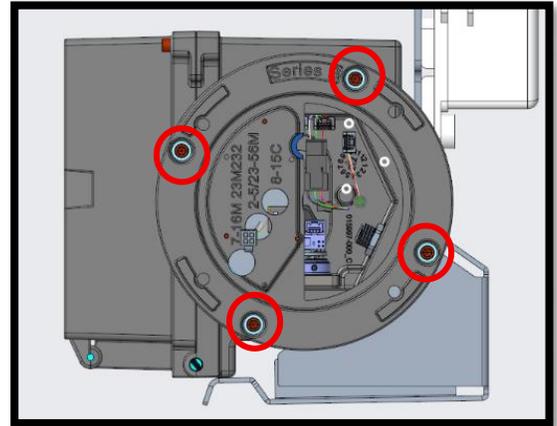
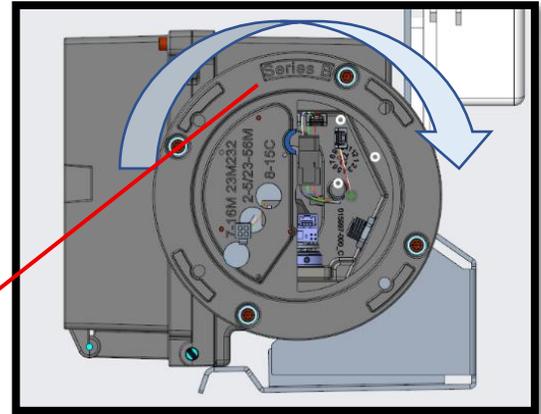


Figure 6: Remove adapter Plate Screws

- b. Rotate the meter adapter plate ¼ turn clockwise (refer to Figure 7), so that the magnetic volume shaft holes are on the top, and the "Series B" imprint is on the right hand side and the screw holes align (refer to Figure 8).



Series B (Before)

Figure 7: Rotate the meter Adapter plate ¼ turn clockwise

Magnetic Shaft Position (After)

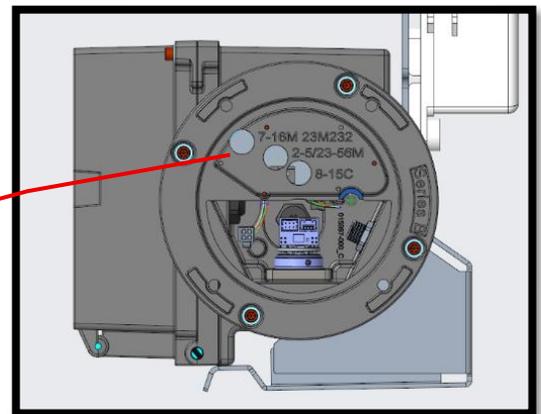


Figure 8: Magnetic Shaft Position

- c. Use the 9/64" Allen or hex wrench to replace the four (4) screws and their washers on the meter adapter plate, (refer to Figure 9). Insert and tighten the screws in a crisscross pattern to 20-inch pounds.

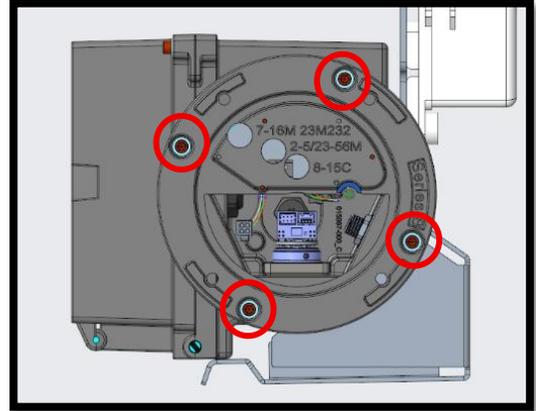


Figure 9: Replace screws on the adapter plate

3. Place a desiccant packet on the end cover of the meter to help prevent moisture buildup (refer to Figure 10).

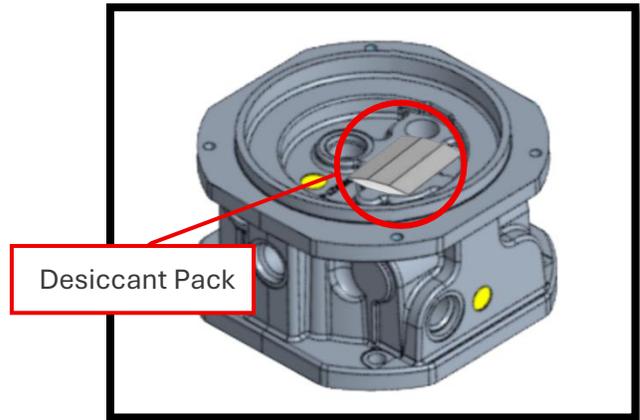


Figure 10: Install desiccant packet

4. Place the gasket on the end cover of the meter before installing the MC3 (refer to Figure 11).

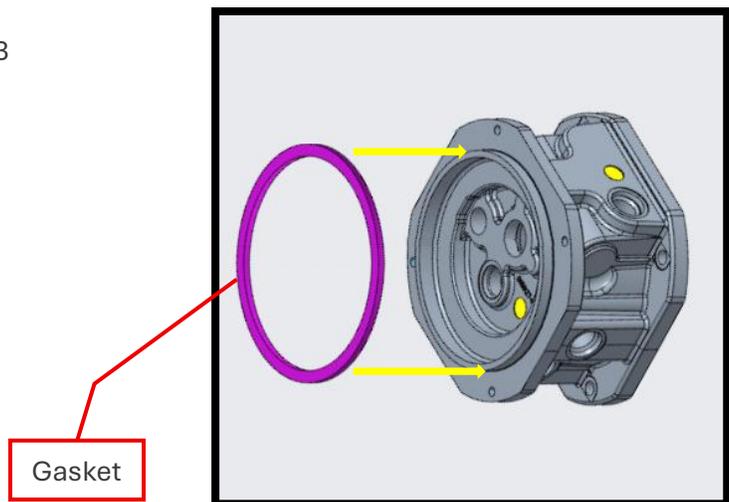


Figure 11: Install the gasket

5. If an internal temperature sensor is installed, hold the corrector's meter adapter plate next to the meter's connecting end and feed the internal temperature sensor into the meter's temperature probe well (refer to Figure 12).

Note: Internal temperature probe mounting is available on Dresser 8C-16M Series B meters.

Internal Temperature
Sensor

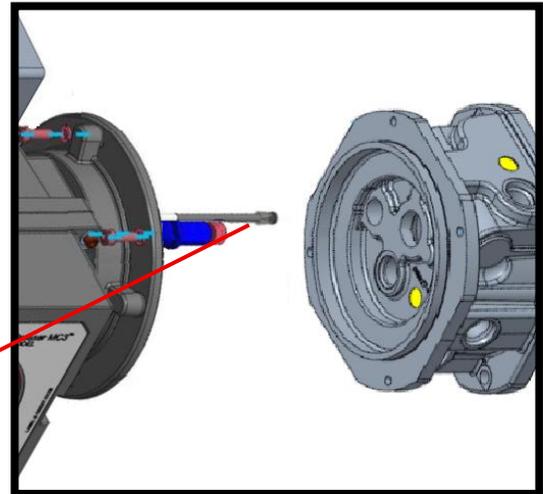
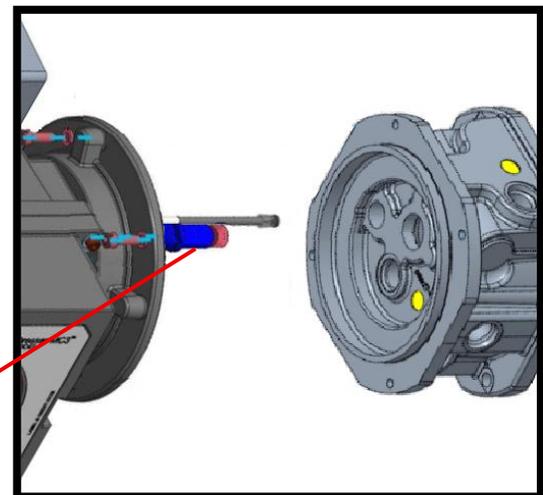


Figure 12: Insert temperature sensor

6. Align the magnetic volume shaft with the volume port on the meter (refer to Figure 13).

Note: If the shaft does not align with the volume port on the meter, verify that it is inserted in the correct port for the meter type and that it is straight. For more information, refer to step 2.1.1.

Magnetic Volume
Shaft



**Figure 13: Align magnetic
volume shaft**

7. Carefully place the corrector on the meter. If your MC3 has an internal temperature probe, make sure the temperature probe cable is not pinched. Verify the four (4) screw holes align (refer to Figure 14).

Screws and Washers

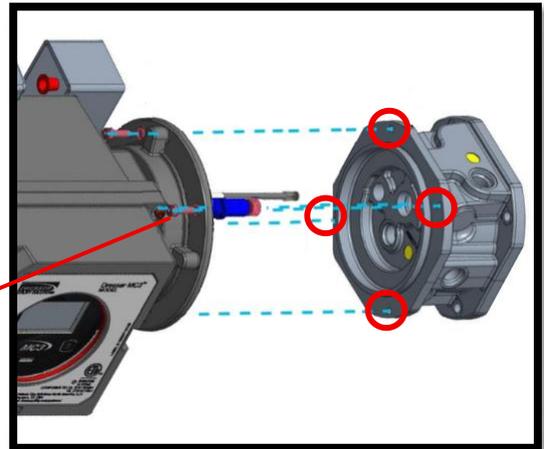


Figure 14: Install on meter

8. Insert a screw into each hole with its washer and then use a 5/32" angled Allen or hex wrench to tighten the screws in a criss-cross pattern to a maximum torque of 20-inch pounds (refer to Figure 15).

Cap Screws and Washers

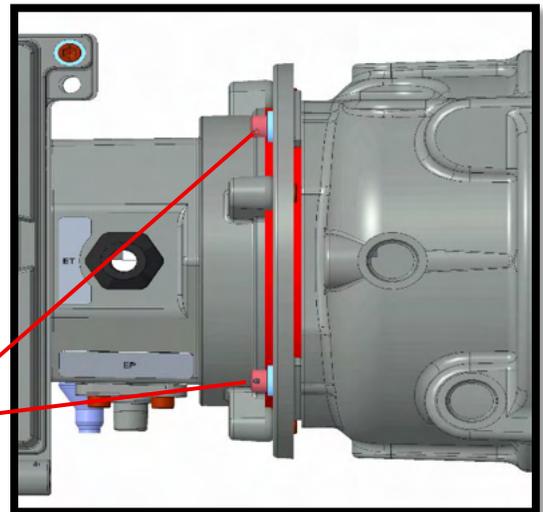


Figure 15: Insert and tighten all screws

4 SYNC Software Introduction

This manual provides instructions for installing and using the Dresser™ Sync desktop software.

This software is used to configure the Dresser MC3 Electronic Volume Corrector (referred to as a “unit” in this manual). The software is installed on a computer or other Windows device. You can communicate locally with the unit by using a serial IrDA cable or remotely via a modem or other available connection.

4.1 System Requirements

Table 1: System Requirements

Requirement	Criteria
Operating System	Microsoft Windows 10 or higher
Processor	64-bit architecture
Memory (RAM)	512 MB minimum 1 GB or more recommended
Storage Space	250 GB minimum
Connections	USB port (2.0 or higher)
Display Screen Resolution	800 x 600 or better
User Access (Windows)	Administrator accounts for permissions to install Standard user account to use

4.2 Required Equipment

The Dresser™ IrDA Communications Kit (Part Number 063158-000) is needed to perform the steps in this section. Contact Customer Service to request these parts or assistance.

Table 2: Communications Kit Contents

Item	Part	Purpose
1	Serial IrDA cable holder	Aligns the IR adapter with the unit’s IR window and holds it in place
2	Serial IrDA cable	Connects the IR (infrared) adapter to the computer’s USB port

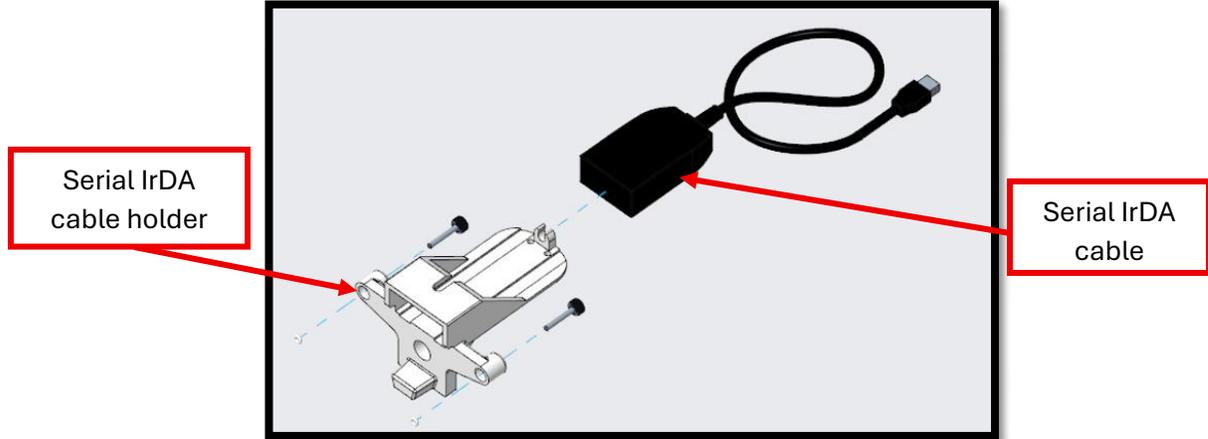


Figure 1: IrDA Communications Kit

4.3 Install SYNC Software for use with MC3 Correctors

Note: Do not plug in the serial IrDA cable until you are instructed to do so.

1. Download the Dresser Fusion software installation files from www.dresserutility.com.

2. After extracting the installation files from the **Fusion_<version>.zip** file, find the the certificate file with the .cer file extension. Open the file.

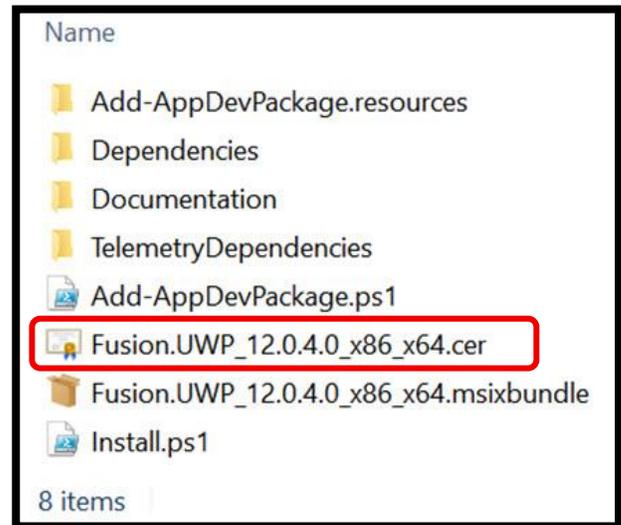


Figure 2: .cer file

3. After you double-click the .cer file, a security window will open. Click Open.

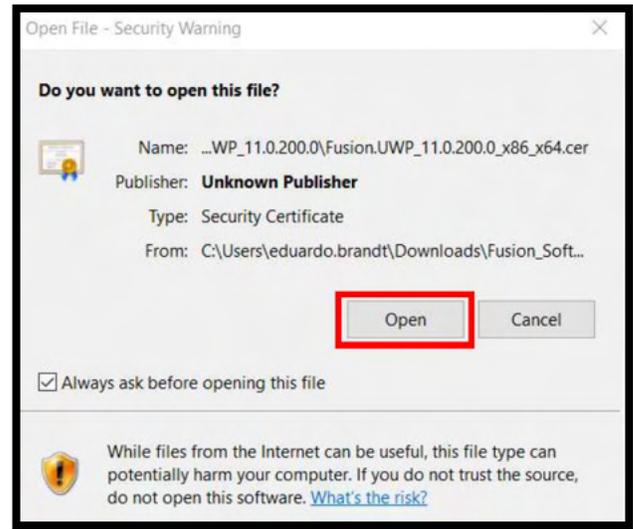


Figure 3: Open .cer file

4. A new window will pop up and you must click on Install Certificate.

NOTE: Verify that the certificate "Valid from" dates are current. If not, please contact Dresser for an updated certificate.

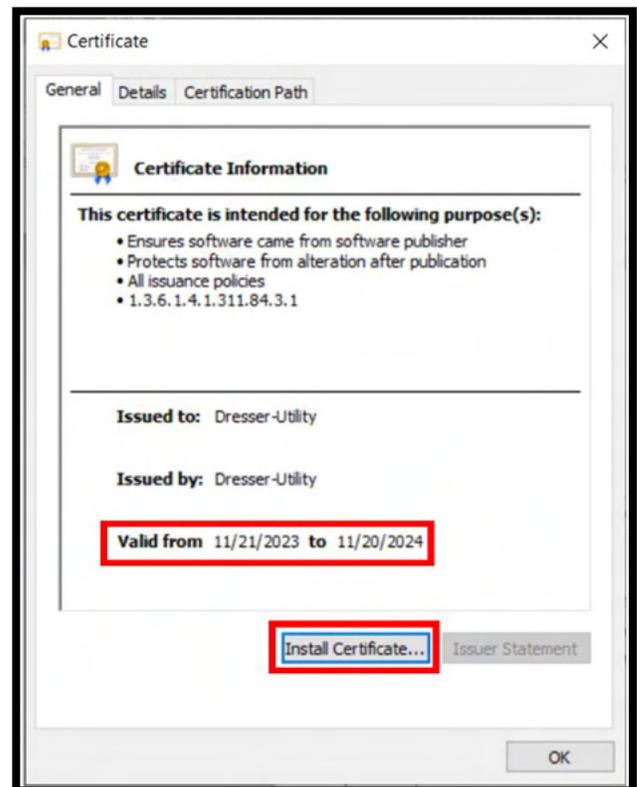


Figure 4: Install Certificate

5. Once you have selected Install Certificate, a new window will pop up.

You will select Local Machine and then click Next.

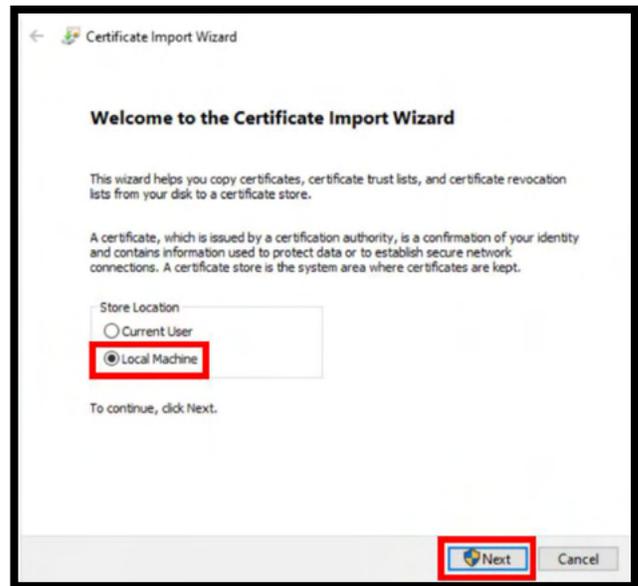


Figure 5: Select Local Machine

6. On the next screen, select Place all certificates in the following store and then click on Browse.

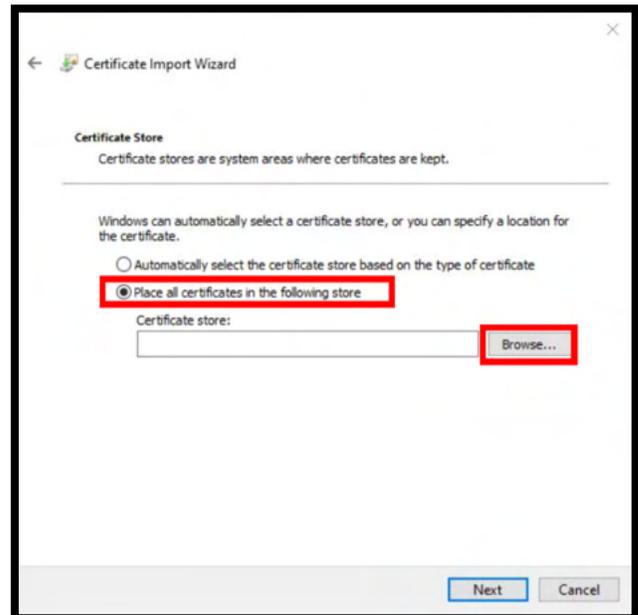


Figure 6: Browse for Certificate Store

7. A new window will open.

Select Trusted Root Certification Authorities and then click OK.

The Certificate Store box will be filled out and all you need to do is click on Next.

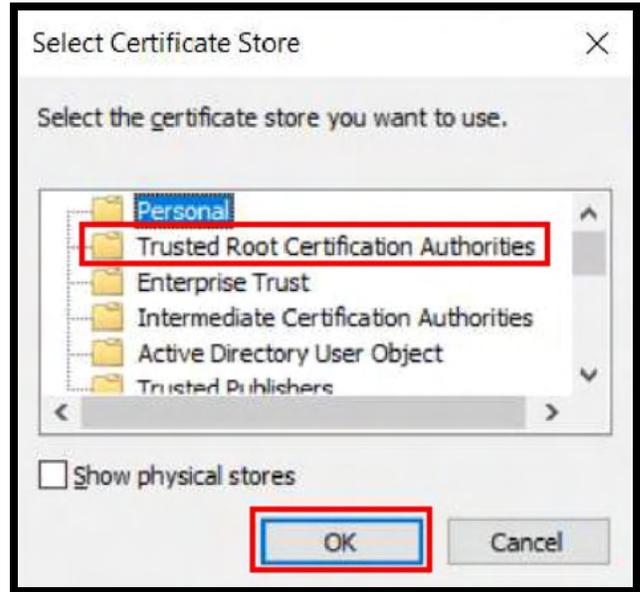


Figure 7: Select Folder

8. The Certificate Store box will be filled out and all you need to do is click on Next.

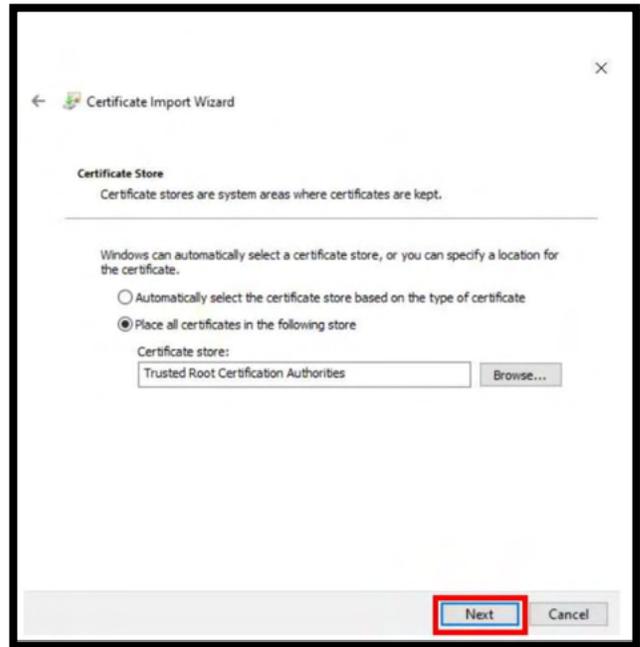


Figure 8: Trusted Root Folder Selection

9. Click on Finish and the certificate will be imported.

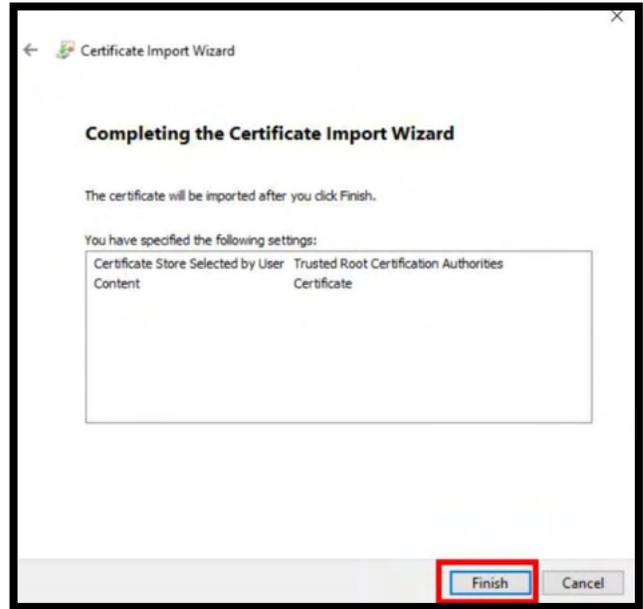


Figure 9: Import Certificate

10. After you have successfully installed the certificate, return to the software folder.

Locate
SYNC.UWP_(version)_x86_x64.msix
bundle and open it.

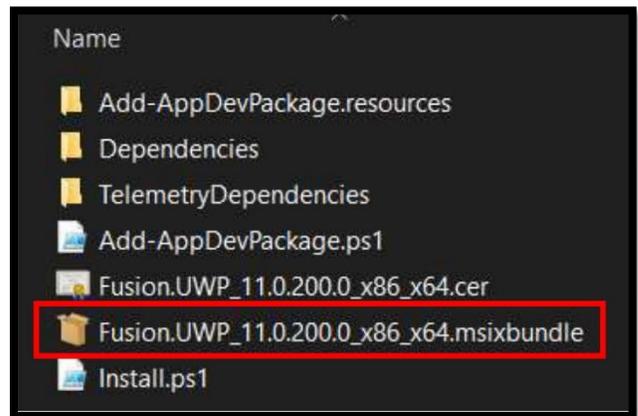


Figure 10: Locate Sync Bundle

11. After you open the file, click Install and this will install the Sync software onto your computer.

NOTE: If when you click Install, you receive error messages in RED letters, continue reading to install the dependencies to fix the errors.

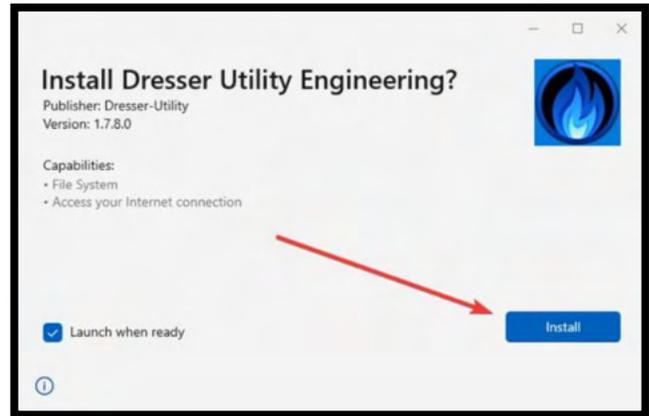


Figure 11: Install Software

12. Open the Dependencies folder.

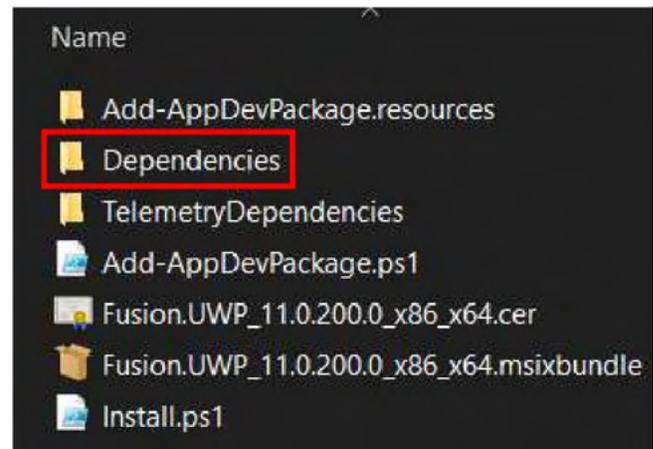


Figure 12: Dependencies Folder

13. In the Dependencies folder, you will find several folders. Select the folder that correlates with the operating system that you have.

NOTE: You may need to check with your IT department to obtain this information.

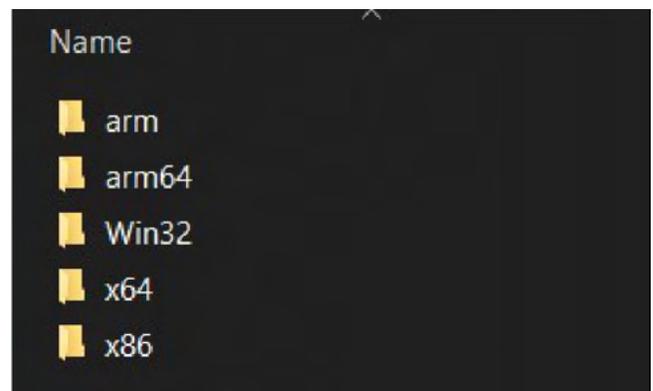


Figure 13: Select Operating System

14. Once you have selected a folder, inside you will find several files that will all need to be installed.

Some of the files might say that you have a newer version and that is OK, just close the window.

After this step, you can return to the previous steps to finish installing SYNC.

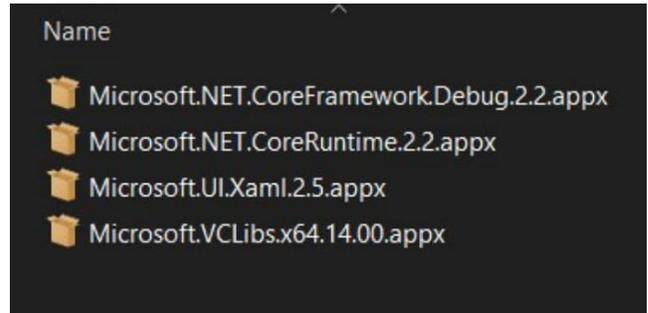


Figure 14: Installing Files

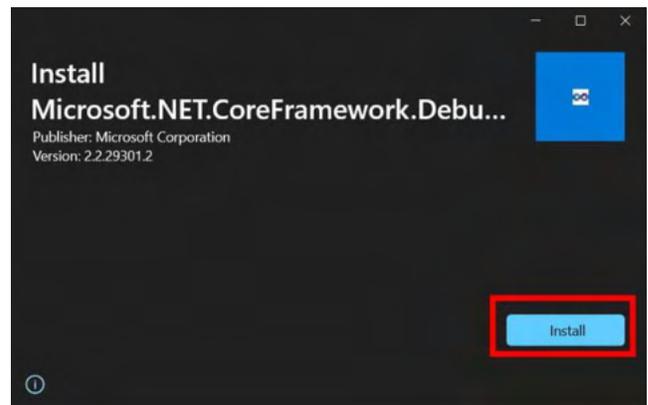


Figure 14: Installing Files cont.

15. After opening the software, this screen will show. The username and password for the first time setup will be

Username: super

Password: super

Then click Login to move on to the next step.

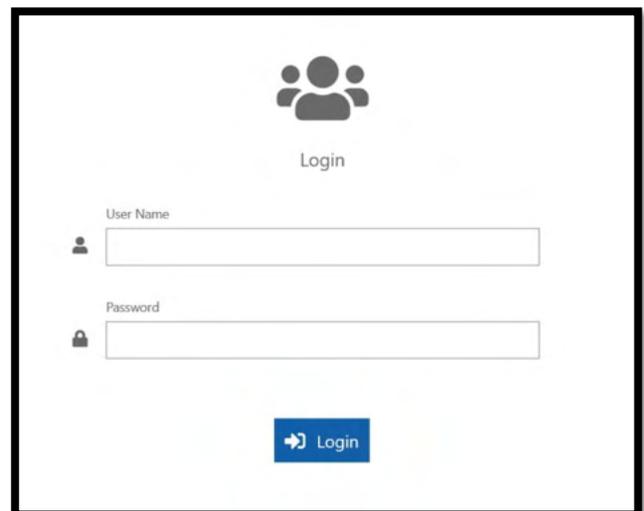


Figure 15: Temporary Login

16. On this next screen, you will need to enter all the information shown on the right.

NOTE: This password is a TEMPORARY password and you will be asked to change it later so do not make it the password you want it to be.

In the two drop down menus, you will need to select Administrator and Level Two.

Next, for the Level One and Two Password boxes, the password you will need to enter will be:

Level One Password: **Mc3Level1@**

Level Two Password: **Mc3Level2@**

Lastly, click on Create to continue.

Welcome! Thank you for choosing Dresser Fusion Software. Please create the first administrator account. After this session, your Dresser provided profile will be removed.

First Name
Last Name
User Name
Password
Company
Department
Title
Level One Password
Level Two Password
Create

Figure 16: Account Creation

17. After you have created your account, the software will ask you to update your password.

NOTE: Here is where you will set the password to what you want it to be going forward.

This is your first login. Please update your password.

New Password
Password
Reenter Password
Password
Update

Figure 17: Personalized Password

18. Once you click on update, you have finished setting up your account.

Now next time you open the software, you will use the username and password you have set on the screen shown on the right.

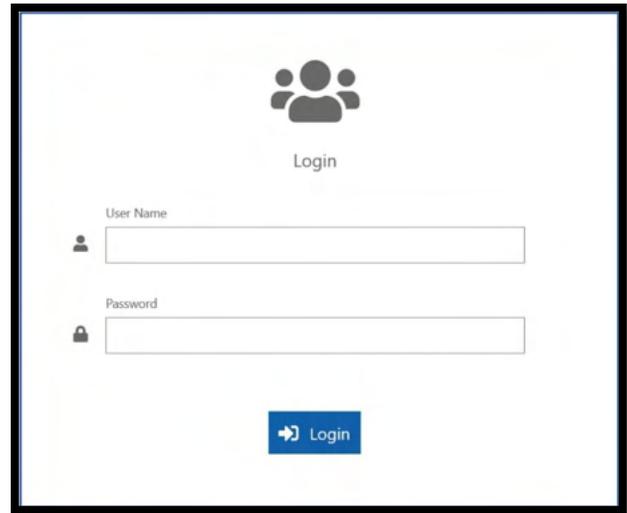


Figure 18: Login Screen

4.4 Locally Connect to MC3 Corrector with Dresser Communications Kit

1. To connect the cable included in the communications kit (PN 063158-000) to the MC3, insert the dovetail of the MC3 cable holder into the slot underneath the MC3. Next, secure the thumb screws into the threaded holes found on the MC3 faceplate. Lastly, make sure the MC3 comms cable is tucked into the holder so it can sit flush with the MC3.

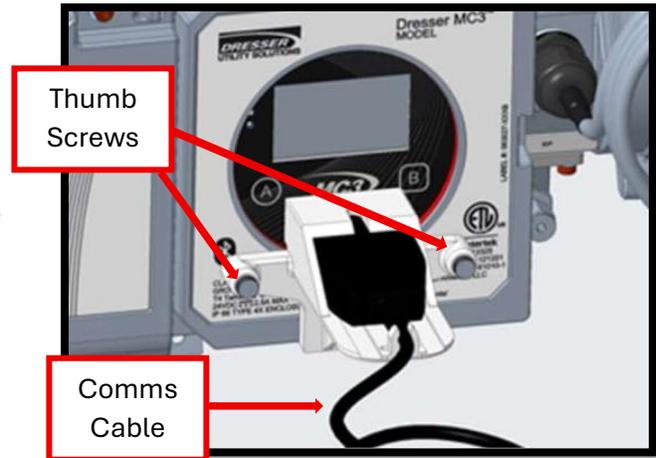


Figure 19: Login Screen

2. Next, connect the comms cable to your computer and then load the SYNC software and log in with your account.

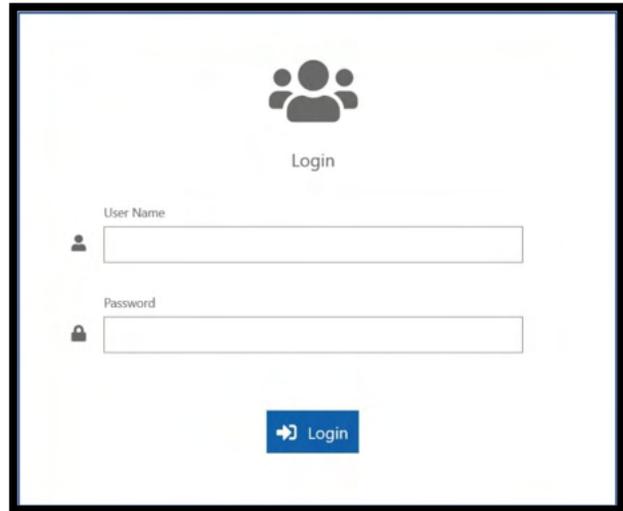


Figure 20: Login Screen

3. After you have logged in, click on the Local connection button.

NOTE: If you clicked on this before you connected the cable, go back to the Connect screen and click on the Refresh button, in the top right corner, to refresh the connections. Then, you can proceed to click on Local.



Figure 21: Local Connection

4. On this screen, you will select the serial (COM) port that the cable is on as well as selecting 9600 for the Baud Rate.

NOTE: To find out what COM port the cable is on, search for Device Manager on Windows and then look under Ports (COM & LPT).

Next, wake up the MC3 by holding down the “B” button on the touch screen of the MC3. A blue light will flash once and then once again. Once you see the second flash release the “B” button.

Lastly, click on Connect and the software will begin connecting with the MC3.

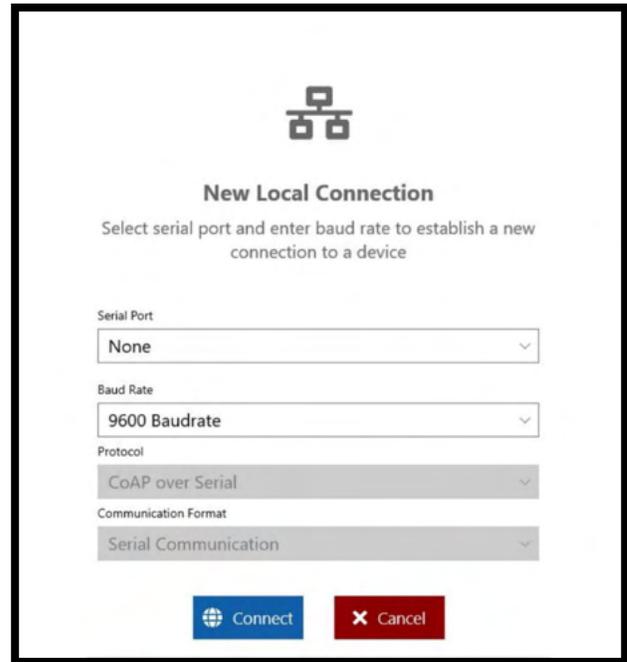


Figure 22: Local Connection

5 Corrector Display

Customizable settings determine when the screen is actively displaying information. When active, the screen is updated according to user settings. According to settings, the display goes inactive (sleeps and goes dark) to conserve battery life.

The screen can be read at temperatures of -40°F to 140°F (-40°C to 60°C).

The screen can display at least two lines of data, so you can scroll through values with the **A** and **B** navigation buttons.

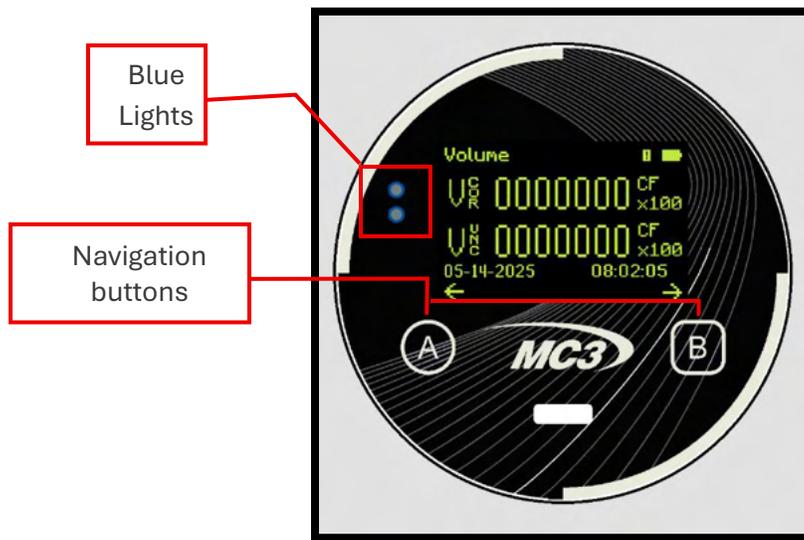


Figure 1: Navigation Buttons

5.1 Waking Up the Unit

If the unit has gone to sleep, the display is inactive (dark).

To wake the unit, press the **B** button and hold it until you see the blue light (Figure 1) blink twice (approximately 5 seconds). When the **B** button is released, the screen displays.

The length of time until the unit enters sleep mode is configurable and can be set in the Screen Setup section of the Dresser Sync Software.

5.2 Scrolling Through the Screens

To scroll through the different screens, press the **A** or **B** button under the display, as shown in Figure 5. The button's function is indicated by the icon displayed above it. For example, an ← icon indicates pressing the **A** button displays the previous screen, and a → icon indicates pressing the **B** button displays the next screen. The icon is highlighted when selected.

5.3 Data Screens and Icons

Data is displayed on the screen, as shown in Table 1. Icons display depending on the function or parameter and the corrector's configuration.

Table 1: Data Display Icons

Icon	Description
!	Alarm/Fault indicator; refer to Section Error! Reference source not found.
	Battery status is indicated by the length of the bar within the battery symbol.
≈	The flow indicator displays each time an input rotation is sensed.
	The Bluetooth connection is active.
	The number of bars displayed indicates signal strength.
←	Display the previous screen in the series.
→	Display the next screen in the series.
↑	Show previous Menu screen entries.
↓	Show the next Menu screen entries.

Table 2: Abbreviations

Abbreviation	Description	Abbreviation	Description
°C	Temperature in Celsius	INW	Inches of Water Column
°F	Temperature in Fahrenheit	kPa	Kilopascal
Abs	Absolute	Press or P	Pressure
AVG	Average	PSI	Pounds per Square Inch
Batt	Battery	Temp or T	Temperature
CF	Cubic Feet	Time Adj	Time adjustment
CFH	Cubic Feet per Hour	UNC/UNCORR	Uncorrected
COR	Corrected	V Sensor	Volume Sensor
DP	Differential Pressure	Vol or V	Volume
F	Flow	x100 CF	100 Cubic Feet
GA	Gauge	m ³	Cubic Meters

5.4 Main Screens

The Main screens display up to three (3) lines of information. If the screen is inactive, wake the unit up (refer to section 8.1.1). The Home screen is not customizable by the user and, by default, displays corrected and uncorrected volume information. Additionally, there are three (3) customizable Main screens.

Unless otherwise specified by the customer, the following Main screen order is set by default:

- Corrected and Uncorrected Volume (Home screen)
- Corrected and Uncorrected Flow
- Pressure and Temperature
- Differential Pressure Test Results (if DP transducer is installed)

Note: If an alarm or fault is active, the Faults & Alarms screen displays about every five (5) seconds.

After these Main screens are displayed, a Menu screen is displayed. Use the Menu screen to scroll through faults, alarms, and view status information. For more information, refer to section **Error! Reference source not found.**

The data shown and the order in which it is shown is configurable. Depending on settings, you can auto scroll through active Main screens or press the **A** or **B** button to move to the previous or next screens. For auto scroll, each screen displays for a set amount of time before the next screen displays. For more information about customizing these screens, refer to the *Dresser Sync Software Manual*.



Figure 2: Main Screen Examples

5.5 Faults and Alarms Screen

The Faults & Alarms screen is not user configurable. It only displays if there is an alarm or fault condition, about every five seconds. Select **Alarms & Faults** from the Menu for more information about the condition.



Figure 3: Faults & Alarms screen example

5.6 Menu Screen

The Menu screen (Figure 4) is not user configurable and only displays when manually advancing through the Main screens by pressing the **A** or **B** button.

To access the Menu, press the **A** and **B** buttons at the same time.



Figure 4: Menu Screen

Within the Menu (Figure 5), press the **A** (↑) and **B** (↓) buttons to move up or down, respectively, through the menu options. Select a menu option by pressing the **A** and **B** buttons at the same time. Select **EXIT** to return to the first Main screen.

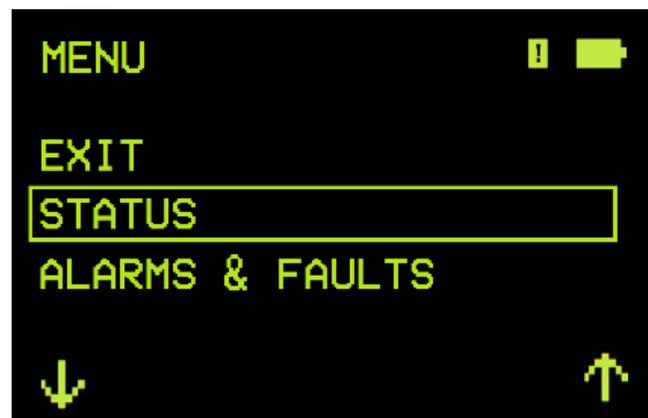


Figure 5: Example Menu Screen

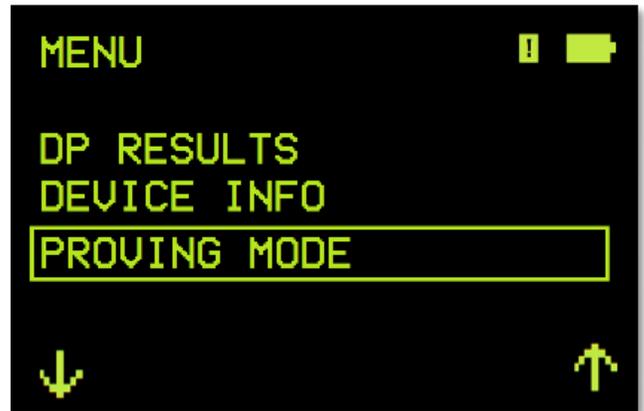


Figure 6: Example Menu Screen 2

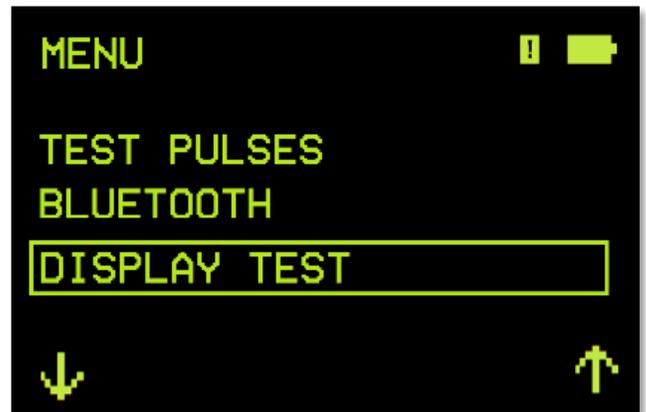


Figure 7: Example Menu Screen 3

5.7 Status Screen

Some menu entries are selected in the Menu screen (such as **STATUS**) have multiple data screens. Use the **A** (↑) and **B** (↓) buttons to navigate between these screens of information. The last screen in the series has a **BACK** menu entry that returns to the previous menu screen (for examples, refer to Figures 8-10).

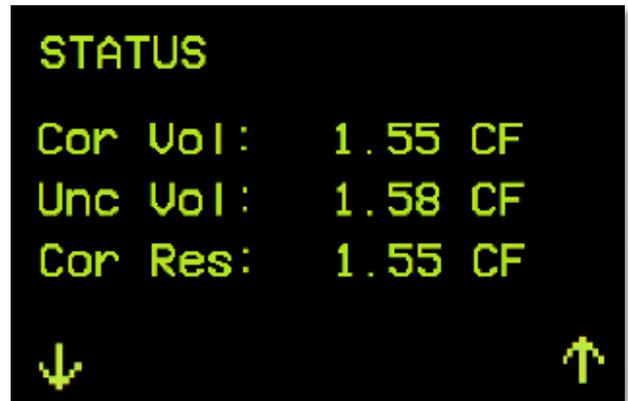


Figure 8: Example Status Screen 1

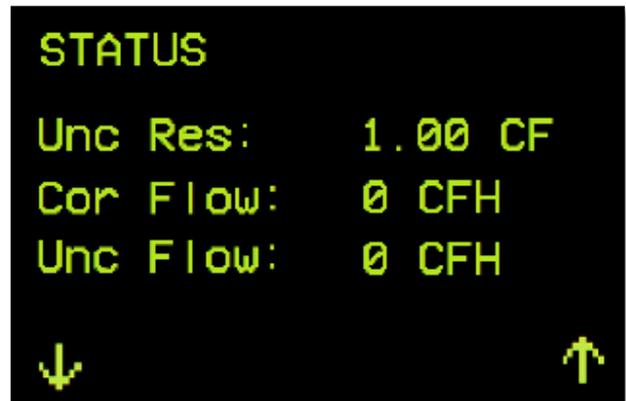


Figure 9: Example Status Screen 2

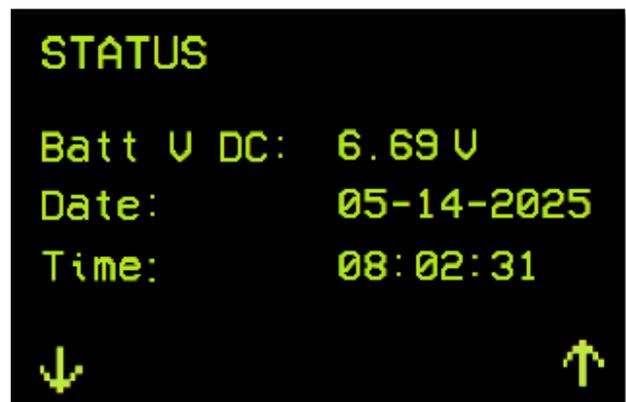


Figure 10: Example Status Screen 3

Appendix A: Internal Modem Installation

The Dresser MC3 Nexus and Guardian volume correctors can be equipped with an internal modem. Dresser provides internal modem mounting hardware as well as external antenna mounting hardware according to customer requirements.

Note: The modem antenna must be installed externally to the because the enclosure is metal and blocks the signal.

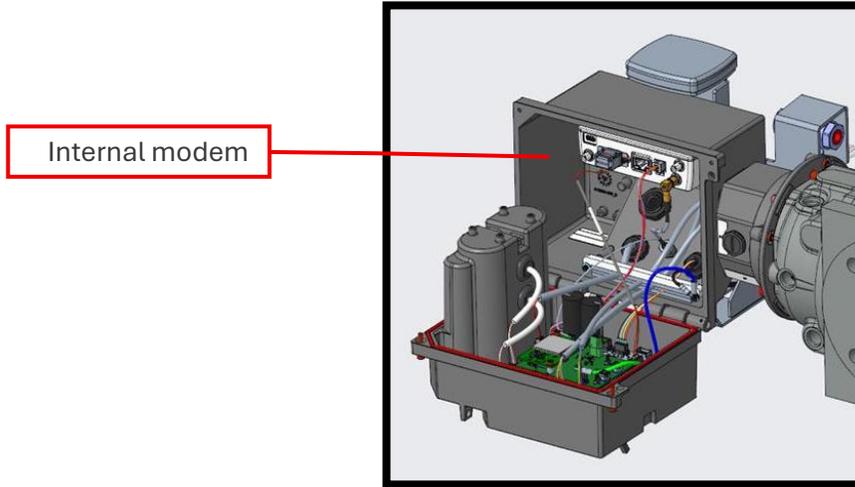


Figure 1: Example of a modem installed in MC3

1.1 Parts and Tools for Installation

Table 1: Modem Installation Parts and Tools

Description	Part Number
9/64" Allen wrench or hex screwdriver	-
8 mm wrench	-
Torque screwdriver with 9/64" bit	-
Modem installation kit (Sierra RV55-specific)	062805-010
Four (4) screws	000141-249
Four (4) washers	000301-008
Two (2) O-Ring seals	000568-007
Communication Harness Options-to-modem RV55 to MC3	062668-020
Power Harness Options-to-modem RV55 to MC3	062668-030
Mounting plate ASM Modem MC3	063006-000
MC3 Enclosure Gasket	062629-150

1.2 Installing an Internal Modem

Note: As an example, a Sierra Wireless RV-55 modem is shown.

1. Install the modem onto the modem bracket by performing the following steps:

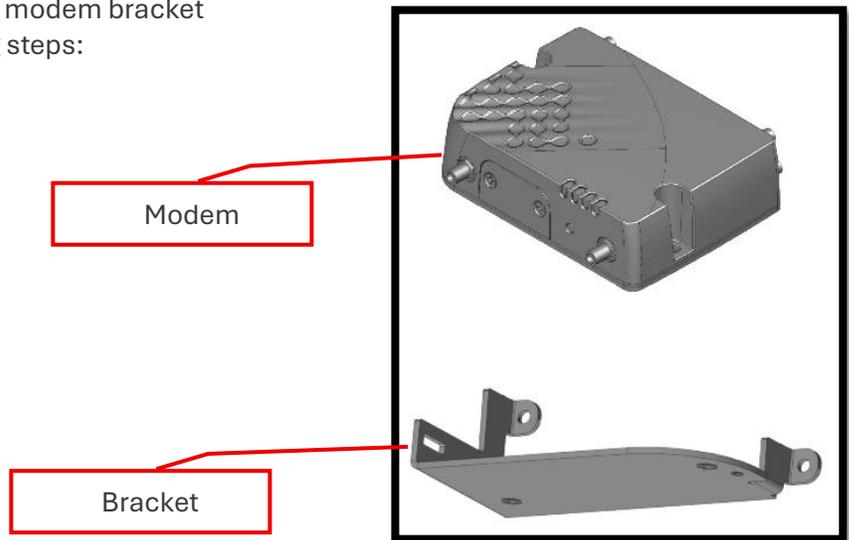


Figure 2: Bracket and Modem

- a. Insert the two (2) screws into the holes on the modem.

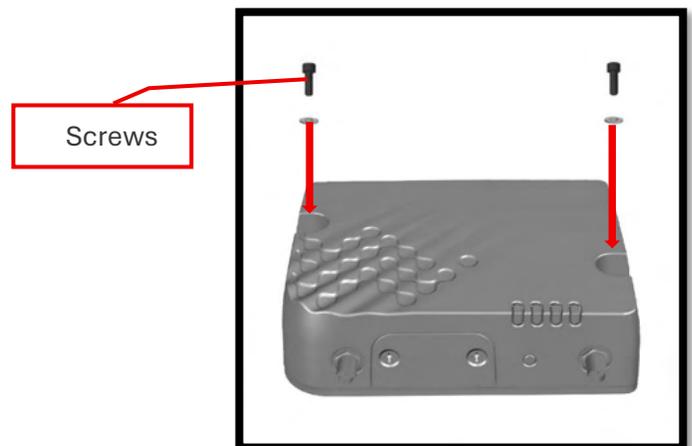


Figure 3: Insert screws into modem

- b. Align screws in the modem with the holes on the bracket.
- c. Tighten the screws to attach the modem onto the bracket to a maximum torque of 20 inch-pounds

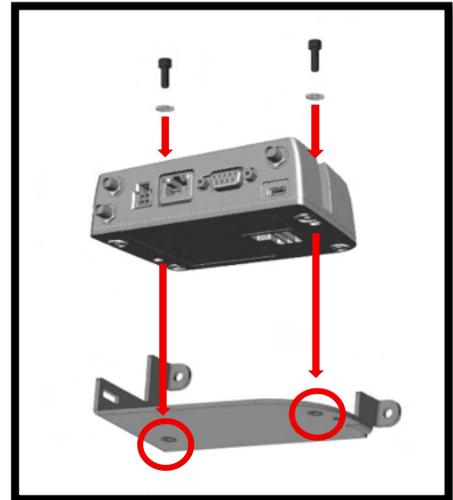


Figure 4: Align screws with Holes on the bracket

- d. Turn bracket over to be sure screws are attached correctly.

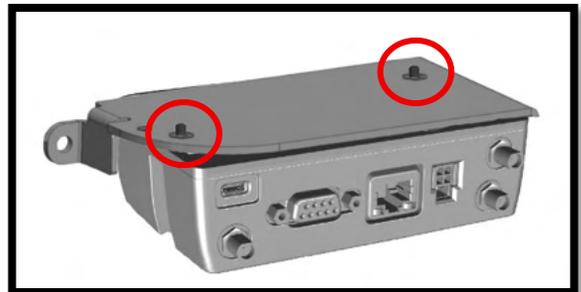


Figure 5: Modem installed on bracket

- 2. If needed, remove any security devices (for example, hask locks etc.) on the connector enclosure.

Use a 9/64" Allen or hex wrench to loosen the screws on the corrector enclosure cover (turn counterclockwise).

The screws should be held on the door by an internal retainer.

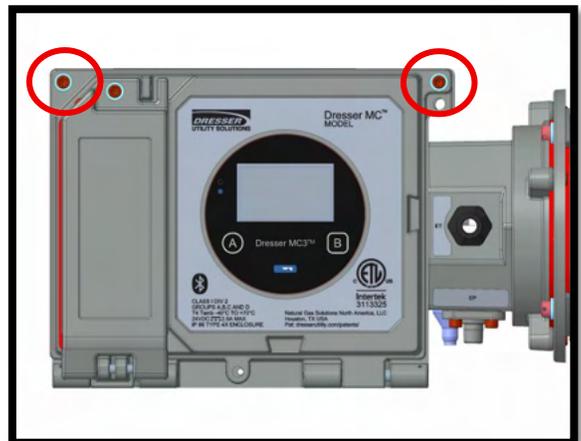


Figure 6: Loosen Lid Screws

3. Locate the modem bracket mounting holes inside the corrector enclosure.

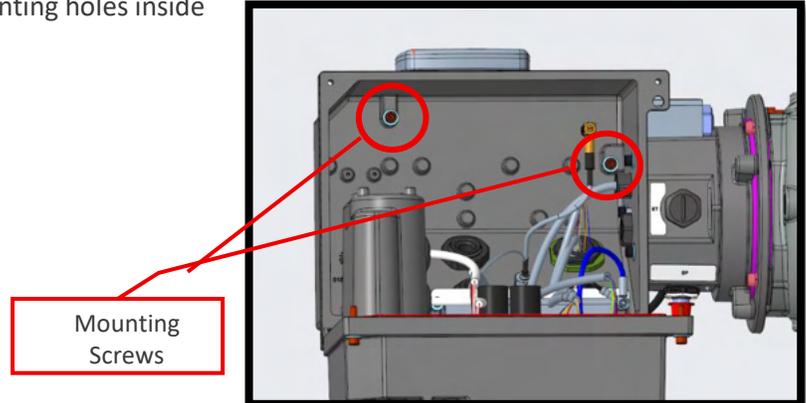


Figure 7: Modem mounting holes

4. Install the modem on its bracket (prepared in step 1) by tightening the screws with a 9/64" Allen or hex wrench (turn clockwise) to a maximum torque of 20-inch pounds. There is one screw and one washer on each side.

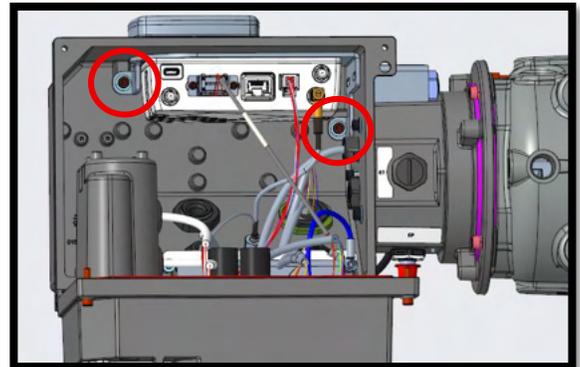


Figure 8: Mount the modem

5. While closing the enclosure lid, carefully tuck all cables into the enclosure. Verify that no wires will get pinched in the lid.

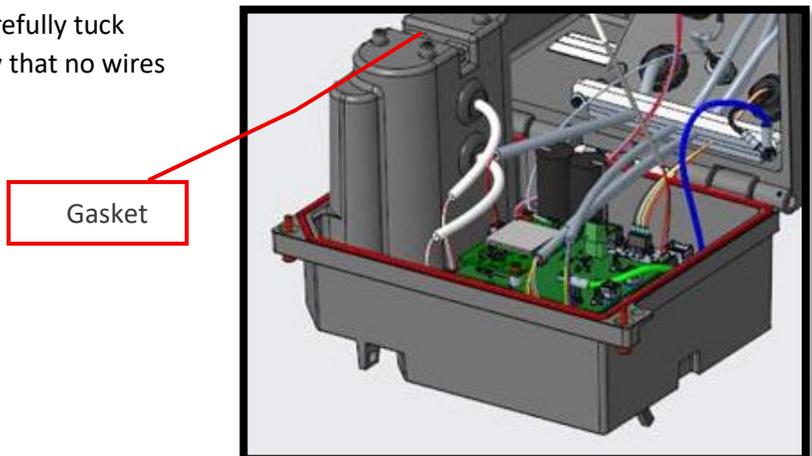


Figure 9: Gasket Location

5. Use a 9/64" Allen or hex wrench to tighten the screws on the corrector enclosure cover (turn clockwise) to a maximum torque of 20-inch pounds.

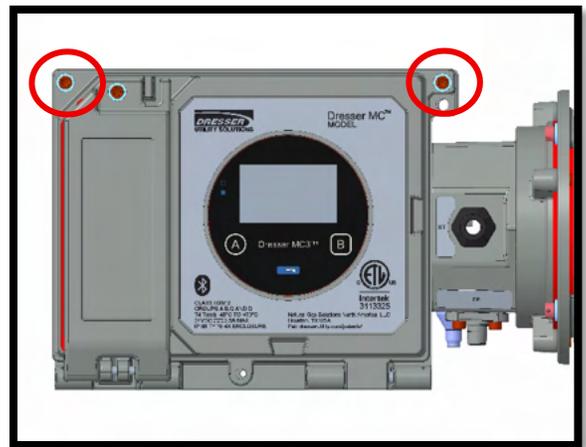


Figure 10: Tighten Lid Screws

Appendix B: Antenna Replacement

For illustration purposes, the antenna shown in this section is available from Dresser. Other antennas can be installed; refer to Table 1 for the required tools.

Table 1: External Antenna Replacement Parts and Tools

Part Description	Part Number
9/64" Allen Wrench or Hex Screwdriver	-
14mm Wrench	-
18mm Wrench	-
8mm Wrench	-
Antenna Kit (Factory)	063014-000
Antenna (Replacement)	013870-003

1.1 Perform the following steps to install an antenna:

1. Remove the rear cable cover using a 9/64" Allen or hex wrench to access the rear enclosure panel (Figure 1).

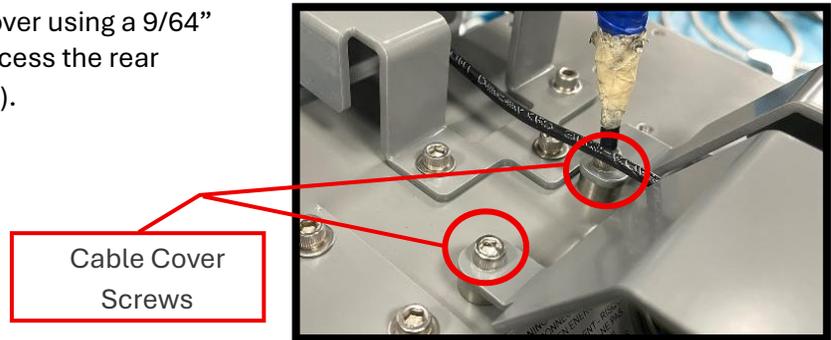


Figure 1: Remove Rear Cable Cover

2. Remove the SMA connector from the antenna port on the rear enclosure panel by unscrewing its connector using an 8 mm wrench (Figure 2).



Figure 2: Remove SMA connector from Antenna Port

3. Use a 9/64" Allen or hex wrench to remove the screws on the antenna bracket from the corrector enclosure (Figure 3).

Antenna Bracket
Screws



Figure 3: Remove Antenna Bracket

4. Remove the metal nut and washer from the cable by using a 14mm wrench. Remove the old antenna from the bracket and set it aside (Figure 4).

Metal Nut
And
Washer

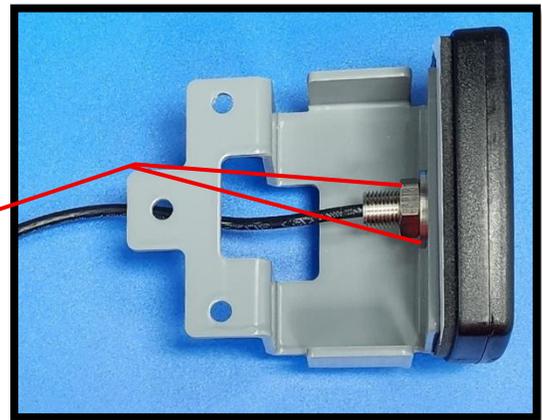


Figure 4: Remove Old Antenna

5. Below the tape on the new antenna, you will find a nut and washer. Remove them. *Important: Ensure the work area is free of dust and debris.*

The new antenna will come with sticky tape. Slice the paper on top of the tape in the shape of the antenna bracket similar to what is shown here (Figure 5).

Sticky Tape

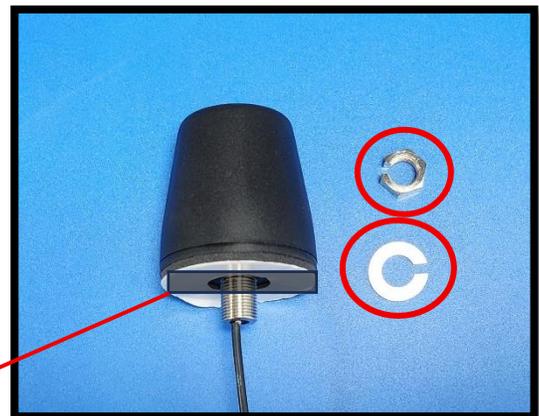


Figure 5: Prepare Antenna for Installation

6. Insert the new antenna cable through the slot on the metal bracket, making sure that the cutout of the tape lines up with the bracket (Figure 6).

Secure the tape on the antenna to the bracket by pushing down on the antenna.

Antenna
Bracket

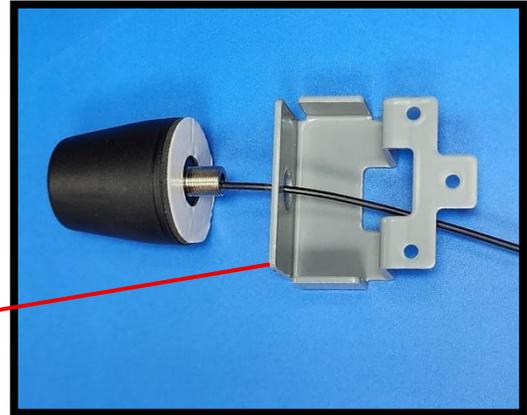


Figure 6: Align Antenna and Secure Tape

7. Screw the washer and nut onto the cable and then tighten the nut by using an 18mm wrench until tight (Figure 7).

Metal Nut
And
Washer

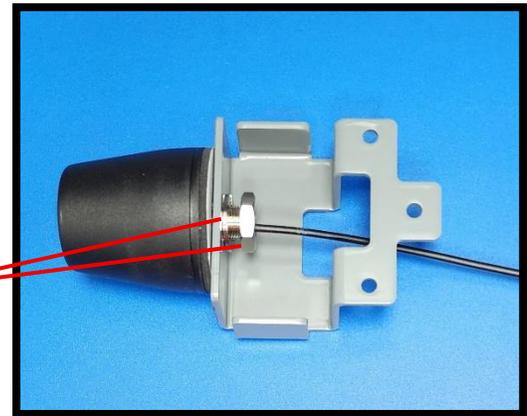


Figure 7: Secure Antenna to Bracket

8. Identify the three (3) antenna bracket mounting holes on the back side of the corrector's enclosure (Figure 8).

Mounting
Holes



Figure 8: Locate Bracket Mounting Holes

9. Use a 9/64" Allen or hex wrench to tighten the screws on the antenna bracket to 20 inch-pounds (Figure 9).

Mounting
Screws

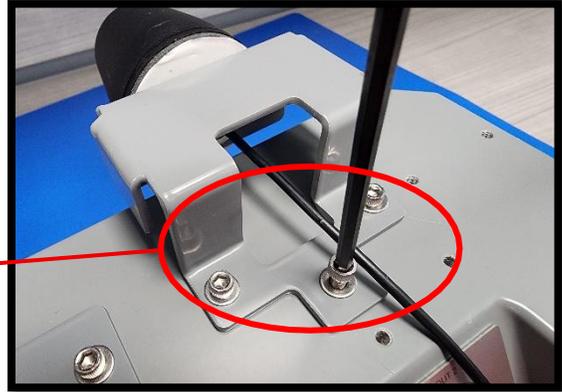


Figure 9: Tighten Bracket Mounting Screws

10. Attach the SMA connector from the antenna to the antenna port on the rear enclosure panel and tighten using the 8 mm wrench to 5 inch-pounds (Figure 10).

Antenna
Port



Figure 10: Attach and Tighten SMA Connector

11. Tighten the screws on the rear cable cover using a 9/64" Allen or hex wrench to 20 inch-pounds (Figure 11).

Enclosure
Screws



Figure 11: Tighten Rear Cable Cover Screws



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