FB2100/FB2200 Flow Computer CPU Enclosure and Electronics Field Replacement Guide

For Part Numbers (Kits):

See page 2 for field replacement kit part numbers

EMERSON

Device Safety Considerations

- ## Reading these Instructions

  Before operating the device, read these instructions carefully and understand their safety implications. In some situations, improperly using this device may result in damage or injury. Keep this manual in a convenient location for future reference. Note that these instructions may not cover all details or variations in equipment or cover every possible situation regarding installation, operation, or maintenance. Should problems arise that are not covered sufficiently in the text, immediately contact Customer Support for further information.

- ## Protecting Operating Processes

  A failure of this device – for whatever reason -- may leave an operating process without appropriate protection and could result in possible damage to property or injury to persons. To protect against this, you should review the need for additional backup equipment or provide alternate means of protection (such as alarm devices, output limiting, fail-safe valves, relief valves, emergency shutoffs, emergency switches, etc.). Contact Remote Automation Solutions for additional information.

- ## Returning Equipment

  If you need to return any equipment to Remote Automation Solutions, it is your responsibility to ensure that the equipment has been cleaned to safe levels, as defined and/or determined by applicable federal, state and/or local law regulations or codes. You also agree to indemnify Remote Automation Solutions and hold Remote Automation Solutions harmless from any liability or damage which Remote Automation Solutions may incur or suffer due to your failure to ensure device cleanliness.

- ## Grounding Equipment

  Ground metal enclosures and exposed metal parts of electrical instruments in accordance with OSHA rules and regulations as specified in *Design Safety Standards for Electrical Systems*, 29 CFR, Part 1910, Subpart S, dated: April 16, 1981 (OSHA rulings are in agreement with the National Electrical Code). You must also ground mechanical or pneumatic instruments that include electrically operated devices such as lights, switches, relays, alarms, or chart drives.
  Important: Complying with the codes and regulations of authorities having jurisdiction is essential to ensuring personnel safety. The guidelines and recommendations in this manual are intended to meet or exceed applicable codes and regulations. If differences occur between this manual and the codes and regulations of authorities having jurisdiction, those codes and regulations must take precedence.

- ## Protecting from Electrostatic Discharge (ESD)

  This device contains sensitive electronic components which be damaged by exposure to an ESD voltage. Depending on the magnitude and duration of the ESD, it can result in erratic operation or complete failure of the equipment. Ensure that you correctly care for and handle ESD-sensitive components.

System Training

A well-trained workforce is critical to the success of your operation. Knowing how to correctly install, configure, program, calibrate, and trouble-shoot your Emerson equipment provides your engineers and technicians with the skills and confidence to optimize your investment. Remote Automation Solutions offers a variety of ways for your personnel to acquire essential system expertise. Our full-time professional instructors can conduct classroom training at several of our corporate offices, at your site, or even at your regional Emerson office. You can also receive the same quality training via our live, interactive Emerson Virtual Classroom and save on travel costs. For our complete schedule and further information, contact the Remote Automation Solutions Training Department at 800-338-8158 or email us at *education@emerson.com*.

Ethernet Connectivity

This automation device is intended to be used in an Ethernet network which **does not** have public access. The inclusion of this device in a publicly accessible Ethernet-based network is **not recommended**.

Replacing the CPU Enclosure & Electronics

You can replace the CPU enclosure and its individual boards in the field provided that the replacement has the exact same part number and version.

There is considerable overlap between the different field replacement procedures for the items covered in this guide. This guide presents several discrete tasks which are used, and then references them in procedures as they are needed.

Restriction
Hazardous area approvals require that any part replaced in the field be the exact same part ("like-for-like"). Upgrading or substituting different parts violates hazardous area certification.

Contents

Refer to the table below for the correct field replacement part numbers.

Item	Field Replacement Kit Part Number
CPU Board	621678-01-0
Optional 6-Channel Expansion I/O Board	400215010-KIT
Connectivity Board	400211010-KIT
Adapter Board	400209010-KIT
CPU Enclosure - Bottom – (black plastic)	399260-01-0
CPU Enclosure – Top- (black plastic)	399264-01-0
CPU Enclosure Assembly with Base I/O - Ethernet disabled	621673-01-0
CPU Enclosure Assembly with Base I/O - Ethernet enabled	621674-01-0
CPU Enclosure Assembly with optional 6-Channel Expansion I/O board – Ethernet disabled	621675-01-0
CPU Enclosure Assembly with optional 6-Channel Expansion I/O board - Ethernet enabled	621676-01-0
UL File Number for these kits: E192567	

Required Tools

- #1 Phillips-head screwdriver
- #2 Phillips-head screwdriver
- Hexagonal torque wrenches. Ranges must include 1 to 2 in-lbs (0.1 to 0.2 N-m), 4 to 6 in-lbs (0.5 to 0.7 N-m), 5 to 7 in-lbs (0.6 to 0.8 N-m), and 7 to 9 in-lbs (0.8 to 1.0 N-m).

Electrical Ratings:

- **Input Voltage**: 10.5 Vdc to 30 Vdc external supply (Max power at 10 watts)

Ambient Temperature Range:

May be used up to a maximum ambient temperature of 80°C and a minimum ambient temperature of –40°C; refer to the data plate attached to the device for ambient temperature.

⚠ WARNING

EXPLOSION HAZARD – Substitution of any components may impair suitability for Class 1, Division 2.

⚠ WARNING

EXPLOSION HAZARD – Do not disconnect equipment unless power has been removed or the area is known to be non-hazardous.

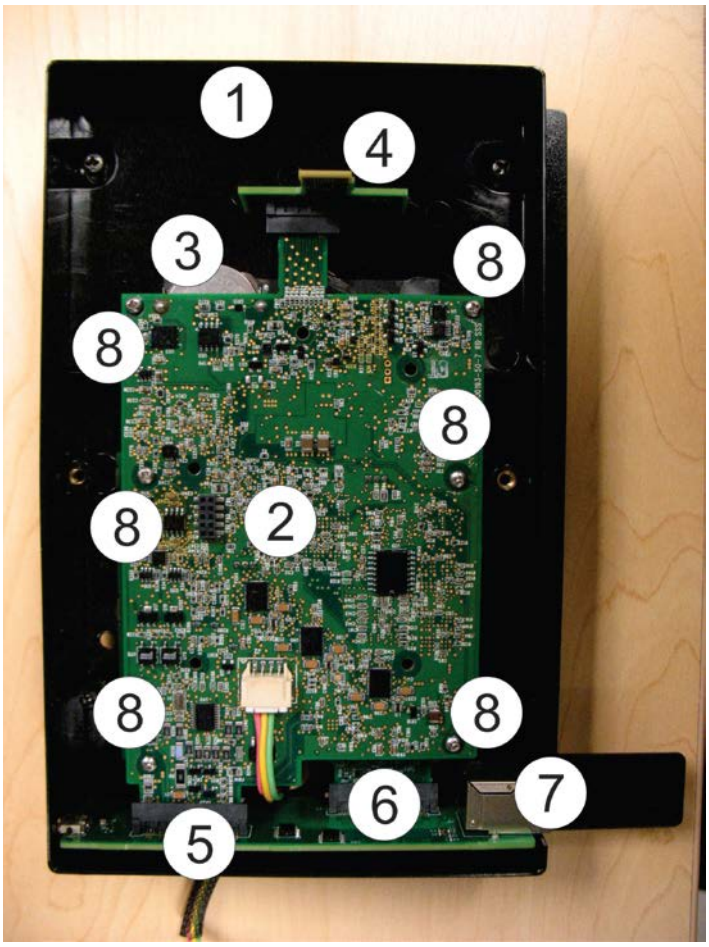
⚠ DANGER

EXPLOSION HAZARD: Ensure the area in which you perform this operation is non-hazardous. Performing this operation in a hazardous area could result in an explosion.

Tip

Because some of these procedures involve removing small parts such as screws and standoffs, we recommend you provide a container for holding small parts.

Components of CPU Enclosure



1 CPU enclosure (bottom)
2 CPU board
3 SRAM backup battery
4 Adapter board
5 Connectivity board
6 Connection for optional 6-Channel Expansion I/O Board (underneath CPU) – (FB2200 only)
7 Ethernet port (active on FB2200 only)
8 Screws (6) if you have the 6-channel expansion I/O board installed underneath, (4) if you do not.

Removing/Restoring Main Power

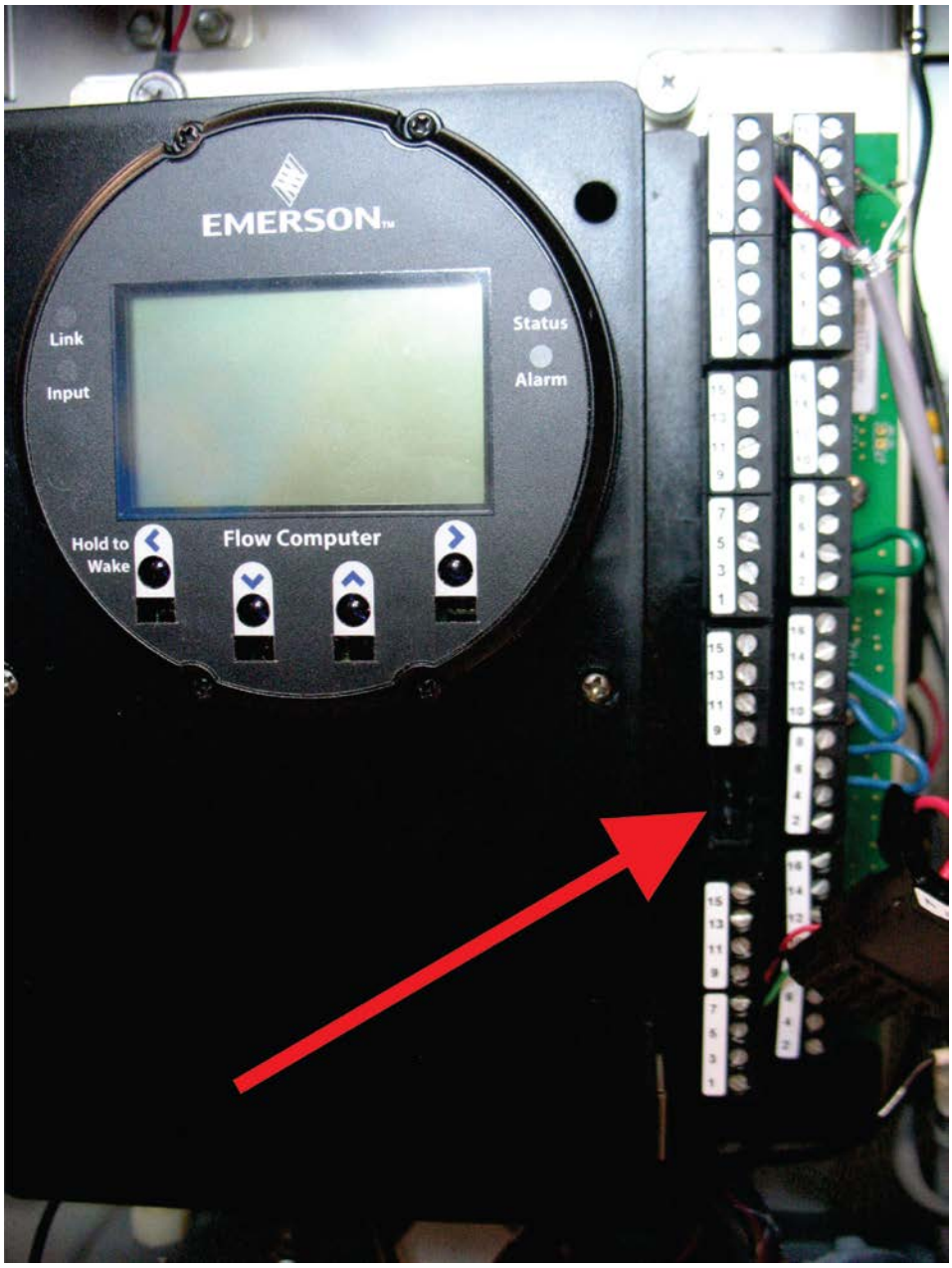
Except when replacing batteries or the HMI module, you must always remove main power when performing field replacements.

Removing Main Power

Before you begin any of these procedures, you must remove main power. Terminal block TB2 (pins 1,3,5,7) includes connections for DC power (DCIN+, DCIN-) and battery/ solar power (BATT+, BATT–). The internal battery (used with solar power) also has its own internal connectors inside the battery compartment.

1. Open the door of the flow computer enclosure.

2. Unplug TB2 (pins 1,3,5,7) to deactivate DC or battery/solar power. This shuts OFF power from either an external power supply or the internal battery pack/solar panel.



Restoring Main Power

When you are done with all field replacement activities, you can restore main power. Plug in terminal block TB2 (pins 1,3,5,7) to restore power.

Once you restore main power, close the flow computer enclosure door.

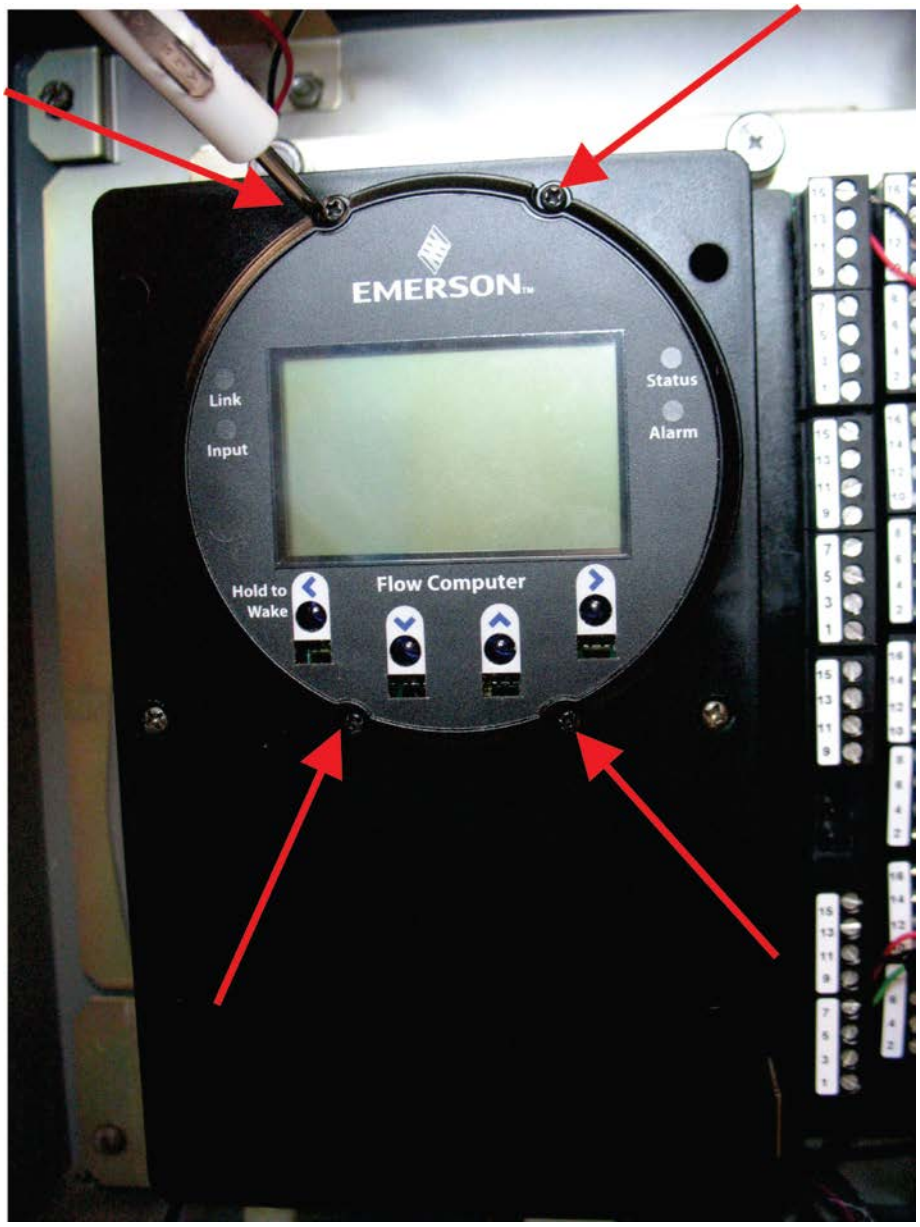
Removing/Replacing the HMI Module

The HMI module attaches to the outside of the CPU enclosure cover.

Removing the HMI Module

1. Use a #1 Phillips-head screwdriver to loosen the four captive fastening screws that attach the HMI module to the CPU enclosure cover.

Captive Screws



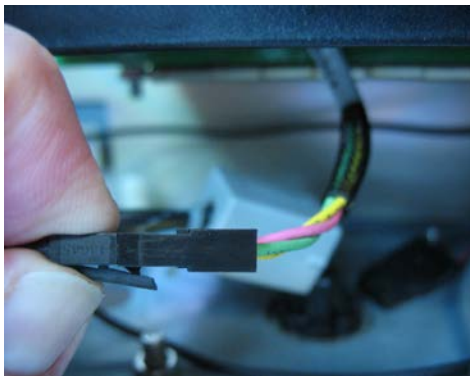
2. Grasp the HMI module and remove it by gently pulling it straight out.

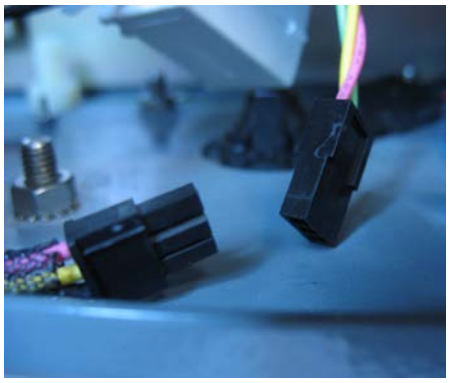
Replacing the HMI Module

1. To replace the HMI module, line up the printed circuit board (PCB) with the slot on the back and gently press it back on.
2. Tighten the four captive fastening screws with a torque value of 4 to 6 in.-lbs. (0.5 to 0.7 N-m).

Disconnecting the Cable Between the CPU Enclosure and the Sensor

Disconnect the cable between the CPU enclosure and the sensor module. To do this, press down on the outer edge of the connection tab, then pull the connectors apart.





Detaching/Re-Attaching the CPU Enclosure from/to the Battery Compartment

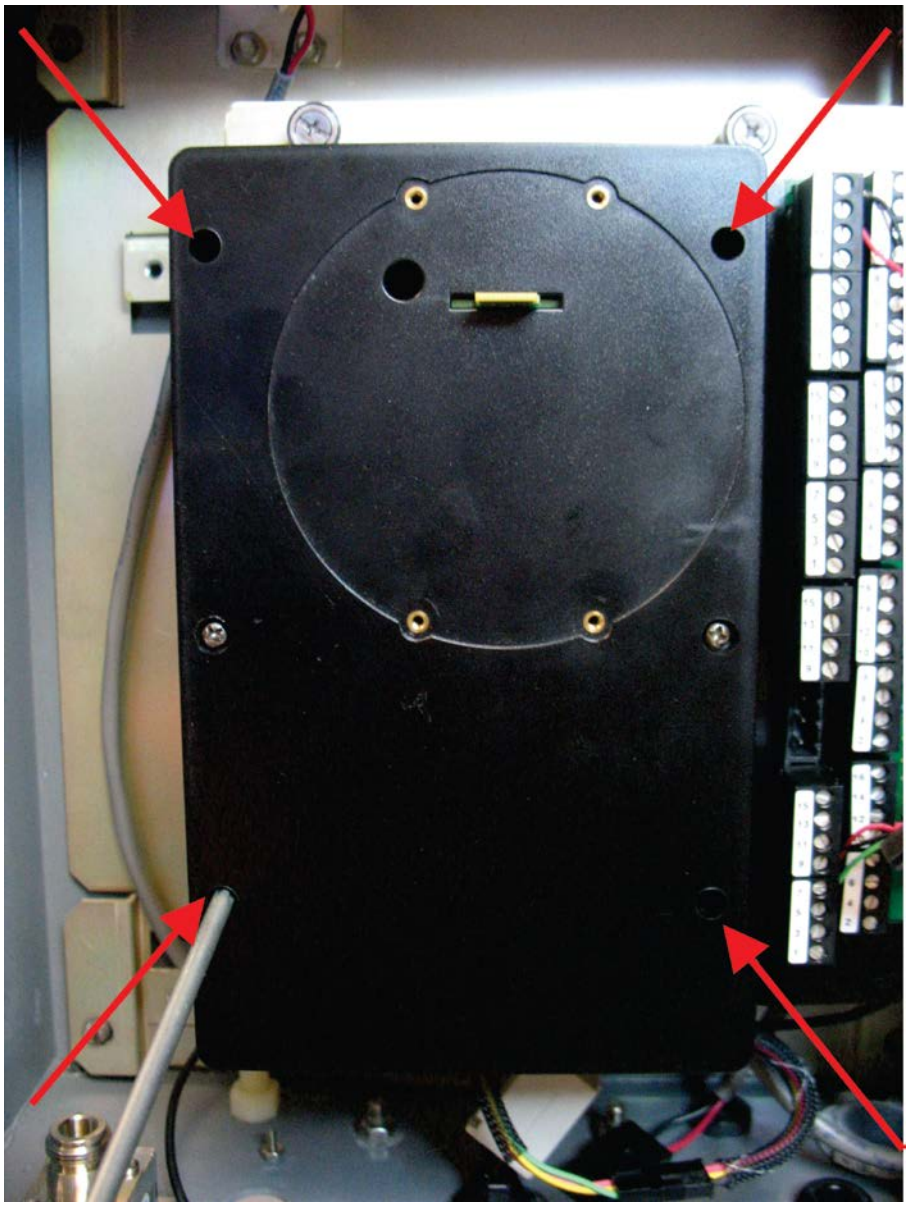
UL Listed CPU Box Field Installed Accessory Kit for Use in Class I, Division 2, Groups A, B, C, and D

- Flow Computer CPU Box Option 1 Field Installed Accessory Kit Part No. 621673-01-0 for use with UL Listed Model Series FB2100 and FB2200.
- Flow Computer CPU Box Option 2 Field Installed Accessory Kit Part No. 621674-01-0 for use with UL Listed Model Series FB2100 and FB2200.
- Flow Computer CPU Box Option 3 Field Installed Accessory Kit Part No. 621675-01-0 for use with UL Listed Model Series FB2100 and FB2200.
- Flow Computer CPU Box Option 4 Field Installed Accessory Kit Part No. 621676-01-0 for use with UL Listed Model Series FB2100 and FB2200.

This procedure applies if you are replacing an entire CPU enclosure with its electronics. In addition, most field replacements of components inside the CPU enclosure require you to remove the CPU enclosure from the flow computer enclosure.

Detaching the CPU Enclosure from the Battery Compartment

1. Remove the HMI module. See *Removing the HMI Module* on page 6 for details.
2. Disconnect the cable between the CPU enclosure and the sensor. See *Disconnecting the Cable Between the CPU Enclosure and the Sensor* on page 7.
3. Use a #2 Phillips-head screwdriver to loosen the four captive fastening screws that hold the CPU enclosure to the battery compartment.



4. Gently pull the CPU enclosure out of the flow computer enclosure.

Re-attaching the CPU Enclosure to the Battery Compartment

1. Line up the CPU enclosure's captive fastening screws with their matching holes on the other assemblies and battery compartment. Press the enclosure screws onto the holes and hold the CPU enclosure while tightening each of the captive fastening screws with a torque of 7 to 9 in-lbs (0.8 to 1.0 N-m).
2. Connect the cable between the CPU and the sensor module and make sure it has clearance.
3. Replace the HMI module. See *Replacing the HMI Module* on page 6.

Removing/Replacing the CPU Enclosure Cover (Top)

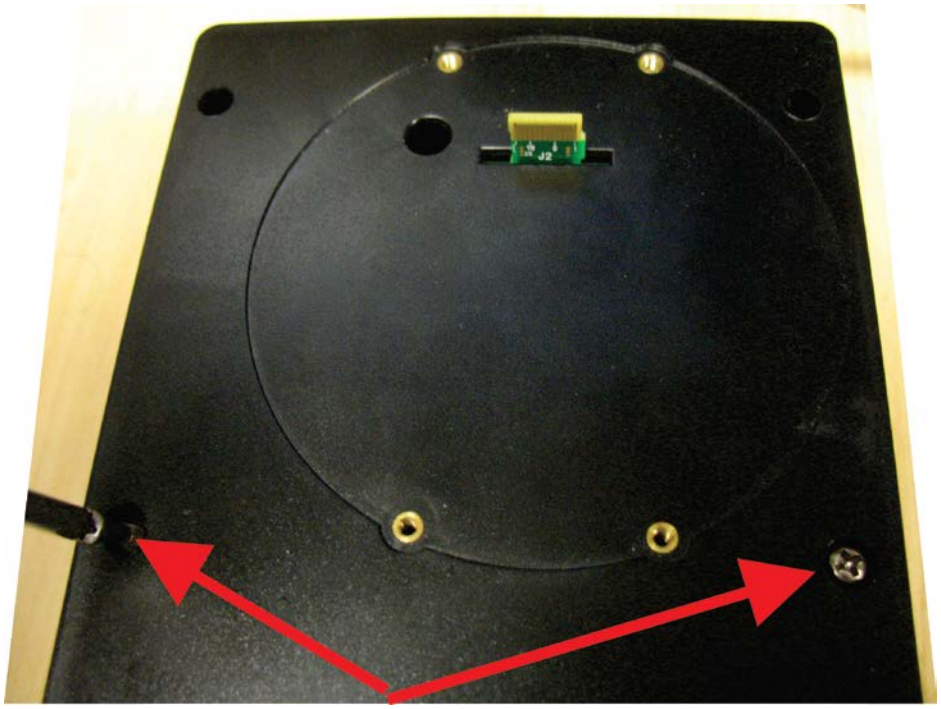
UL Listed CPU Enclosure Cover (Top) Field Installed Accessory Kit for Use in Class I, Division 2, Groups A, B, C, and D

- Flow Computer CPU Enclosure Cover (Top) Field Installed Accessory Kit Part No. 399264-01-0 for use with UL Listed Model Series FB2100 and FB2200.

You remove the CPU enclosure cover to gain access to the inside of the CPU enclosure, to perform a field replacement, or if you need to replace the CPU enclosure cover itself. Replace the CPU enclosure cover when you are done with your field replacement procedure.

Removing the CPU Enclosure Cover (Top)

1. Remove the HMI module. See *Removing the HMI Module* on page 6.
2. Disconnect the cable between the CPU enclosure and the sensor. See *Disconnecting the Cable Between the CPU Enclosure and the Sensor* on page 7.
3. Detach the CPU enclosure from the battery compartment. See *Detaching the CPU Enclosure from the Battery Compartment* page 7.
4. Use a #2 Phillips-head screwdriver to loosen the two screws that hold the CPU enclosure cover (top) to the CPU enclosure (bottom). Save the screws.



5. Pull off the CPU enclosure cover to reveal the inside of the CPU enclosure.

Replacing the CPU Enclosure Cover (Top)

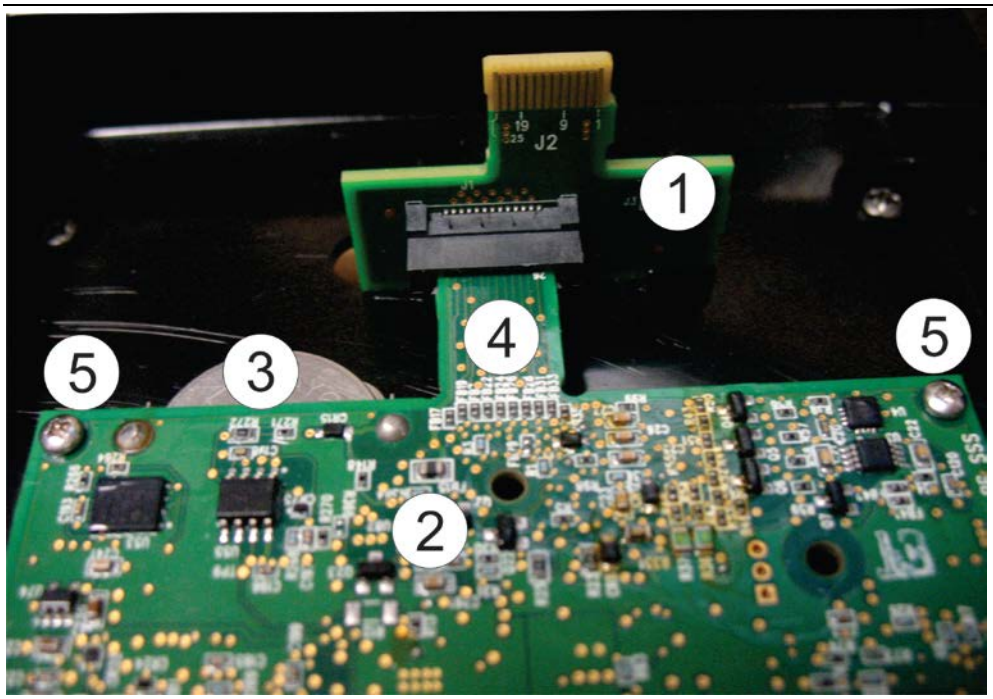
1. Press the CPU enclosure cover (whether the original cover or a new replacement cover) against the CPU enclosure.
2. Tighten the two screws to attach the cover. Use a torque value of 5 to 7 in-lbs (0.6 to 0.8 N-m.
3. Re-attach the CPU enclosure to the battery compartment. See *Re-attaching the CPU Enclosure to the Battery Compartment* on page 9.
4. Re-connect the cable between the CPU enclosure and the sensor.
5. Replace the HMI module. See *Replacing the HMI Module* on page 6.

Removing/Replacing the Adapter Board

UL Listed Adapter Board Field Installed Accessory Kit for Use in Class I, Division 2, Groups A, B, C, and D

- Flow Computer Adapter Board Field Installed Accessory Kit Part No. 400209010-KIT for use with UL Listed Model Series FB2100 and FB2200.

The adapter board resides inside the CPU enclosure. It provides a connection through a slot in the CPU enclosure cover to the HMI module. You would remove/replace the adapter board if the adapter board itself fails, or as a step in the field replacement of the CPU board, the 6-channel expansion I/O board, the connectivity board, or the CPU enclosure (bottom).



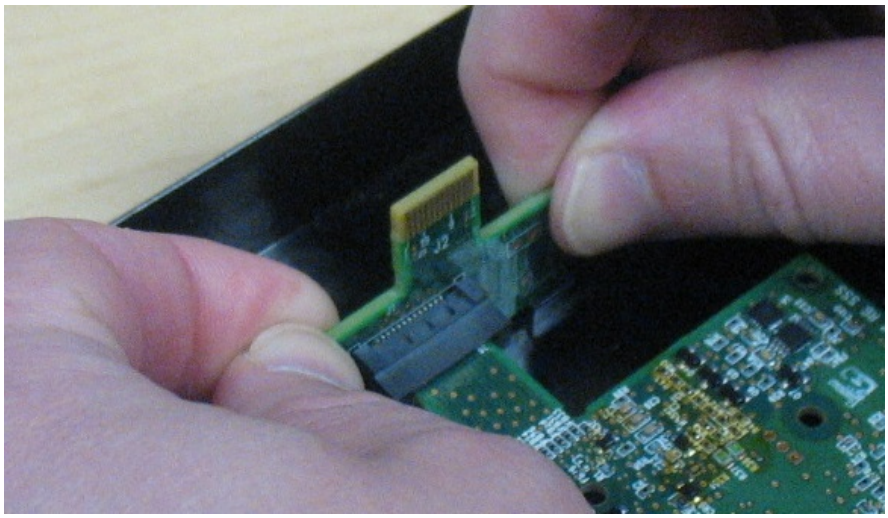
1 Adapter Board
2 CPU board
3 SRAM backup battery
4 CPU board connector to the adapter board
5 CPU screws nearest to the adapter board

Removing the Adapter Board

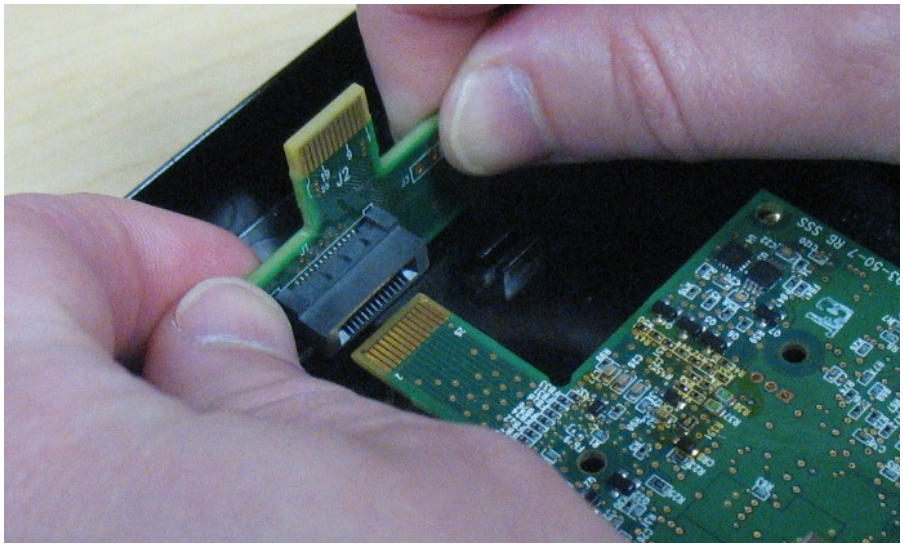
1. Remove the HMI module. See *Removing the HMI Module* on page 6.
2. Disconnect the cable between the CPU enclosure and the sensor. See *Disconnecting the Cable Between the CPU Enclosure and the Sensor* on page 7.
3. Detach the CPU enclosure from the battery compartment. See *Detaching the CPU Enclosure from the Battery Compartment* on page 7.
4. Remove the CPU enclosure cover. See *Removing the CPU Enclosure Cover (Top)* on page 10.

5. Remove the two CPU board screws closest to the adapter board. This allows some free movement of the CPU board when you remove the adapter board.

6. With both hands, place your thumbs and fingers on each side of the adapter board. Four plastic tabs on the bottom of the CPU enclosure hold it in place. Gently pull it up just enough so it is clear of the plastic tabs.



7. Once clear of the plastic tabs, slide it off the CPU board connector and set it aside.



Replacing the Adapter Board

1. Gently slide the adapter board onto the CPU board connector.
2. Once on the connector, carefully lift it just enough so it moves to sit inside the four plastic tabs on the bottom of the CPU enclosure.
3. Replace the two CPU board screws nearest to the adapter board. Torque the screws to 1 to 2 in-lbs (0.1 to 0.2 N-m).
4. Replace the CPU enclosure cover. See *Replacing the CPU Enclosure Cover (Top)* on page 11.
5. Attach the entire CPU enclosure assembly to the battery compartment inside the flow computer enclosure. See *Re-attaching the CPU Enclosure to the Battery Compartment* on page 9.
6. Re-connect the cable between the CPU enclosure and the sensor.
7. Replace the HMI module. See *Replacing the HMI Module* on page 6.

Removing/Replacing the CPU Board

UL Listed CPU Board Field Installed Accessory Kit for Use in Class I, Division 2, Groups A, B, C, and D

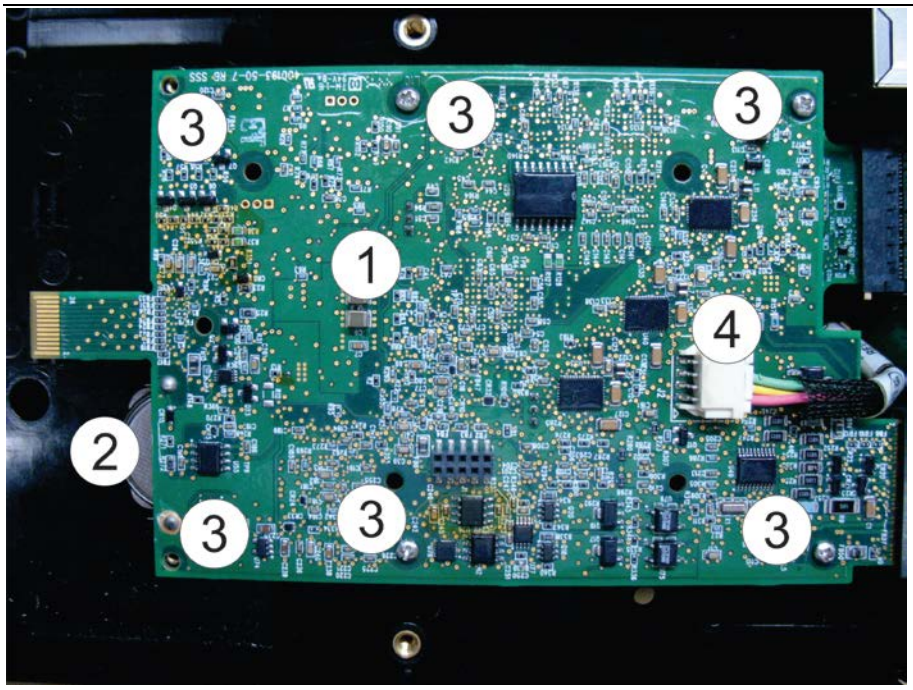
- Flow Computer CPU Board Field Installed Accessory Kit Part No.621678-01-0 for use with UL Listed Model Series FB2100 and FB2200.

The CPU board resides inside the CPU enclosure. You would remove/replace the CPU board if it fails, or as a step in the field replacement of the 6-channel expansion I/O board, the connectivity board, or the CPU enclosure (bottom).

Removing the CPU Board

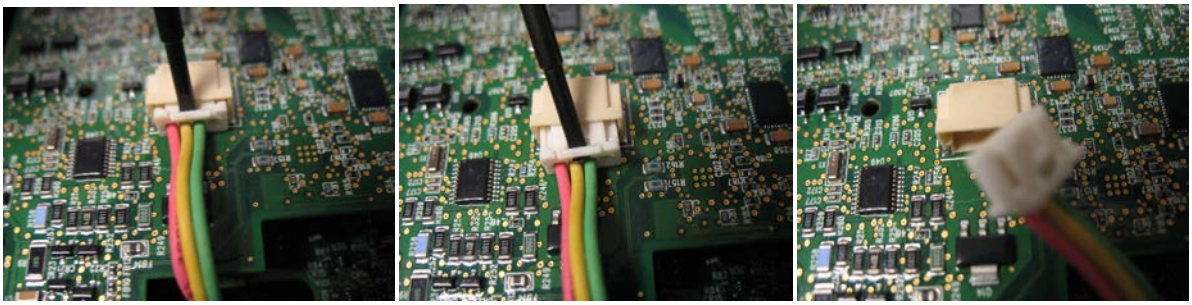
1. Remove the HMI module. See *Removing the HMI Module* on page 6.
2. Disconnect the cable between the CPU enclosure and the sensor. See *Disconnecting the Cable Between the CPU Enclosure and the Sensor* on page 7.
3. Detach the CPU enclosure from the battery compartment. See *Detaching the CPU Enclosure from the Battery Compartment* on page 7.
4. Remove the CPU enclosure cover. See *Removing the CPU Enclosure Cover (Top)* on page 10.
5. Remove the adapter board. See *Removing the Adapter Board* on page 12.

6. Use a #1 Phillips-head screwdriver to remove the screws that hold down the CPU board. Save the screws. If you have the 6-channel expansion I/O board installed, there are 6 screws; if the board is not present, there are 4 screws.



1 CPU board
2 SRAM backup battery
3 Screw locations. There are six screws (if you have the 6-channel expansion I/O board installed underneath) or four screws (without the board).
Note: The two left-most screws in this picture have been removed to ease removal of the adapter board.
4 Connector for intermediate cable to sensor module

7. Use a small flat head screwdriver to push the intermediate cable connector off its mating connector on the CPU board.



8. Gently slide the CPU board out of its connector on the connectivity board.
9. If the CPU board itself is to be replaced with a new CPU board, take the SRAM backup battery out as you will need it for the new replacement CPU board. Otherwise, leave the battery in the board.

Replacing the CPU Board

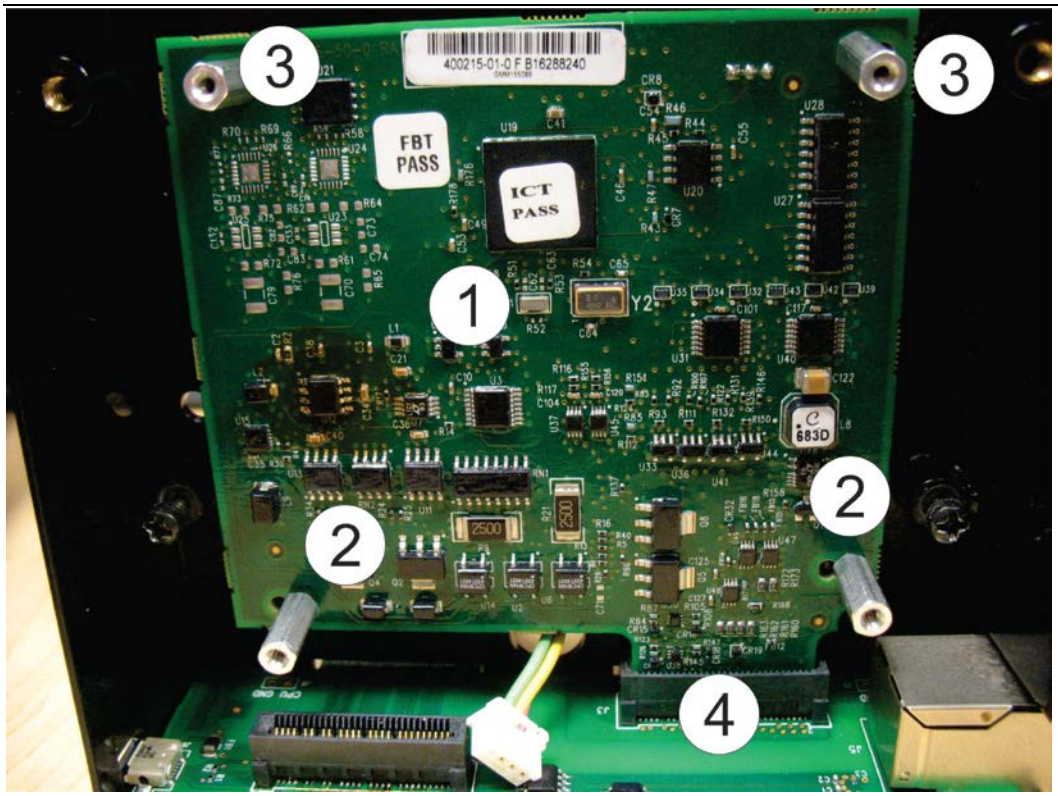
1. Gently slide the CPU board into its connector on the connectivity board. Make sure it is firmly in place.
2. Attach the CPU board using the screws saved from when you removed it but leave the two screws nearest the adapter board off.
3. Gently slide the adapter board onto its mating connector on the CPU board and move it so it fits between the four plastic tabs on the bottom of the CPU enclosure. Now finish attaching the CPU board using the two screws nearest the adapter board Torque all CPU board screws to 1 to 2 in-lbs (0.1 to 0.2 N-m).
4. Connect the intermediate cable to its mating connector on the CPU board. Ensure that the other end of the cable goes out the round hole in the bottom of the CPU enclosure.
5. If you removed the SRAM backup battery, slide it into its slot on the CPU board. Be sure to align the positive side properly as marked on the battery housing.
6. Replace the CPU enclosure cover. See *Replacing the CPU Enclosure Cover (Top)* on page 11.
7. Reattach the CPU enclosure to the battery compartment. See *Re-attaching the CPU Enclosure to the Battery Compartment* on page 9.
8. Re-connect the cable between the CPU enclosure and the sensor.
9. Reattach the HMI module. See *Replacing the HMI Module* on page 6.

Removing/Replacing the Optional 6-Channel Expansion I/O Board

UL Listed Optional 6-Channel Expansion I/O Board Field Installed Accessory Kit for Use in Class I, Division 2, Groups A, B, C, D

- Flow Computer 6-Channel Expansion I/O Board Field Installed Accessory Kit Part No. 400215010-KIT for use with UL Listed Model Series FB2100 and FB2200.

The optional 6-channel expansion I/O board resides inside the CPU enclosure. You would remove/replace the optional 6-channel expansion I/O board if it fails, or as a step in the field replacement of the connectivity board, or the CPU enclosure (bottom).



1	6-channel expansion I/O board
2	Standoffs that connect directly with connections on the bottom of the CPU enclosure. There are a pair of holds for each standoff. For the board positioned as shown, use the right-most hole. The other holes are used when this board resides in an FB1200
3	Standoffs that are held onto the 6-Channel Expansion I/O Board by screws underneath the board. There are a pair of holes for each standoff. For the board positioned as shown, use the right-most hole. The other holes are used when this board resides in an FB1200.
4	Socket on the connectivity board for the 6-channel Expansion I/O Board.

Removing the Optional 6-Channel Expansion I/O Board

1. Remove the HMI module. See *Removing the HMI Module* on page 6.
2. Disconnect the cable between the CPU enclosure and the sensor. See *Disconnecting the Cable Between the CPU Enclosure and the Sensor* on page 7.
3. Detach the CPU enclosure from the battery compartment. See *Detaching the CPU Enclosure from the Battery Compartment* on page 7.
4. Remove the CPU enclosure cover. See *Removing the CPU Enclosure Cover (Top)* on page 10.
5. Remove the adapter board. See *Removing the Adapter Board* on page 12.
6. Remove the CPU board. See *Removing the CPU Board* on page 14.
7. Remove the two standoffs closest to the connectivity board; these screw directly through the board to connections on the CPU enclosure bottom.

   The other two standoffs have separate screws underneath that hold them onto the expansion I/O board. (If you are replacing the board itself because it failed, remove these standoffs and screws as well so you can re-use them on the replacement board.)
8. Carefully slide the 6-channel expansion I/O board out of its socket on the connectivity board and set it aside.

Replacing the 6-Channel Expansion I/O Board

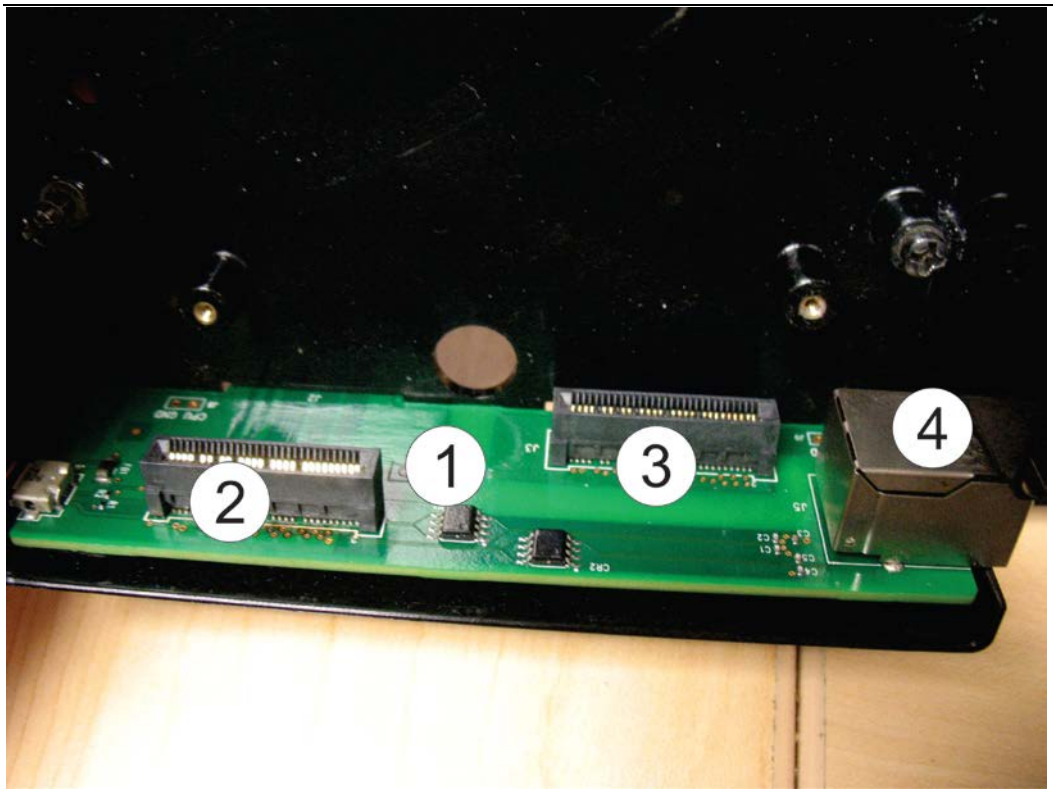
1. If you removed standoffs that are held on the expansion I/O board, attach them to the new replacement expansion I/O board. Torque standoffs to 1 to 2 in-lbs (0.1 to 0.2 N-m).
2. Carefully slide the 6-channel expansion I/O board into its slot in the connectivity board and make sure it is firmly in place.
3. Secure the board to the bottom of the CPU enclosure by tightening the two standoffs that have connections on the CPU enclosure. Torque standoffs 1 to 2 in-lbs (0.1 to 0.2 N-m).
4. Attach the CPU board. See *Replacing the CPU Board* on page 16.
5. Reattach the adapter board. See *Replacing the Adapter Board* on page 14.
6. Reattach the CPU enclosure cover. See *Replacing the CPU Enclosure Cover (Top)* on page 11.
7. Re-attach the CPU enclosure to the battery compartment. See *Re-attaching the CPU Enclosure to the Battery Compartment* on page 9.
8. Re-connect the cable between the CPU enclosure and the sensor module.
9. Reattach the HMI module. See *Replacing the HMI Module* on page 6.

Removing/Replacing the Connectivity Board

UL Listed Connectivity Board Field Installed Accessory Kit for Use in Class I, Division 2, Groups A, B, C, and D

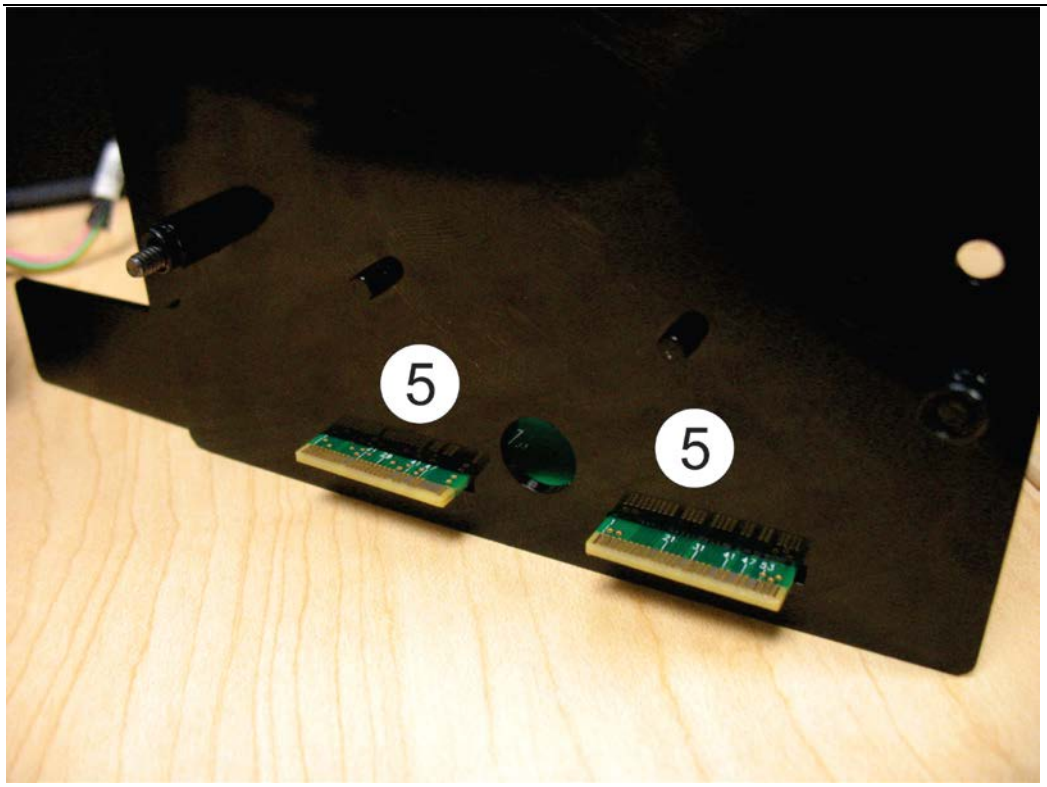
- Flow Computer Connectivity Board Field Installed Accessory Kit Part No. 400211010-KIT for use with UL Listed Model Series FB2100 and FB2200.

The connectivity board provides connections to the CPU board as well as the optional 6-channel expansion I/O board inside the CPU enclosure.



1 Connectivity Board
2 Connectivity Board connector to the CPU board
3 Connectivity board connector to the optional 6-channel expansion I/O board.
4 Ethernet port (active on FB2200 only)

The connectivity board sits on the side of the CPU enclosure. It has two connectors that go through the bottom of the CPU enclosure to mate with the termination I/O board, and an Ethernet port (active on FB2200 only), that goes through the side of the CPU enclosure.

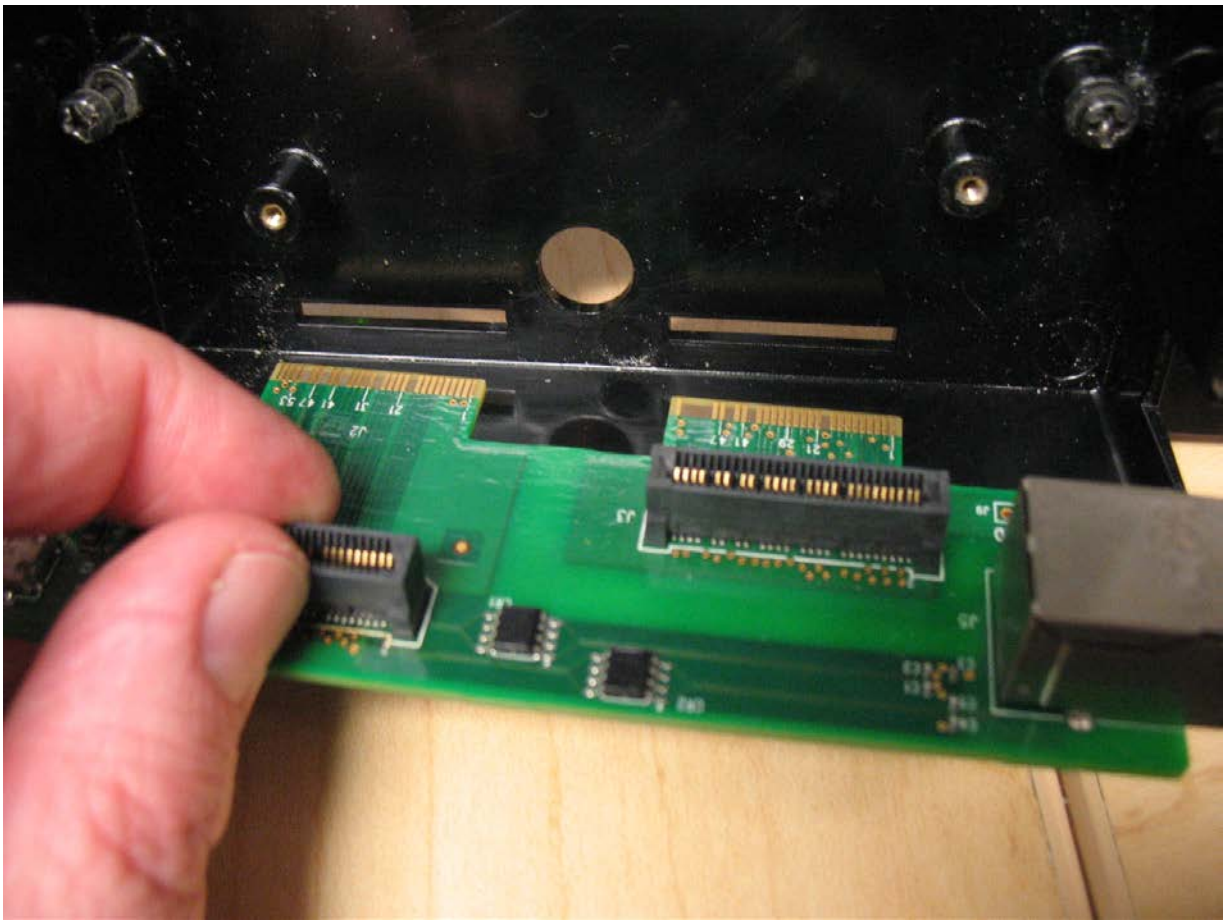


5 Connectivity board connectors that go through the bottom of the CPU enclosure to mate with the termination I/O board.

You would remove/replace the connectivity board if it fails, or as a step in the field replacement of the CPU enclosure (bottom).

Removing the Connectivity Board

1. Remove the HMI module. See *Removing the HMI Module* on page 6.
2. Disconnect the cable between the CPU enclosure and the sensor. See *Disconnecting the Cable Between the CPU Enclosure and the Sensor* on page 7.
3. Detach the CPU enclosure from the battery compartment. See *Detaching the CPU Enclosure from the Battery Compartment* on page 7.
4. Remove the CPU enclosure cover. See *Removing the CPU Enclosure Cover (Top)* on page 10.
5. Remove the adapter board. See *Removing the Adapter Board* on page 12.
6. Remove the CPU board. See *Removing the CPU Board* on page 14.
7. If present, carefully slide the 6-channel expansion I/O board out of its socket off the connectivity board and set it aside.
8. Slide the connectivity board out of the CPU enclosure and set it aside.



Replacing the Connectivity Board

1. Slide the connectivity board into the bottom of the CPU enclosure. The Ethernet port must fit into its matching opening on the side of the enclosure.
2. If present, replace the optional 6-channel expansion I/O board. See *Replacing the 6-Channel Expansion I/O Board* on page 18.
3. Replace the CPU board. See *Replacing the CPU Board* on page16.
4. Reattach the adapter board. See *Replacing the Adapter Board* on page 14.
5. Reattach the CPU enclosure cover. See *Replacing the CPU Enclosure Cover (Top)* on page 11.
6. Re-attach the CPU enclosure to the battery compartment. See *Re-attaching the CPU Enclosure to the Battery Compartment* on page 9.
7. Re-connect the cable between the CPU enclosure and the sensor module.
8. Reattach the HMI module. See *Replacing the HMI Module* on page 6.

Removing/Replacing the CPU Enclosure (Bottom)

UL Listed Enclosure Box (Bottom) Field Installed Accessory Kit for Use in Class I, Division 2, Groups A, B, C, D

- Flow Computer Enclosure Box (Bottom) Field Installed Accessory Kit Part No. 399260-01-0 for use with UL Listed Model Series FB2100 and FB2200.

You only replace the CPU enclosure (bottom) if the original box is damaged.

Removing the CPU Enclosure (Bottom)

1. Remove the HMI module. See *Removing the HMI Module* on page 6.
2. Disconnect the cable between the CPU enclosure and the sensor. See *Disconnecting the Cable Between the CPU Enclosure and the Sensor* on page 7.
3. Detach the CPU enclosure from the battery compartment. See *Detaching the CPU Enclosure from the Battery Compartment* on page 7.
4. Remove the CPU enclosure cover. See *Removing the CPU Enclosure Cover (Top)* on page 10.
5. Remove the adapter board. See *Removing the Adapter Board* on page 12.
6. Remove the CPU board. See *Removing the CPU Board* on page 14.
7. Carefully slide the 6-channel expansion I/O board out of its socket on the connectivity board and set it aside.
8. Slide the connectivity board out of the CPU enclosure and set it aside.
9. The CPU enclosure is now empty.

Replacing the CPU Enclosure (Bottom)

1. Slide the connectivity board into the bottom of the new CPU enclosure. The Ethernet port must fit into its matching opening on the side of the enclosure.
2. If present, replace the optional 6-channel expansion I/O board. See *Replacing the 6-Channel Expansion I/O Board* on page 18.
3. Replace the CPU board. See *Replacing the CPU Board* on page 16.
4. Reattach the adapter board. See *Replacing the Adapter Board* on page 14.
5. Reattach the CPU enclosure cover. See *Replacing the CPU Enclosure Cover (Top)* on page 11.
6. Re-attach the CPU enclosure to the battery compartment. See *Re-attaching the CPU Enclosure to the Battery Compartment* on page 9.
7. Re-connect the cable between the CPU enclosure and the sensor module.
8. Reattach the HMI module. See *Replacing the HMI Module* on page 6.

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