

EA Collector version 5

Upgrade/RMA installation instructions

General

⚠ WARNING

Do not disassemble the EA Collector enclosure, service the EA Collector unit, or service the components inside the unit with power present. Use authorized utility procedures to install and service equipment. Dangerous voltages are present. Equipment damage, personal injury, and death can result if safety precautions are not followed.

The leaflet contains instructions for installing the electronic assembly for the collector version 5 in the following EA collector models.

- EA collector with an AC power supply and battery backup
- EA collector with an AC power supply only
- EA collector with a solar power supply

In addition, this leaflet contains each model may use one of the following communication options:

- Ethernet
- Cellular modem
- Telephone (POTS/PSTN) modem
- RS-232

Unpacking the upgrade kit

Visually inspect all parts for any damage during shipment, contacting Elster as appropriate.

NOTICE

The upgrade kit contains components that are sensitive to electrostatic discharge (ESD). When installing, servicing, or removing components, connect to ground with a wrist strap and follow safe ESD procedures. Failure to properly ground both you and the electronic devices, or failure to follow safe ESD procedures to avoid ESD, can result in equipment damage.

There is an upgrade kit for each communication option supported by the different EA collector models.

Ethernet and cellular modem communication options

The Ethernet and cellular modem communication options kit contain identical components.

| Style number | Description |
|--------------|---|
| 5D25648G81 | A3 ALPHA® meter electronic assembly |
| 1C11994G01 | RJ-45 communication cable |
| 7S1734H001 | DC power cable (not required or used in EA collector with AC power supply only) |
| 7S1755H001 | Retention tape |
| 7S1750H00X | Model number label |
| 7S1752H00X | FCC ID label |
| 7S1052H001 | FCC ID label clear UV overlay |

Telephone (POTS/PSTN) modem communication option

The telephone modem communication option kit contains the following components.

| Style number | Description |
|--------------|---|
| 5D25648G81 | A3 ALPHA meter electronic assembly |
| 1B12129G06 | RJ-11 communication cable |
| 7S1734H001 | DC power cable (not required or used in EA collector with AC power supply only) |
| 7S1755H001 | Retention tape |
| 7S1750H00X | Model number label |
| 7S1752H00X | FCC ID label |
| 7S1052H001 | FCC ID label clear UV overlay |

RS-232 communication option

The RS-232 communication option kit contains the following components.

| Style number | Description |
|--------------|---|
| 5D25648G81 | A3 ALPHA meter electronic assembly |
| 4074B15G05 | RS-232 communications cable |
| 7S1734H001 | DC power cable (not required or used in EA collector with AC power supply only) |
| 7S1755H001 | Retention tape |
| 7S1750H00X | Model number label |
| 7S1752H00X | FCC ID label |
| 7S1052H001 | FCC ID label clear UV overlay |

EA collector with AC power and battery backup instructions

▲ WARNING

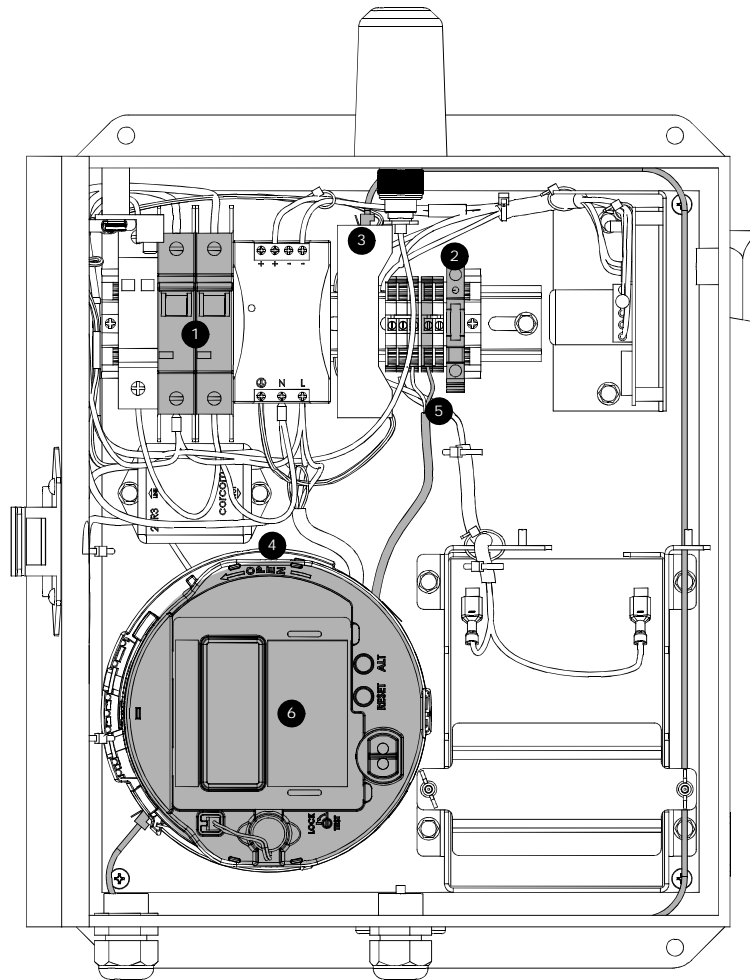
Do not disassemble the EA Collector enclosure, service the EA Collector unit, or service the components inside the unit with power present. Use authorized utility procedures to install and service equipment. Dangerous voltages are present. Equipment damage, personal injury, and death can result if safety precautions are not followed.

The instructions for removing the electronic assembly are the same for all communication options. See Figure 1 for an illustration of the Ethernet and telephone (POTS/PSTN) communication options; see Figure 2 for the cellular modem communication option; see Figure 3 for the RS-232 communication option. The numbered items in all figures refer to the following instructions:

1. Switch the AC circuit breakers to the “off” position.
2. Remove the fuse from the fuse holder.
3. Disconnect the communications or crossover (for cellular modem styles) cable from the surge suppressor.
4. If present, remove the Kapton tape securing the electronic assembly to the meter base (approximately a 2-inch strip located at the 12 o'clock position).
5. Disconnect the red DC power cable by loosening the terminal block that holds the cable.
6. Rotate the electronic assembly counterclockwise and gently lift it from the meter base.
7. Disconnect the AC voltage harness (Figure 4) and the antenna isolation board RF cable (Figure 5) from the electronic assembly.
8. Remove the electronic assembly with the DC power cable and communication cable still attached to the electronic assembly.

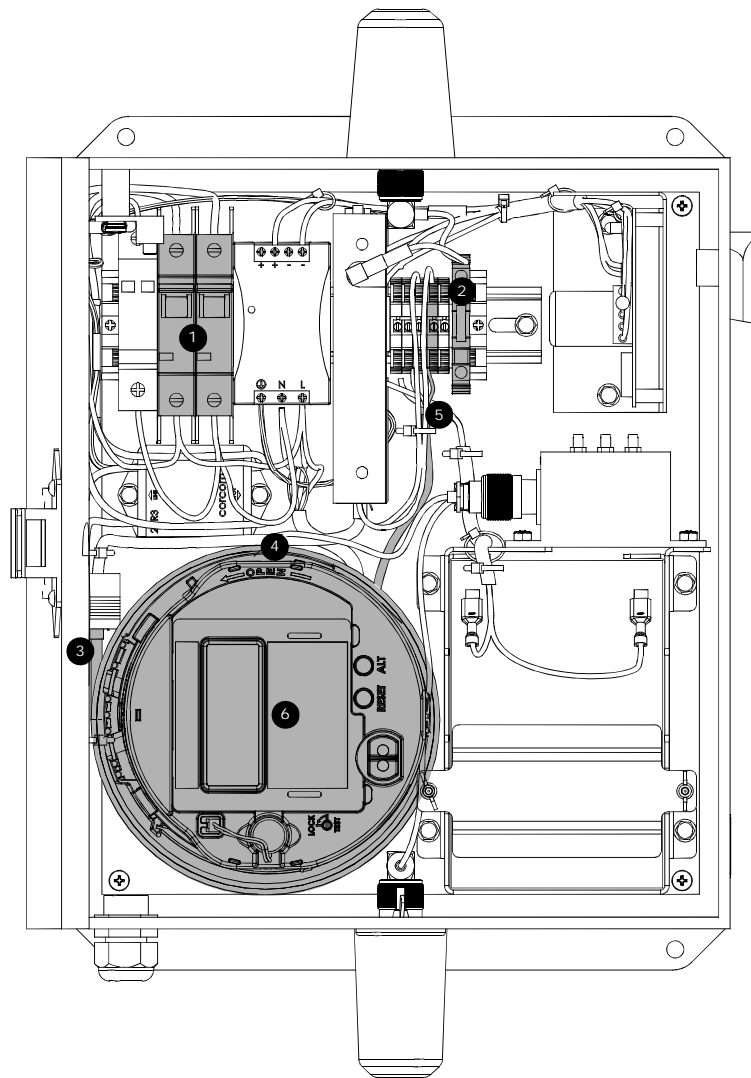
Reverse the instructions to install the electronic assembly for the collector version 5. After you install the electronic assembly for the collector version 5, you must attach new labels to the enclosure.

1. Attach the new model number label, covering the existing model number label. The model number label is located inside the enclosure door. If an ESN is present, transfer this number to the new label.
2. Remove the clear overlay to FCC label and the existing FCC label. Attach the new FCC label and apply the new clear overlay. The FCC label is located on the outside of the enclosure.



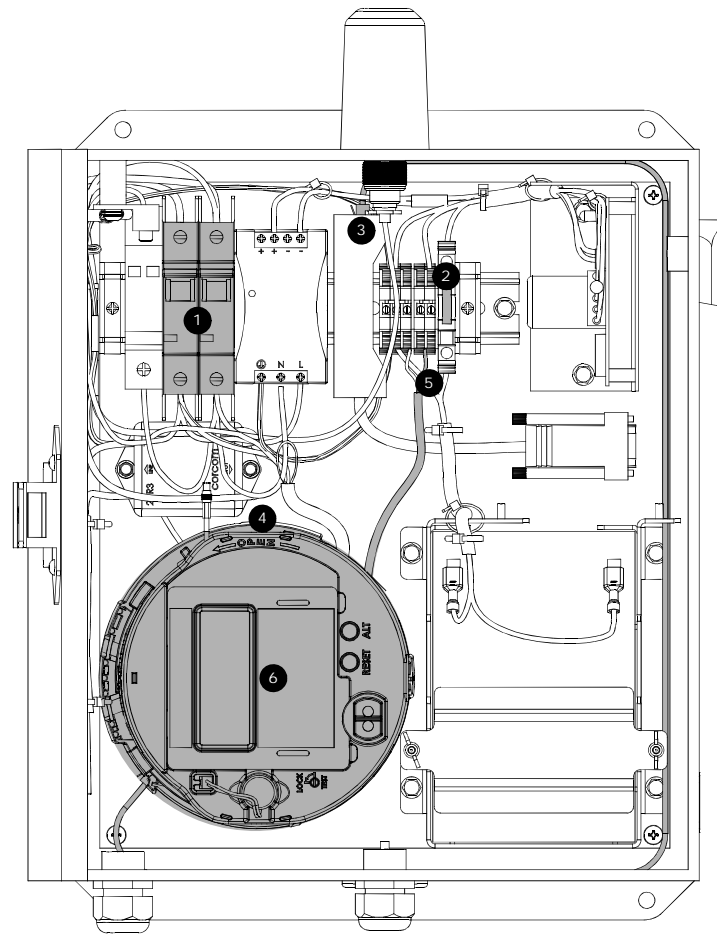
- 1 Circuit breakers
- 2 Fuse holder
- 3 Communication cable
- 4 Kapton tape (if present)
- 5 DC power cable and terminal block
- 6 Electronic assembly for collector

Figure 1. Ethernet and telephone modem options



- 1 Circuit breakers
- 2 Fuse holder
- 3 Communication cable
- 4 Kapton tape (if present)
- 5 DC power cable and terminal block
- 6 Electronic assembly for collector

Figure 2. Cellular modem option



- | | | | |
|---|---------------------|---|-----------------------------------|
| 1 | Circuit breakers | 4 | Kapton tape (if present) |
| 2 | Fuse holder | 5 | DC power cable and terminal block |
| 3 | Communication cable | 6 | Electronic assembly for collector |

Figure 3. RS-232 communication option

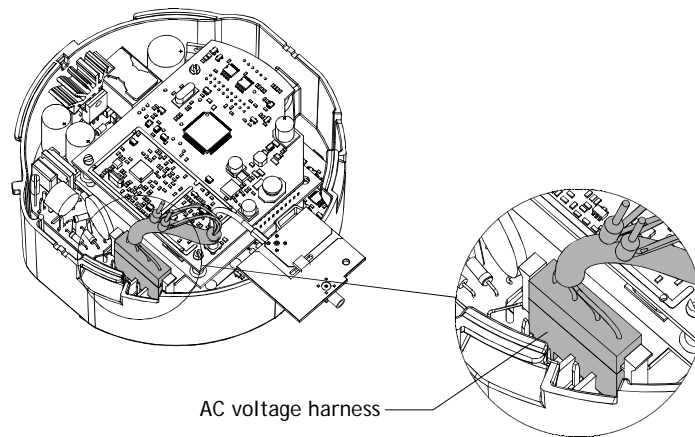


Figure 4. Location of AC voltage harness

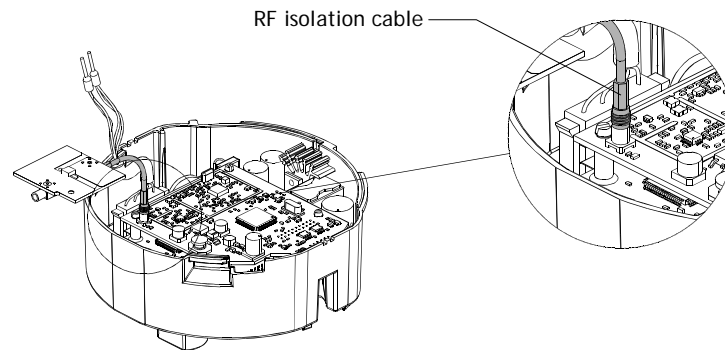


Figure 5. Location of RF isolation cable

EA collector with only AC power

⚠ WARNING

Do not disassemble the EA Collector enclosure, service the EA Collector unit, or service the components inside the unit with power present. Use authorized utility procedures to install and service equipment. Dangerous voltages are present. Equipment damage, personal injury, and death can result if safety precautions are not followed.

Note. The upgrade kit ships the electronic assembly with a DC power cord attached (see Figure 6). The DC power cord is not used in or required by the EA Collector with only AC power. Remove the DC power cord and discard it before continuing with the upgrade.

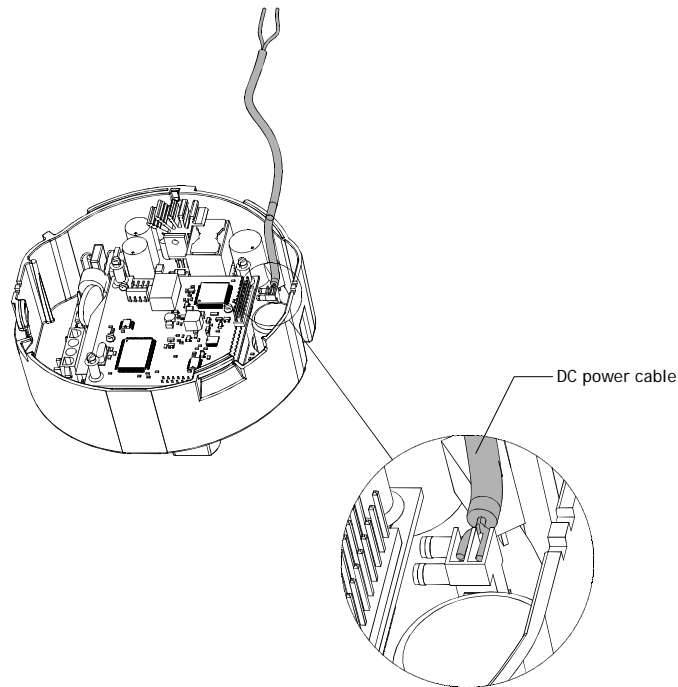


Figure 6. DC power cable

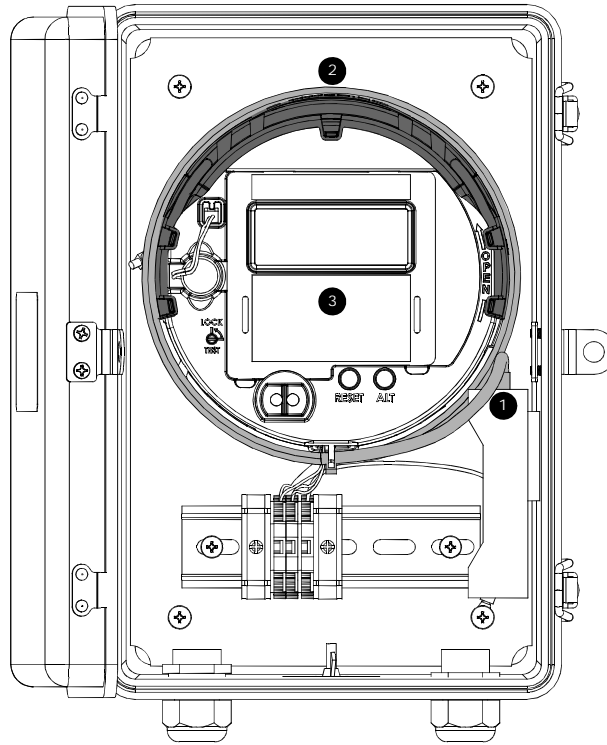
Ethernet, telephone (POTS/PSTN), and RS-232 communication options

The instructions for removing the electronic assembly vary depending on the communication option. Use the following procedure while referring to the figures beginning with Figure 7 for Ethernet and telephone communication options and Figure 8 for RS-232 communication (Note: the numbered items in the figures correlate to the procedure):

1. Disconnect the communication cable from the surge suppressor.
2. If present, remove the Kapton tape securing the electronic assembly to the meter base (approximately a 2-inch strip located at the 12 o'clock position).
3. Rotate the electronic assembly counterclockwise and gently lift it from the meter base.
4. Disconnect the antenna cable from the electronic assembly (see Figure 9).
5. Disconnect the AC voltage harness (see Figure 10).
6. Remove the internal antenna from the electronic assembly.
 - a. Unlatch latches A, B, D, and E (see Figure 11) and gently pry open both sides of the antenna about ½ inch.
 - b. Press on the left and right sides of the antenna slightly to disengage the lower left and right antenna latches.
 - c. With a small flat blade screwdriver, gently pry up and disengage the latch F (see Figure 11).
 - d. Move the internal antenna assembly toward the top using a hinge-like motion about the top antenna mounting hole. The antenna should then pull easily from its mounting hole and can be removed from the electronic assembly.
7. Remove the existing electronic assembly with the communication cable still attached to the electronic assembly.

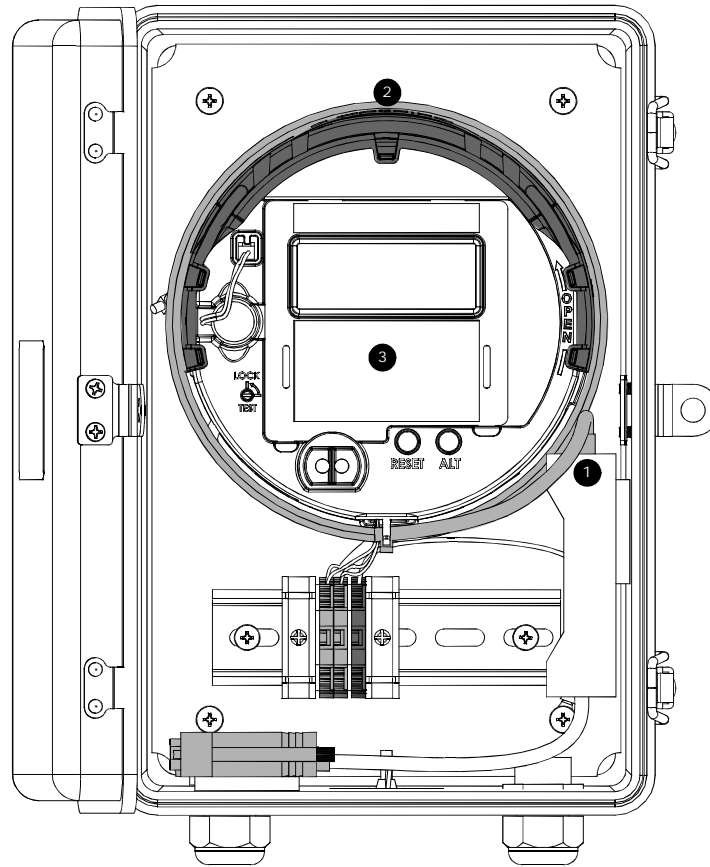
Reverse the instructions to install the electronic assembly for the collector version 5. After you install the electronic assembly for the collector version 5, you must attach new labels to the enclosure.

1. Attach the new model number label, covering the existing model number label. The model number label is located inside the enclosure door.
2. Remove the clear overlay to FCC label and the existing FCC label. Attach the new FCC label and apply the new clear overlay. The FCC label is located on the outside of the enclosure.



- 1 Communication cable
- 2 Kapton tape (if present)
- 3 Electronic assembly for collector

Figure 7. Ethernet and telephone modem options



- 1 Communication cable
- 2 Kapton tape (if present)
- 3 Electronic assembly for collector

Figure 8. RS-232 communication option

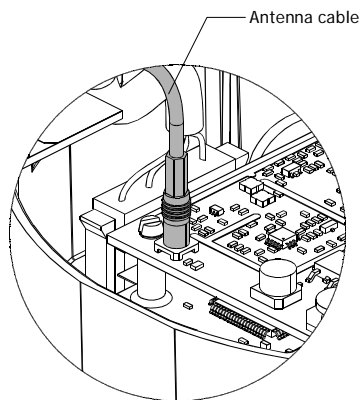


Figure 9. Internal antenna cable

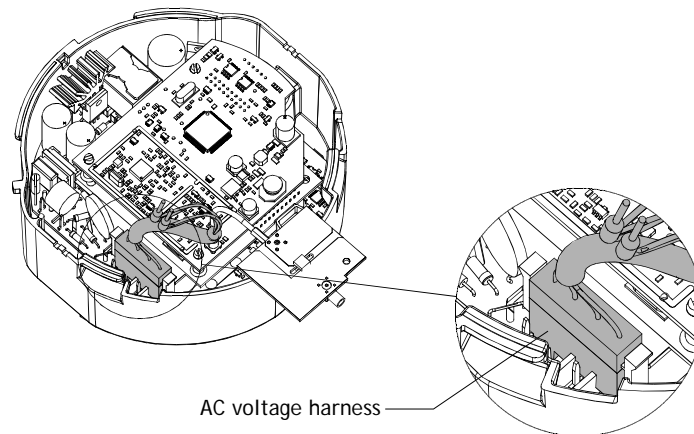


Figure 10. AC voltage harness

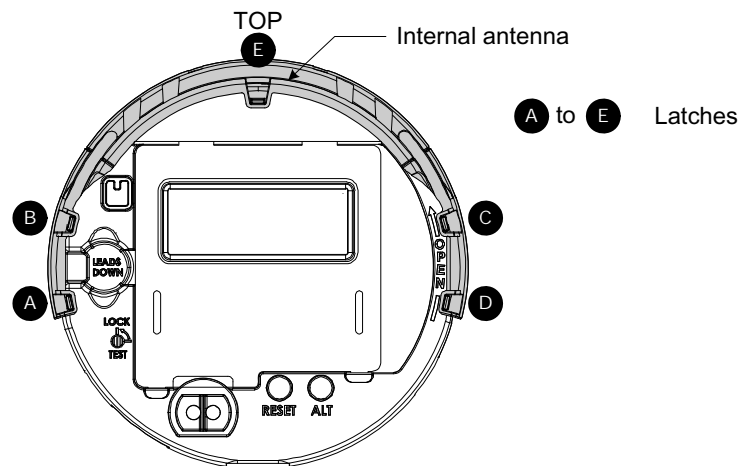


Figure 11. Internal antenna latches

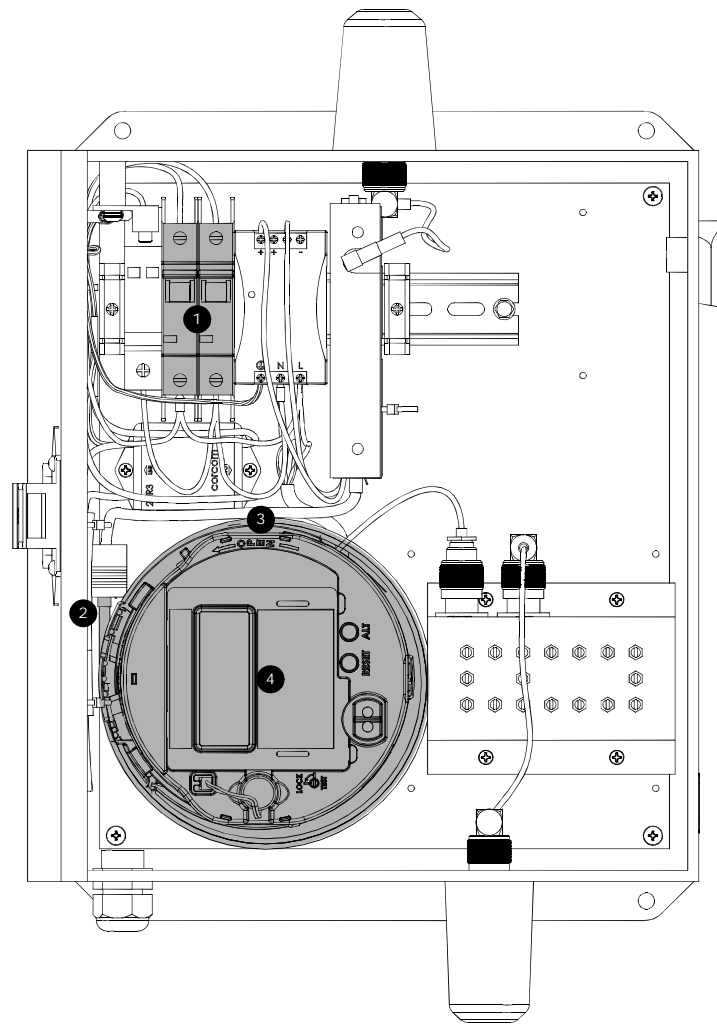
Cellular modem communication option

For the cellular modem communication option, use the following procedure while referring to (Note: the numbered items in the figures correlate to the procedure):

1. Switch the AC circuit breakers to the “off” position.
2. Disconnect the communication cable from the surge suppressor.
3. If present, remove the Kapton tape securing the electronic assembly to the meter base (approximately a 2-inch strip located at the 12 o’clock position).
4. Rotate the electronic assembly counterclockwise and gently lift it from the meter base.
5. Disconnect the AC voltage harness.
6. Remove the electronic assembly with the communication cable still attached to the electronic assembly.

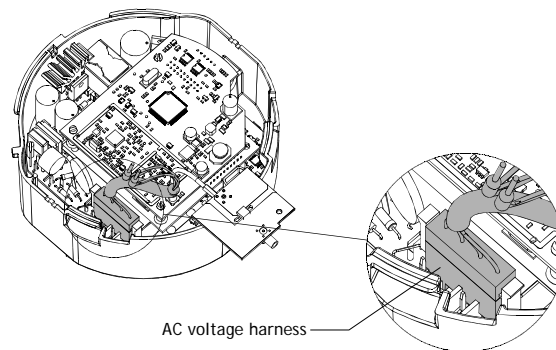
Reverse the instructions to install the electronic assembly for the collector version 5. After you install the assembly for collector version 5, you must attach new labels to the enclosure.

1. Attach the new model number label, covering the existing model number label. The model number label is located inside the enclosure door. If an ESN is present, transfer this number to the new label.
2. Remove the clear overlay to FCC label and the existing FCC label. Attach the new FCC label and apply the new clear overlay. The FCC label is located on the outside of the enclosure.



- 1 Circuit breakers
- 2 Communication cable
- 3 Kapton tape (if present)
- 4 Electronic assembly for collector

Figure 12. Cellular modem model



AC voltage harness

Figure 13. AC voltage harness

EA collector with solar power

▲ WARNING

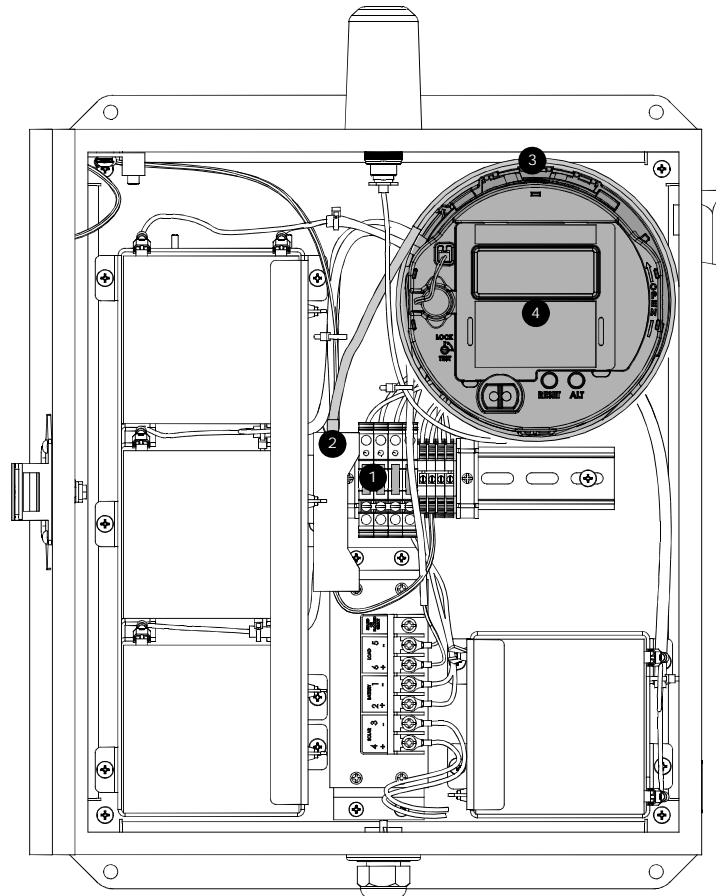
Exercise caution when servicing an EA_Gatekeeper with the solar powered option. The EA_Gatekeeper with the solar powered option may be installed on or near high voltage equipment. Always use authorized utility procedures to install and service equipment. Failure to follow all safety precautions can result in equipment damage, personal injury, or death.

The instructions for removing the electronic assembly are the same for all communications options. See Figure 14 for an illustration of the Ethernet and telephone (POTS/PSTN) communication options; see Figure 16 for the cellular modem option. The numbered items in the figures refer to the following instructions:

1. Remove all fuses from all 4 fuse holders.
2. Disconnect the communications cable from the surge suppressor.
3. If present, remove the Kapton tape securing the electronic assembly to the meter base (approximately a 2-inch strip located at the 12 o'clock position).
4. Rotate the electronic assembly counterclockwise and gently lift it from the meter base.
5. Disconnect the antenna isolation board RF cable (see Figure 17).
6. Disconnect the DC cables from the corresponding ground and fuse terminals.

Reverse the instructions to install the electronic assembly for the collector version 5. After you install the electronic assembly for the collector version 5, you must attach new labels to the enclosure.

1. Attach the new model number label, covering the existing model number label. The model number label is located inside the enclosure door. If an ESN is present, transfer this number to the new label.
2. Remove the clear overlay to the FCC label and the existing FCC label. Attach the new FCC label and apply the new clear overlay. The FCC label is located on the outside of the enclosure.



- 1 Fuse holders
- 2 Communication cable
- 3 Kapton tape (if present)
- 4 Electronic assembly for collector

Figure 14. Ethernet and telephone (POTS/PSTN) options

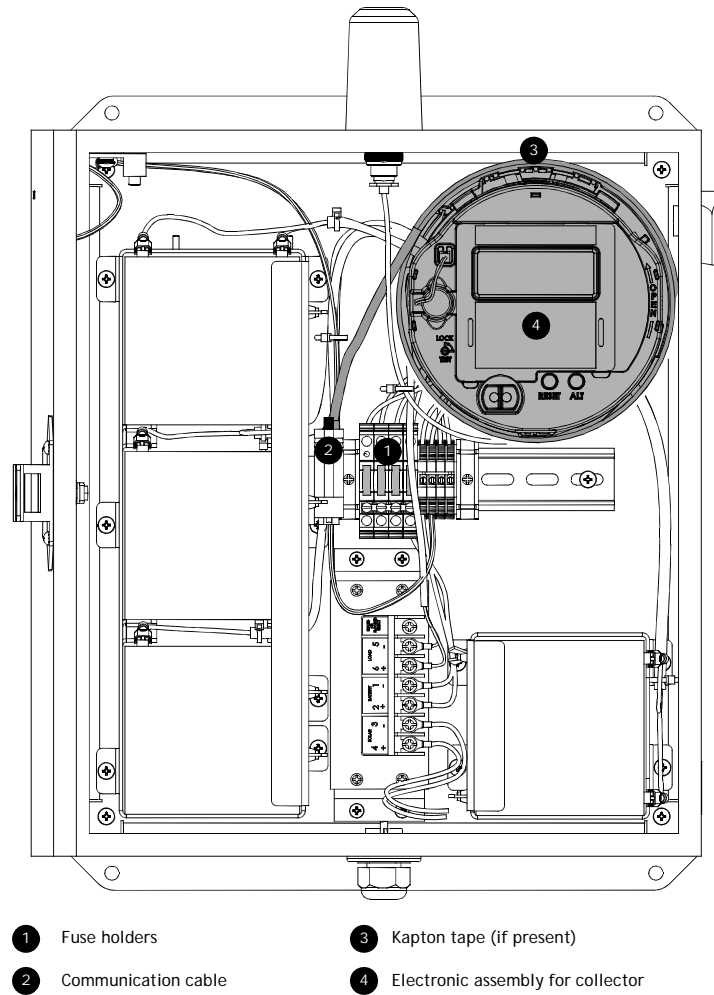
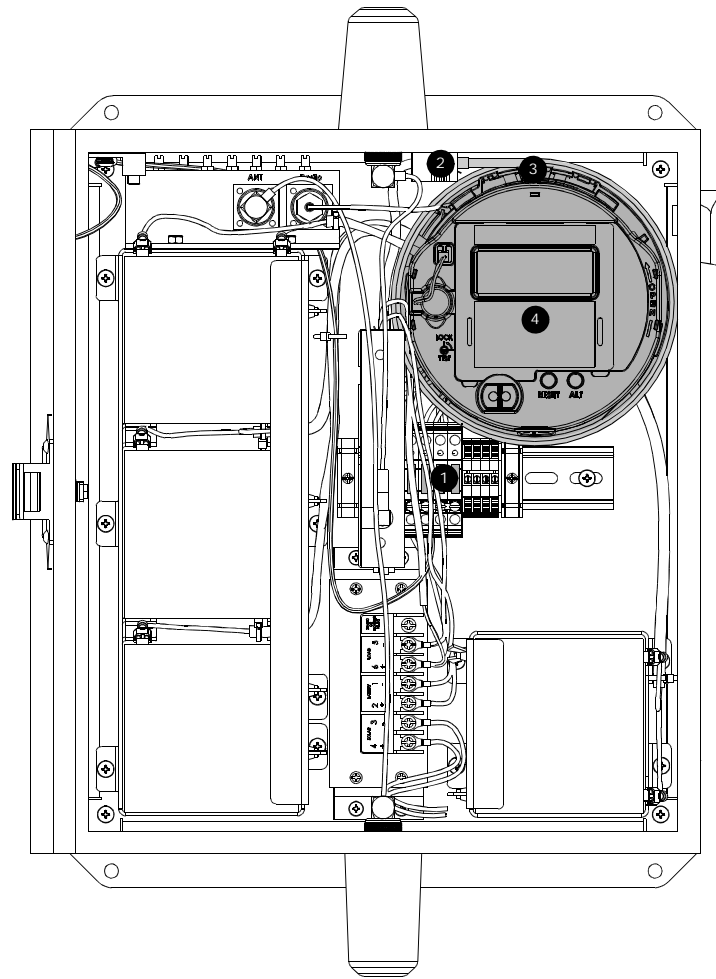
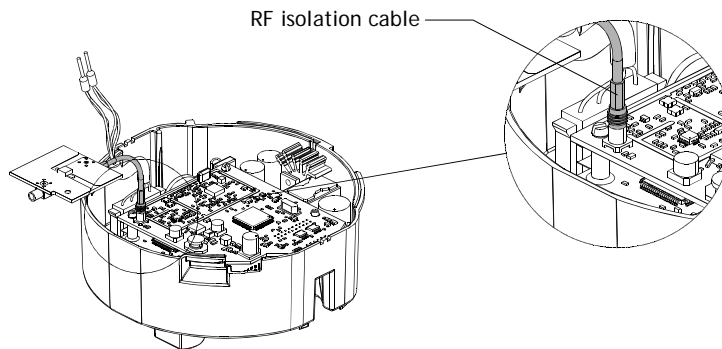


Figure 15. RS-232 communication option



- 1 Fuse holders
- 2 Communication cable
- 3 Kapton tape (if present)
- 4 Electronic assembly for collector

Figure 16. Cellular modem option



RF isolation cable

Figure 17. RF isolation cable

Notes:

Notes:

Notes:

Notes:

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