

## AGI RLC polyphase interrupter

For use with A3 ALPHA® meters

### General

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**▲ WARNING**

If using a transformer-rated meter, make sure the installation current is within the current rating of the AGI RLC assembly. A transformer-rated meter installation can support higher loads than the current rating of the AGI RLC assembly. Overheating and equipment damage can result if the installation current exceeds the AGI RLC assembly current rating.

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The Advanced Grid Infrastructure (AGI) Remote Load Control (RLC) polyphase interrupter allows the utility to connect or disconnect three-phase loads up to 480 V. The AGI RLC polyphase interrupter is available with either a 120 A or a 200 A maximum current rating.

When coupled with an A3 ALPHA meter<sup>1</sup> equipped with either an EnergyAxis® System integrated wireless LAN mesh radio or an integrated wireless WAN option board, the AGI RLC can be controlled using the EnergyAxis System. Additionally, the A3 ALPHA can provide essential metering and monitoring for your remote polyphase loads.

While the AGI RLC polyphase interrupter can be coupled with another controller (such as a third-party device using the auxiliary control terminals), this leaflet provides general instructions for mounting the polyphase service control device and placing the A3 ALPHA meter into service.

- For instructions on placing the A3 ALPHA meter<sup>1</sup> into service, see the ALPHA meter installation instruction IL42-4001Q or later.
- For instructions for the A3 ALPHA meter with Wireless WIC into service, see A3 ALPHA meter with wireless communication option, see IL42-4036A or later.

<sup>1</sup> The A3 ALPHA meter is sold separately. For more information, see the "A3 ALPHA meter for use with AGI RLC polyphase interrupter" data sheet (DS42-1018A or later).

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**▲ WARNING**

Use authorized utility procedures to install and service metering equipment. Dangerous voltages with high current capabilities are present. Equipment damage, personal injury, or death can result if safety precautions are not followed.

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The AGI RLC polyphase interrupter for use with an A3 ALPHA meter<sup>1</sup> contains the following items:

- AGI RLC enclosure assembly
  - optional antenna cable, 3-foot or 10-foot (may be shipped inside enclosure assembly)
  - 3-foot or 10-foot service control cable (may be shipped inside enclosure assembly)<sup>1</sup>
  - 3-foot or 10-foot contactor status cable (may be shipped inside enclosure assembly)<sup>1</sup>
- Mounting bracket (optional)
  - Mounting bracket installation materials (may be shipped with mounting bracket)

Contact Elster's support line at +1 800 338 5251 if you do not have all the required materials.

## Before you install

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**NOTICE**

Be sure to remove power before beginning the installation of the polyphase service control device. Removing the meter from the socket does not necessarily remove power.

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Unpack all the materials, and be sure that you have all the components before installing the polyphase service control device in the field.

Referencing Figure 1, you must attach the mounting bracket to the enclosure using the mounting bracket installation materials, torquing to 20 foot-pounds ( $\pm 0.5$  foot-pounds). Also, your polyphase service control device may be equipped with an optional external antenna. If the unit is not using the optional external antenna, the hole seal will be inserted instead.

<sup>1</sup> Cable length is specified at the time of order.

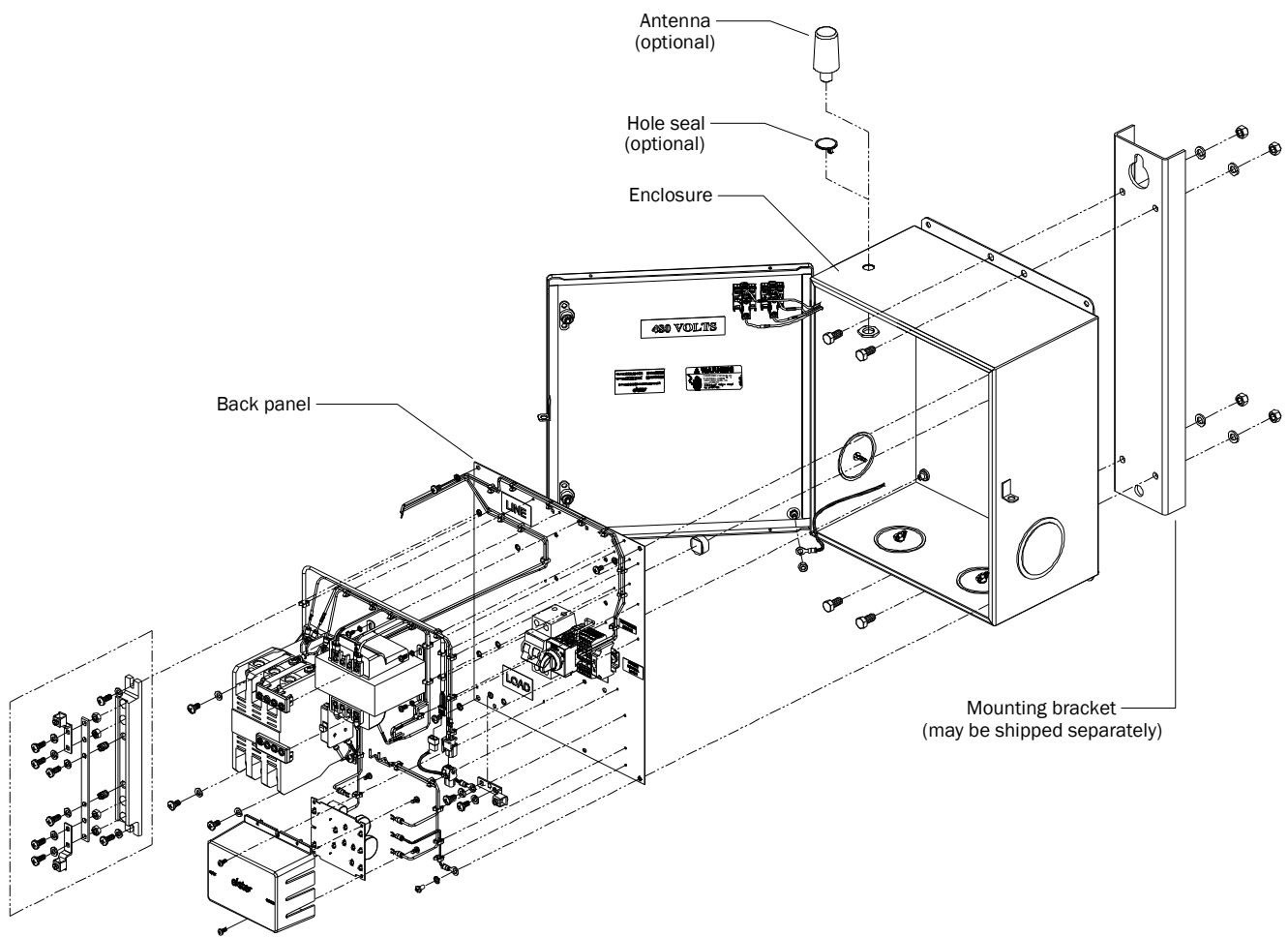
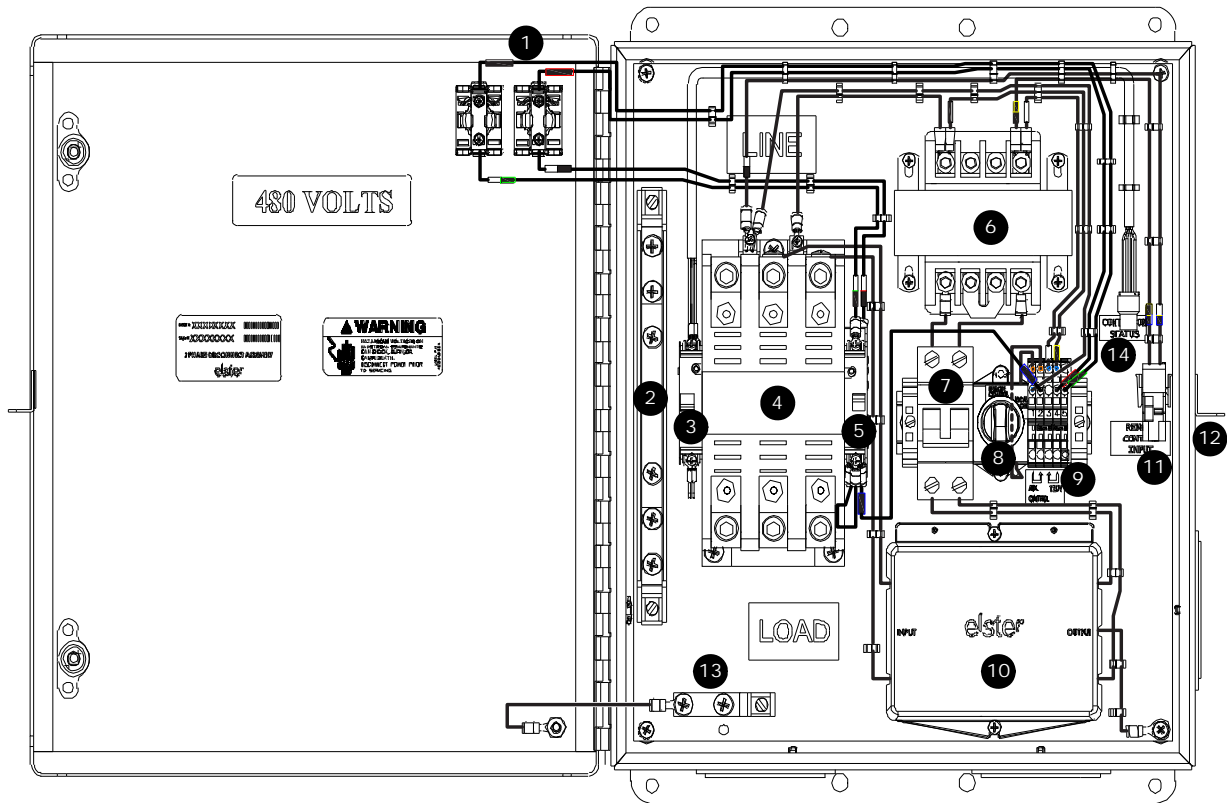


Figure 1. AGI RLC polyphase interrupter assembly, isometric view (120 A version shown; 200 A is similar)



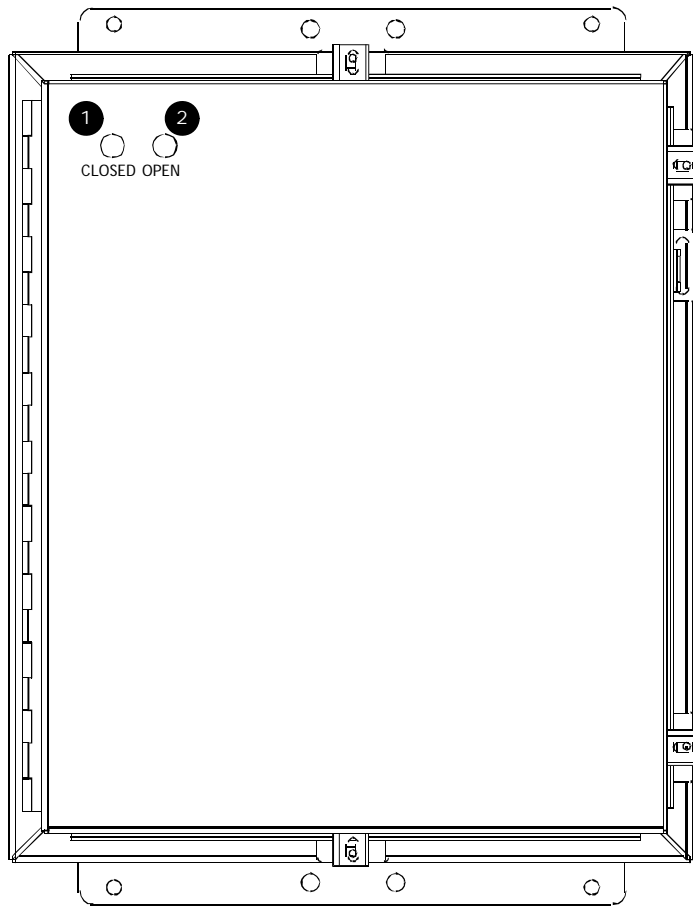
- |   |   |
|---|---|
| 1 LEDs  | 8 Manual switch (to locally restore service)                                    |
| 2 Neutral bar (4-wire version only)                               | 9 Terminal block with two aux control terminals and two 120 V source terminals† |
| 3 Auxiliary switch (for contactor status)                         | 10 Surge protector  |
| 4 Contactor (120 A, 480 VAC version* or 200 A, 480 VAC version**) | 11 Control connector  |
| 5 Auxiliary switch (for LED control)                              | 12 Enclosure latch (lockable)   |
| 6 Step down transformer   | 13 Ground terminal  |
| 7 Double pole circuit breaker                                     | 14 Status connector   |

\* Eaton part number: C25HNY5. Part & part number subject to change without notice.

\*\* Eaton part number: C25KNY9. Part & part number subject to change without notice.

† Maximum load for the source terminals is 60 VA.

Figure 2. AGI RLC polyphase interrupter components (120 A version shown; 200 A version is similar)



1 Red LED  
Indicates contactor is closed  
Power should be present at load

2 Green LED  
Indicates contactor is open  
Power should be absent from load

Figure 3. LED operation (200 A version shown; 120 A version indicators are identical)

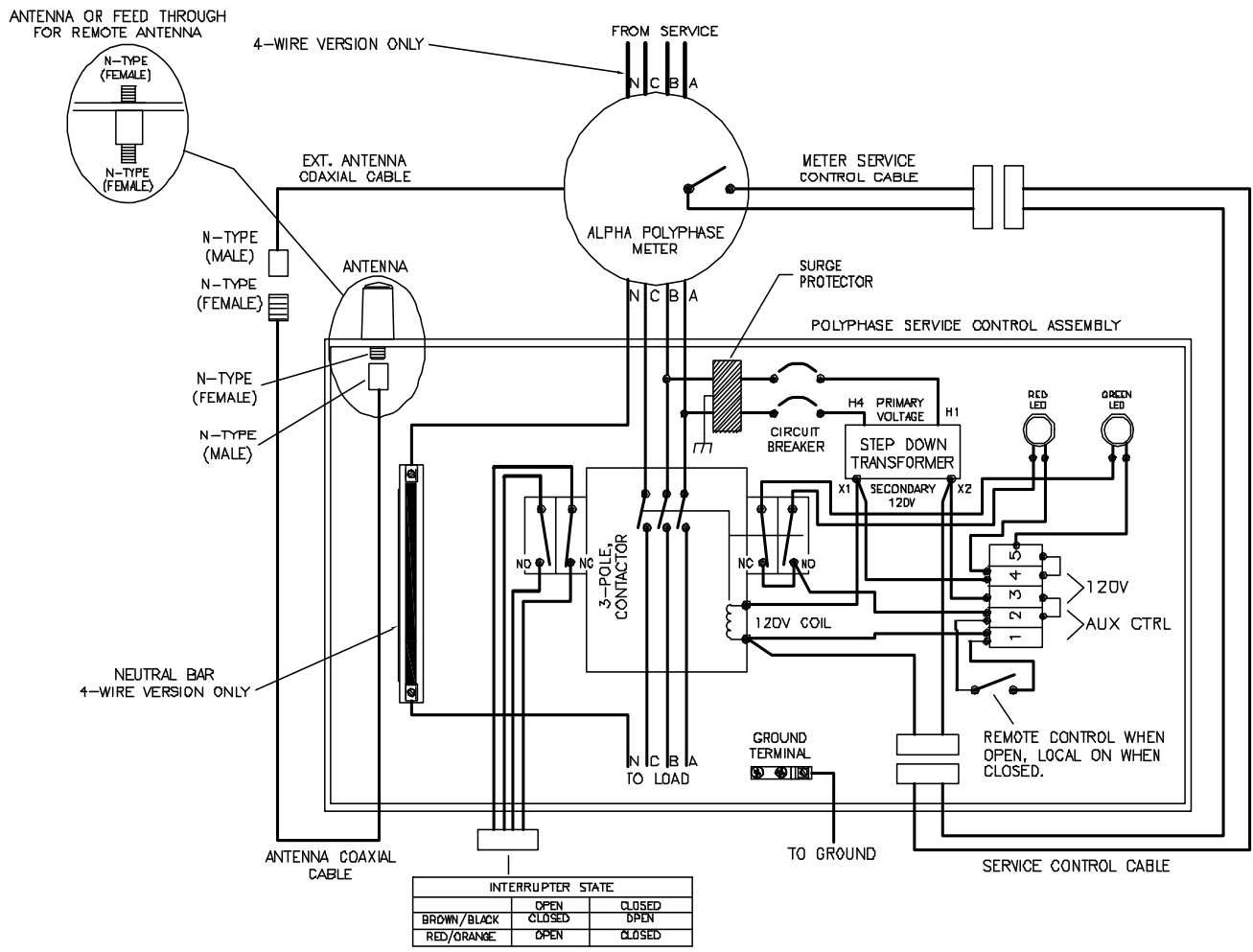


Figure 4. AGI RLC wiring diagram

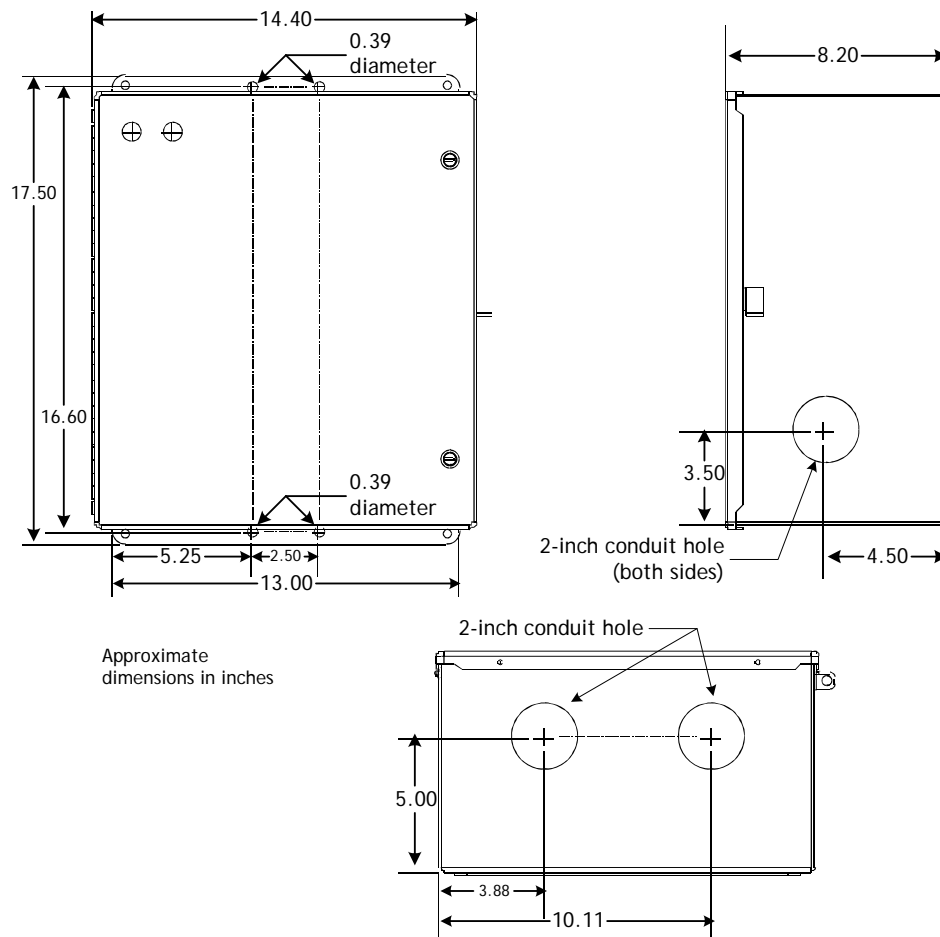


Figure 5. AGI RLC polyphase interrupter assembly dimensions, 120 A version

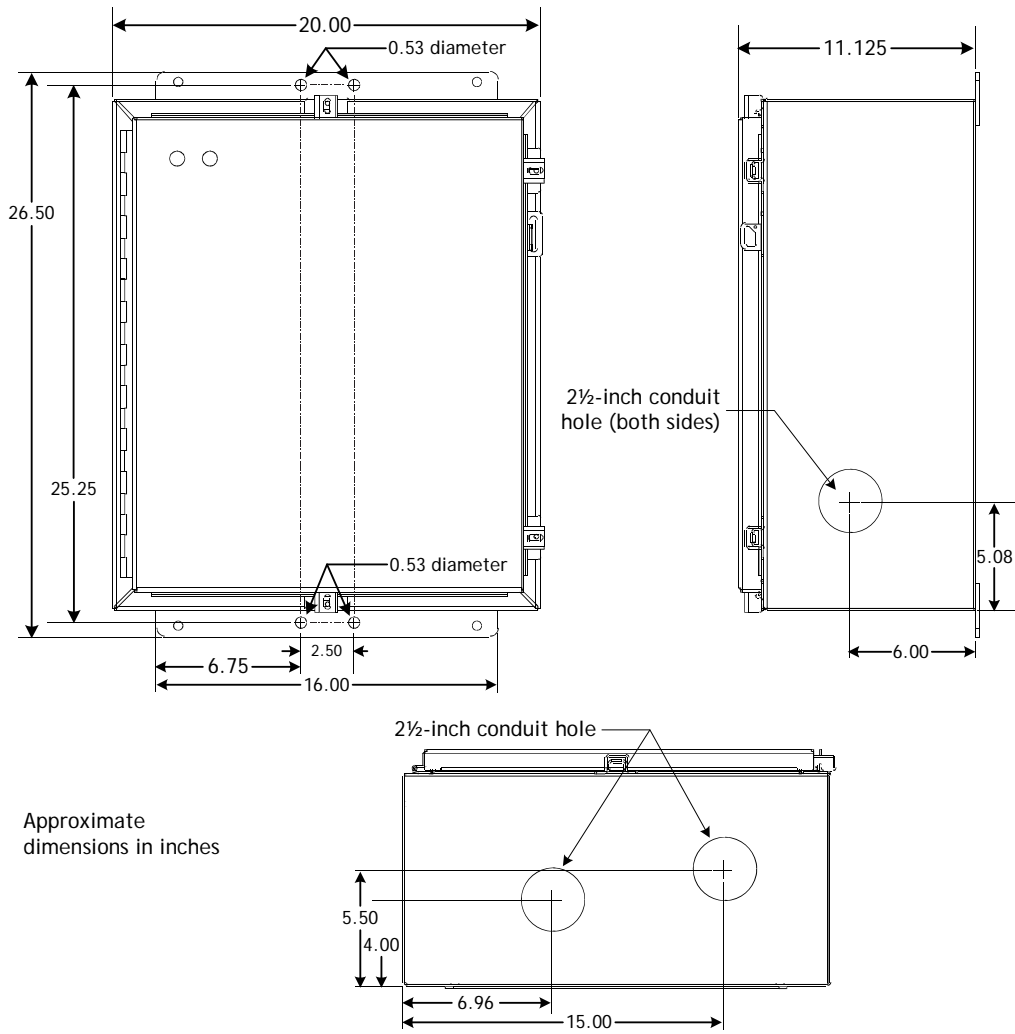


Figure 6. AGI RLC polyphase interrupter assembly dimensions, 200 A version



## Installing the AGI RLC assembly

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### **⚠ WARNING**

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### **⚠ WARNING**

Make sure the installation current is within the current rating of the AGI RLC assembly. A transformer-rated meter installation can support higher loads than the current rating of the AGI RLC assembly. Overheating and equipment damage can result if the installation current exceeds the AGI RLC assembly current rating.

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### **NOTICE**

If cables are exiting the bottom of the enclosure, the cable should be mounted in drip loop fashion. A drip loop is formed by bringing the cable to a point below the enclosure and then bending it back up to the connector. This forms a U-shape that allows water to run down the cable exterior.

Be sure to waterproof conduit entrances (such as, using coax sealant) to help prevent water from entering the enclosure.

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Be sure to always follow your utility's guidelines and practices when installing equipment. When installing the AGI RLC, use the following recommended procedures as well as your utility's guidelines and practices:

1. Mount the enclosure assembly to the pole using your utility's guidelines and practices.
2. If using the optional external antenna, attach the antenna cable to its connector within the enclosure.
3. Attach the service control cable and the contactor status cable to their respective connectors within the enclosure.
4. Turn off the power, following all utility and safety guidelines.
5. Install the conductors from the meter socket to the upper contactor terminals within the enclosure.
6. Install the conductors from the bottom contactor terminals in the enclosure to the load.
7. Place the A3 ALPHA meter into service (see IL42-4001Q or later). When installing the meter into the socket, be sure that the cables are not crushed. Also, be sure that all cables exiting the meter are securely fastened to the meter base.
8. If using the optional external antenna, attach the enclosure's antenna cable to the meter's external antenna cable.
9. Attach the enclosure's service control and status cables to the meter's service control and status cables.

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**NOTICE**

The meter is shipped with the service control state set to closed and remains closed until commanded to change state. By default, when the meter is placed into service, the load will be connected. Using Metercat software version 3.0 or later and an optical probe connected to the A3 ALPHA meter, you can control the state of the relay using the Set Interrupt Control Relay task. For more information on using Metercat version 3.0 or later and the Set Interrupt Control Relay task, see the Metercat user guide or online Help.

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## Troubleshooting

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Use authorized utility procedures to install and service metering equipment. Dangerous voltages with high current capabilities are present. Equipment damage, personal injury, or death can result if safety precautions are not followed.

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Under normal operating conditions, the A3 ALPHA meter will be powered and its LCD will be active. You should be able to use Metercat 3.0 or later to test the connect and disconnect commands for the AGI RLC polyphase interrupter.

If the external load cannot be turned on, check the following items:

1. Is the meter LCD active? Is service voltage present? You may need to replace the A3 ALPHA meter.
2. Is the circuit breaker closed? Reset the circuit breaker if necessary. If you suspect possible damage to the transformer, contactor solenoid, or control wiring, contact Elster.
3. Is the load controllable by the manual switch? If the circuit breaker trips, see item #2. If the contactor pulls in with the switch in the manual position, there may be damage to the external load or load wiring.
4. Using the Set Interrupter Control Relay task in Metercat 3.0 or later, can the external load be controlled?
  - If Metercat cannot control the load, verify that there is no open circuit in the service control extension cable and all its connections. If the control cable circuit is functional, then replace the meter.
  - If Metercat can control the load, verify that there is no damage to the optional external antenna on the control box or coaxial cable and connections between the antenna and meter. If the coaxial cable, connectors, and antenna are undamaged, replace the meter.

For information on Metercat and the Set Interrupter Control Relay task, see the Metercat user guide or online Help.

If the external load cannot be turned off, check the following items:

1. Is the manual switch in the "Local On" position? Set the switch to the "Remote Control" position.
2. Using the Set Interrupter Control Relay task in Metercat 3.0 or later, can the external load be controlled?
  - If Metercat cannot control the load, verify that there is no short circuit in the service control extension cable and all its connections. If the control cable circuit is functional, replace the meter.
  - If Metercat can control the load, verify that there is no damage to the optional external antenna on the control box or coaxial cable and connectors between the antenna and meter. If the coaxial cable, connectors, and antenna are undamaged, replace the meter.

For information on Metercat and the Set Interrupter Control Relay task, see the Metercat user guide or online Help.

If you need technical assistance during installation, call the Elster support line at +1 800 338 5251.

Notes:

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