

# Installing the third party relay option board for the A3 ALPHA<sup>®</sup> meter



Installation instructions  
IL42-4043A

## General

This leaflet contains instructions for installing the third party relay option board (Elster style number: 1C11725xx). It is available with 2 or 4 output relays. A complete description of the relay configuration is included in the A3 ALPHA meter technical manual (TM42-2190C or later).

## Before you begin

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 **CAUTION**

The ALPHA electronic meter and option boards contain components that are sensitive to electrostatic discharge (ESD). When installing, servicing, or removing ALPHA meter or any option board, connect to ground with a wrist strap and follow safe ESD procedures. Failure to properly ground both you and the electronic devices or follow safe ESD procedures to avoid ESD can result in equipment damage.

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Visually inspect all received parts for damage. Contact Elster if any of the parts appear damaged.

## Mounting the third party relay option board

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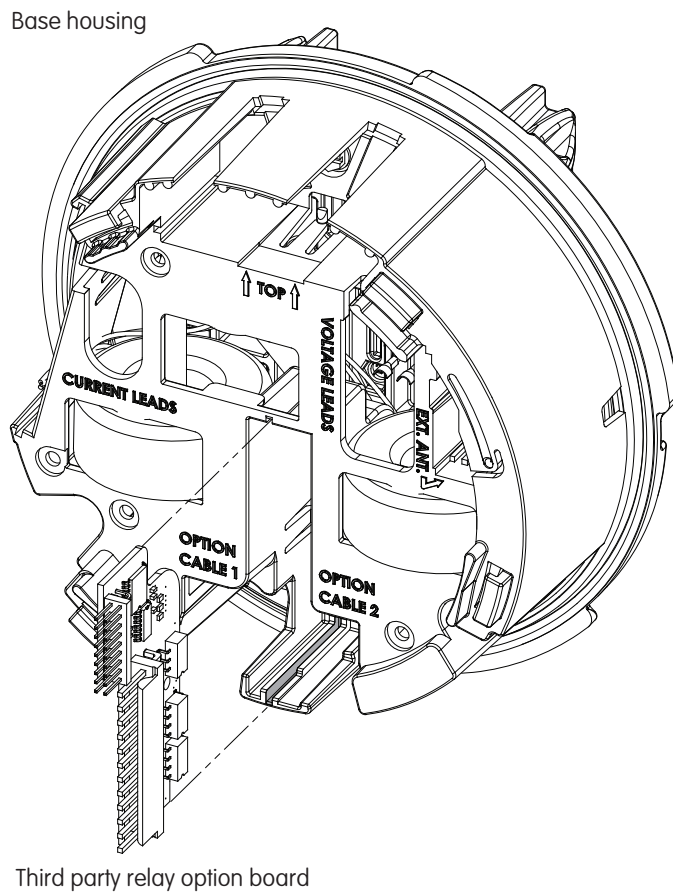
 **WARNING**

Do not disassemble the meter chassis or electronic assembly from the meter chassis with power present. Dangerous voltages are present. Failure to remove power may result in equipment damage, personal injury, or death.

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Use the following procedure to mount the third party relay option board in the base housing (see Figure 1). Regardless of the number of relays, the instructions are the same.

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**Figure 1. Mounting the third party relay option board**

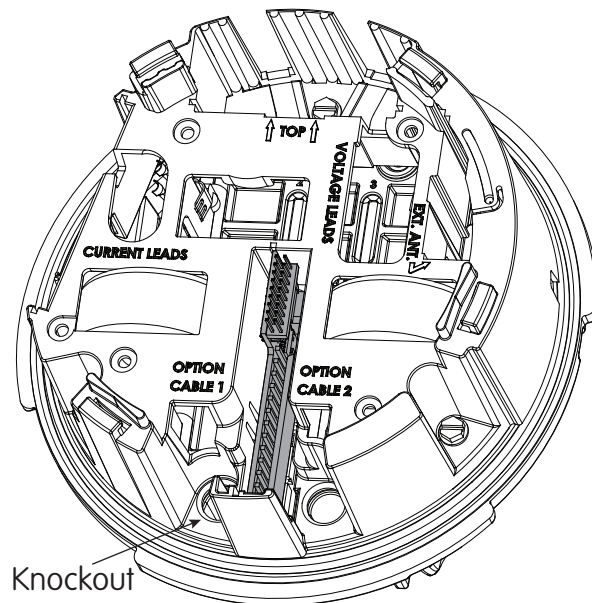
- 1 Remove the meter cover.
- 2 Remove the electronic assembly from the base housing by rotating the electronic assembly housing counterclockwise while holding the base housing stationary.
- 3 Be sure that the third party option board is positioned and oriented correctly as shown in Figure 1.
- 4 Insert the third party relay option board into the designed slot in the base assembly and push until it snaps into place to ensure a proper fit. Exercise caution when inserting the board so that you do not bend any of the pins during installation.

The A3 ALPHA meter assembly is designed to make it difficult to remove the third party relay option board once it is properly inserted. Do not attempt to remove the option board once it is installed.

See Figure 2 for an illustration of a properly installed third party relay option board.

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Figure 2. Third party relay option board installed in base housing



## Installing the relay cable

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### **⚠ WARNING**

Do not disassemble the meter chassis or electronic assembly from the meter chassis with power present. Dangerous voltages are present. Failure to remove power may result in equipment damage, personal injury, or death.

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The meter base must be prepared so that the relay cable can exit the hole in the base.

- 1 Locate the cable exit knockout in the meter base. The words "Option Cable" or "Option Cable 1" are molded in the housing just above the knockout.
- 2 Punch out the knockout in the meter base and remove any remaining material in the hole. The knockout is designed to be pushed from the inside of the meter base and out away from the meter base.
- 3 Feed the relay option cable through the hole in the base with the connector to the inside.
- 4 Leave enough cable to attach to the relay option board. Be sure to not leave too much cable.
- 5 Connect the relay cable connector to the relay board pins, as show in Figure 3 and Figure 4. When connecting the communication cables to the boards, be sure the cables are properly aligned, as noted in the figures.
- 6 If you are connecting to an Itron SmartSynch 3G board, attach the header clip to the relay connector (see Figure 3).

Figure 3. Itron SmartSynch 3G connectors

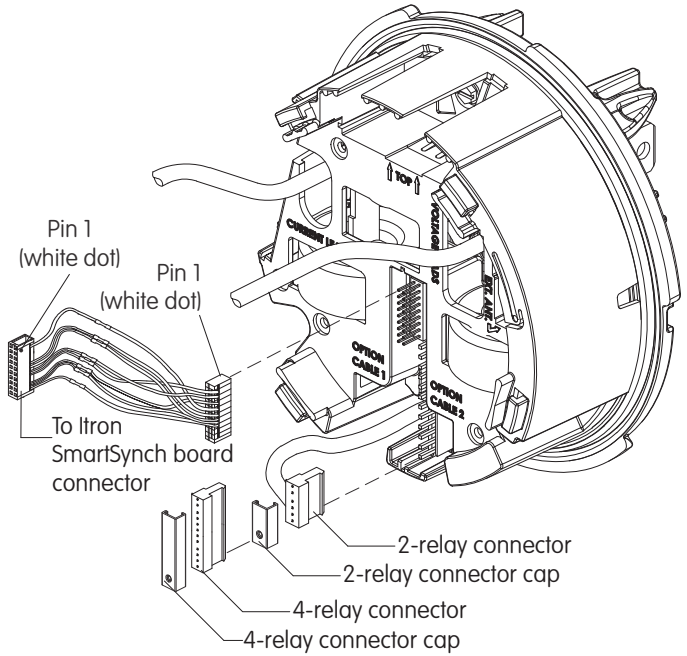
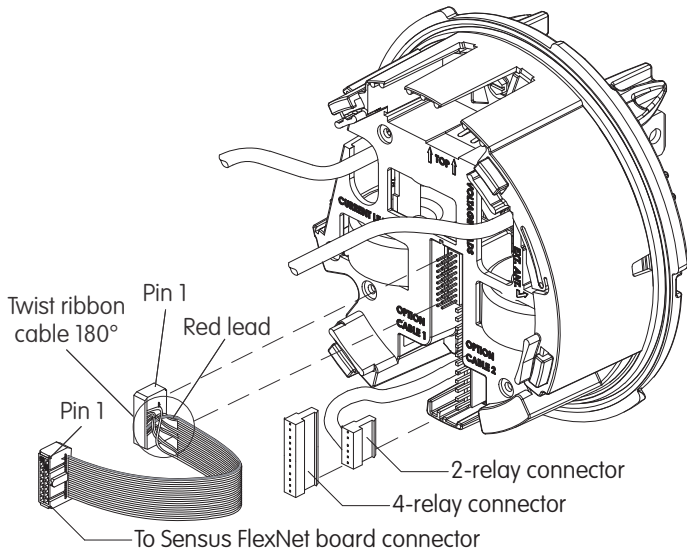


Figure 4. Sensus FlexNet connectors



### Relay outputs

Figure 5 and Figure 6 show the relay output wiring. For more information on programming the relays, see the A3 ALPHA meter technical manual (TM42-2190C or later).

Figure 5. Relay output wiring for 2 relays, 6-wires

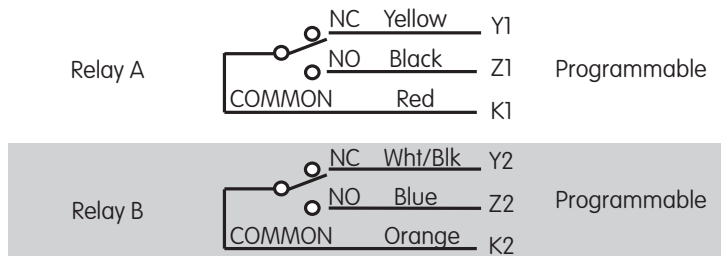


Figure 6. Relay output wiring for 4 relays, 9 wires



## Reassembling the meter

After connecting the communications option board to the third party relay option board, use the following procedure to reassemble the meter.

- 1 If still wearing, remove the wrist strap before proceeding with reassembling the meter.
- 2 Reconnect the current and voltage connectors from the base housing to the electronic assembly. Note that the connectors are keyed for proper orientation.
- 3 Align the top of the electronic assembly with the base housing where the word "TOP" is molded into the plastic.
- 4 Reassembly the electronic assembly to the base housing by rotating the electronic assembly clockwise. Use care to avoid pinching cables or placing strain on the circuit boards.
- 5 Replace the meter cover.
- 6 Seal the meter by following authorized utility procedures.

## Notes:

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