A3 ALPHA® Meter with Internal Cellular Modem

Installation Instructions

General

The A3 ALPHA meter is available with an option board that allows communicating over the advanced mobile phone service (AMPS) and the public switched telephone network (PSTN). This leaflet contains procedures for installing an A3 ALPHA meter with the internal cellular modem (ICM) option board to provide a standard interface for data communications using the AMPS/PSTN. For information on installing the A3 ALPHA meter see IL42-4001.

⚠ WARNING

Use authorized utility procedures to install and service metering equipment. Dangerous voltages are present. Personal injury, death, or equipment damage can result if safety precautions are not followed.

Use circuit closing devices on any current transformer secondaries (Form 35S (5S), 35A (5A), 36S (6S),36A (6A), 9S, 10A meters). Personal injury, death, or equipment damage can result if circuit closing devices are not used.

The A3 ALPHA meter with the ICM option board is available in two styles: an internal antenna or an external antenna-ready with an 18 inch (46 cm) radio frequency (RF) cable terminated with a type N male connector.

The A3 ALPHA meter with the internal antenna does not require any additional wiring for meter communications. However, when using an external antenna[1], additional wiring will be required.

For more information on operating the A3 ALPHA meter see the *A3 ALPHA Meter Technical Manual* (TM42-2190A or later).

Activating the ICM

Before you install the meter, you must:

1. Activate the modem with the cellular carrier who will provide you with the following information:
   a. mobile identification number (MIN) – modem's telephone number
   b. home system identification number (SID) or a file containing all of the SIDs for a particular region
2. Using the **Change ICM Settings** task in the Metercat™ meter support software Rel. 1.2 or later, enter the MIN and Home SID and select the operating mode for the modem. Refer to the *Metercat User Guide* for details.

[1] Not supplied by Elster Electricity

Elster Electricity, LLC
Raleigh, North Carolina USA
+ 1800 338 5251 (US Technical Support)
+ 1800 257 9754 (US Sales Support)
+1 919 212 4800 (US Main)
+1 905 634 4895 (Canada)
support@us.elster.com
www.elsterelectricity.com

Connecting an External Antenna

At times, the meter may be installed in a service cabinet or in a location where the RF signal is greatly attenuated due to physical obstructions, or simply because the distance from the nearest cellular tower is too great to achieve sufficient signals for reliable data communications. In these situations, an external antenna[2] may be attached to the A3 ALPHA meter to enhance communications between the tower and the meter (see Figure 1).

Elster Electricity recommends Antenex, Inc.'s TRA8213P, 821-896 3dB TRANST PRMN MT [3] antenna for use with the A3 ALPHA meter with the ICM option board. If an antenna is used that does not reside on the socket, Elster Electricity recommends the use of a lightning arrestor like the Polyphaser RF Protector, DSX [4].

⚠ WARNING

To ensure compliance with FCC RF exposure requirements, the antenna used for this device must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or radio transmitter. Installers and end–users must follow the installation instructions provided by the antenna supplier.

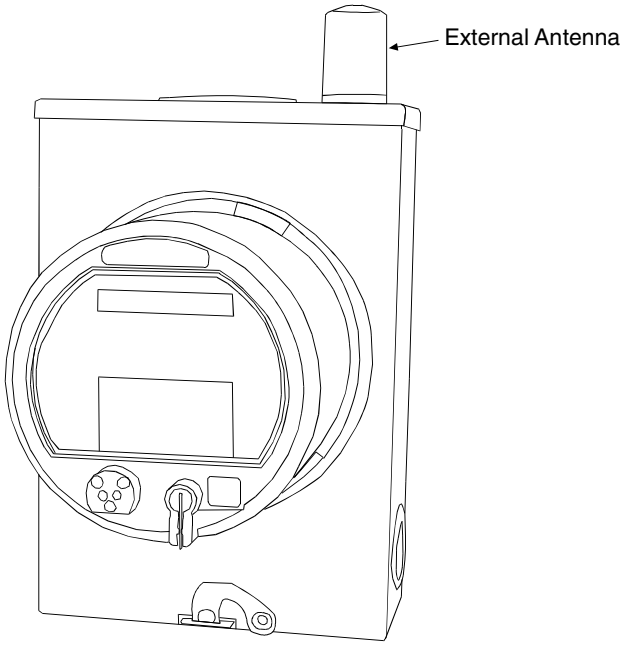

Figure 1. Installed A3 ALPHA meter with external antenna

[2] Not supplied by Elster Electricity
[3] www.antenex.com
[4] www.polyphaser.com

Relay Connections

The ICM option board can be equipped with either zero or four relays. When equipped with four relays, an 8–lead output cable is included (see Figure 2). See *Metercat Program Development Guide* (TM42-2204B or later) for more information on configuring relays for the A3 ALPHA meter.

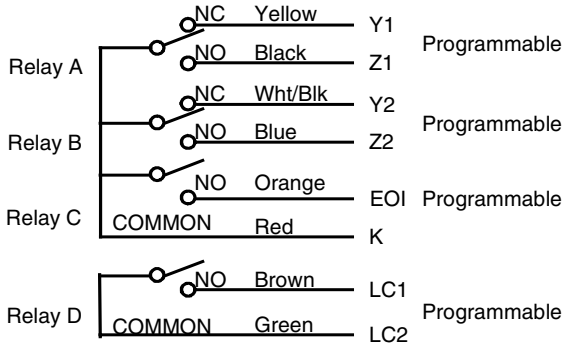

Figure 2. Color coding for 4 relays with 8 output leads

FCC Compliance

Class B Device

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- reorient or relocate the receiving antenna
- increase the separation between the equipment and the receiver
- connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- consult the dealer or an experienced radio/TV technician for help

If you experience trouble with this equipment, please contact Elster Electricity's Return Material Resolution (RMR) department at +1 919 212 4700. Do not attempt to repair this equipment yourself unless you are replacing the entire module.

Technical Support

Contact Elster Electricity's Technical Support at +1 800 338 5251.

Elster Electricity, LLC
Raleigh, North Carolina USA
support@us.elster.com
www.elsterelectricity.com

IL42-4027B