Excellence in Compliance Testing

Certification Exhibit

FCC ID: QZC-ILC24FI

FCC Rule Part: 15.247

ACS Project Number: 15-0013

Manufacturer: Elster Solutions, LLC
Model: ILC24FI

Manual

Model ILC24FI PCBA manual

General

The Model ILC24FI Printed Circuit Board Assembly (PCBA) contains a frequency hopping spread spectrum radio operating in the 916-927.6 MHz ISM frequency band. It also contains circuitry for application control and communications with a host electricity meter. When the ILC24FI module is installed in an A3 ALPHA polyphase meter, that meter is then enabled for operation in an Advanced Metering Infrastructure (AMI) that utilizes a proprietary network architecture and protocol devised by Elster Electricity LLC.

Device specifications

Mode	35.5 and 142 kbps
Frequency Band	916-927.6 MHz
Classification	Frequency Hopping Spread Spectrum
Maximum Output Power	250 mW
Number of Channels	25
Channel Spacing	400 kHz
Data Rate	35.5 kbps or 142 kbps
20 dB Occupied Bandwidth	315 kHz
99% Occupied Bandwidth	435 kHz
Max channel dwell time within a 10 second period	< 0.4 seconds within a 10 second period The network is a 25 channel FHSS network.

FCC and Industry Canada Compliance

The module is inserted into the electronic housing of the meter at manufacture. It has no user-serviceable parts.

USER INFORMATION (PART 15.105)

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 use the Return Material Authorization (RMA) feature available at the Online Customer Services at www.elstersolutions.com. Do not attempt to repair this equipment yourself unless you are replacing the entire module.

COMPLIANCE STATEMENT (FCC PART 15.19 AND INDUSTRY CANADA)

This device complies with part 15 of the FCC Rules and with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

ÉNONCÉ DE CONFORMITÉ

Cet appareil est conforme à la Partie 15 des règles de la FCC et aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'utilisation de cet appareil est soumise aux deux conditions suivantes : (1) Cet appareil ne doit pas provoquer d'interférences nocives et (2) cet appareil doit accepter toutes les interférences reçues notamment celles pouvant provoquer un fonctionnement intempestif de l'appareil.

ANTENNA COMPLIANCE

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

A3 meter: This radio transmitter has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

A3 meter: Le présent émetteur radio a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

- Internal Elster Inverted F (5D25668G01): 3.49 dBi
- PCTEL (MAXRAD) MFB9150 unity gain Fiberglass omnidirectional: 2.15 dBi
- PCTEL (MAXRAD) MFB9153 3dB Fiberglass omnidirectional: 5.15 dBi
- Antenex TRA9023P(NP) (white body) or Antenex TRAB9023P(NP) (black body): 3 dBi

WARNING (PART 15.21)

Changes or modifications not expressly approved by Elster could void the user's authority to operate the equipment.

RF RADIATION SAFETY GUIDELINES

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated to provide a separation distance of at least 20cm from all persons.

COLLOCATION STATEMENT

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.