

EA_Gatekeeper model 2110/2111

Installation instructions

General

With the EnergyAxis® System, the EA_Gatekeeper is the intelligent interface between the EnergyAxis Management System (EA_MS) and the local area network created by the gatekeeper (referred to as the EA_LAN). As the interface, gatekeepers are equipped with WAN communication capabilities and LAN communication capabilities. Depending on the need, utilities have options when choosing how to deploy the EA_Gatekeeper into service. For example, the EA_Gatekeeper module can be installed in an A3 ALPHA® meter if revenue metering is required at a particular site. If deploying meter-based gatekeepers is neither feasible nor desired, the EA_Gatekeeper can be mounted in different structures.

This leaflet explains how to install the following gatekeeper models:

- EA_Gatekeeper model 2110 (uses a W-WIC for CDMA wireless communication)
- EA_Gatekeeper model 2111 (uses a W-WIC for GSM wireless communication)

Both models use a battery for backup gatekeeper operation if AC power fails at site.

The EA_Gatekeeper model 2110/2111 uses a NEMA-4 rated polycarbonate enclosure. The EA_Gatekeeper supports different mounting options, including mounting on 18-foot (5-meter) to 35-foot (11-meter) utility poles and telephone poles. Instructions on preparing the EA_Gatekeeper model 2110/2111 for pole mounting are provided in the instructional leaflet IL42-5019.

Figure 1 shows the major components of the EA_Gatekeeper model 2110 (model 2111 is similar). Figure 2 shows an illustration of an assembled gatekeeper.

NOTICE

Because of the self discharge rate of the system backup battery, this product must be powered up within 60 days of receiving. If the battery drops below 11.25 VDC for an extended period, the battery may need to be charged with a shop charger or be replaced.

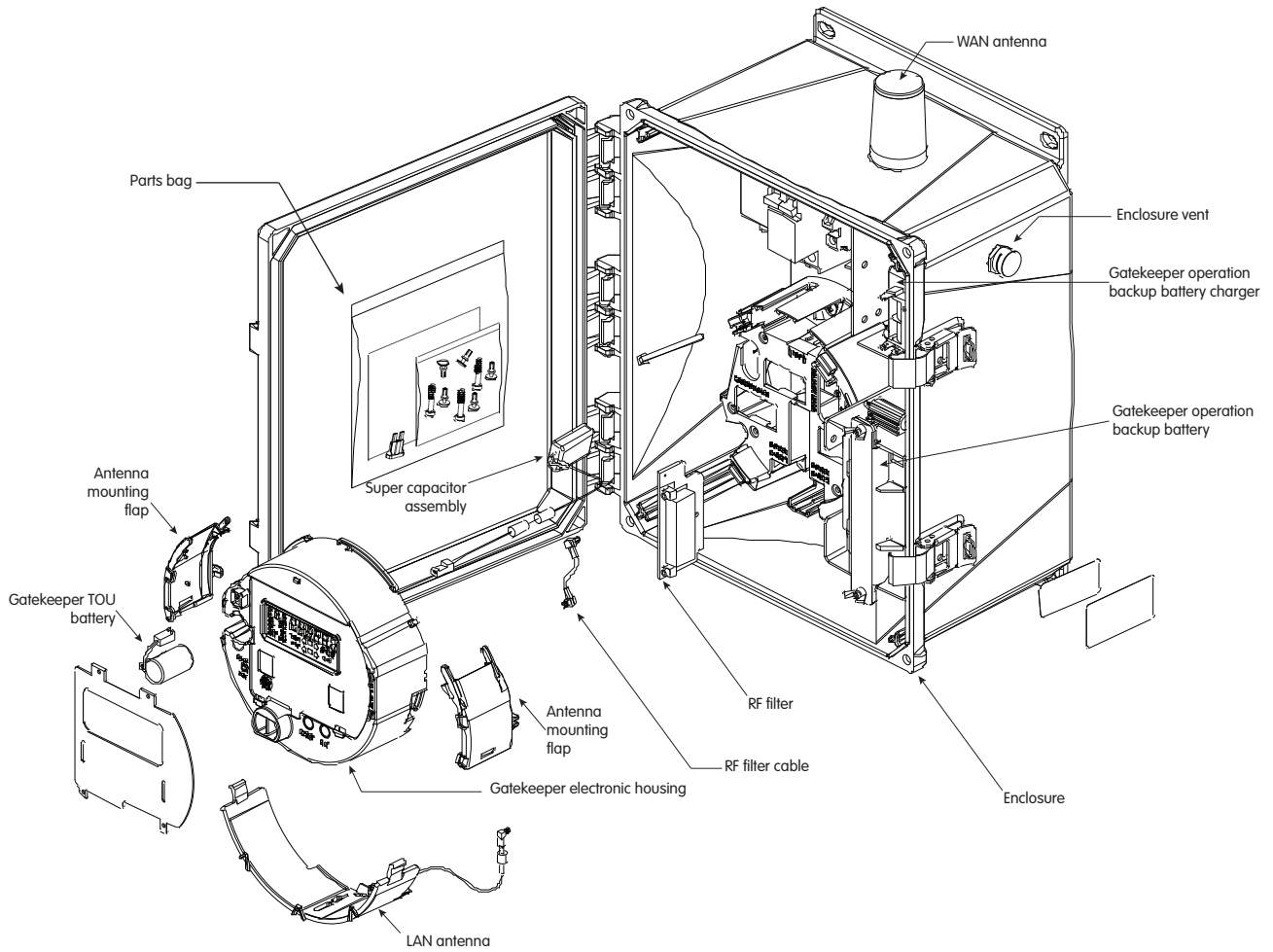


Figure 1. Exploded view of the EA_Gatekeeper model 2110 (model 2111 similar)

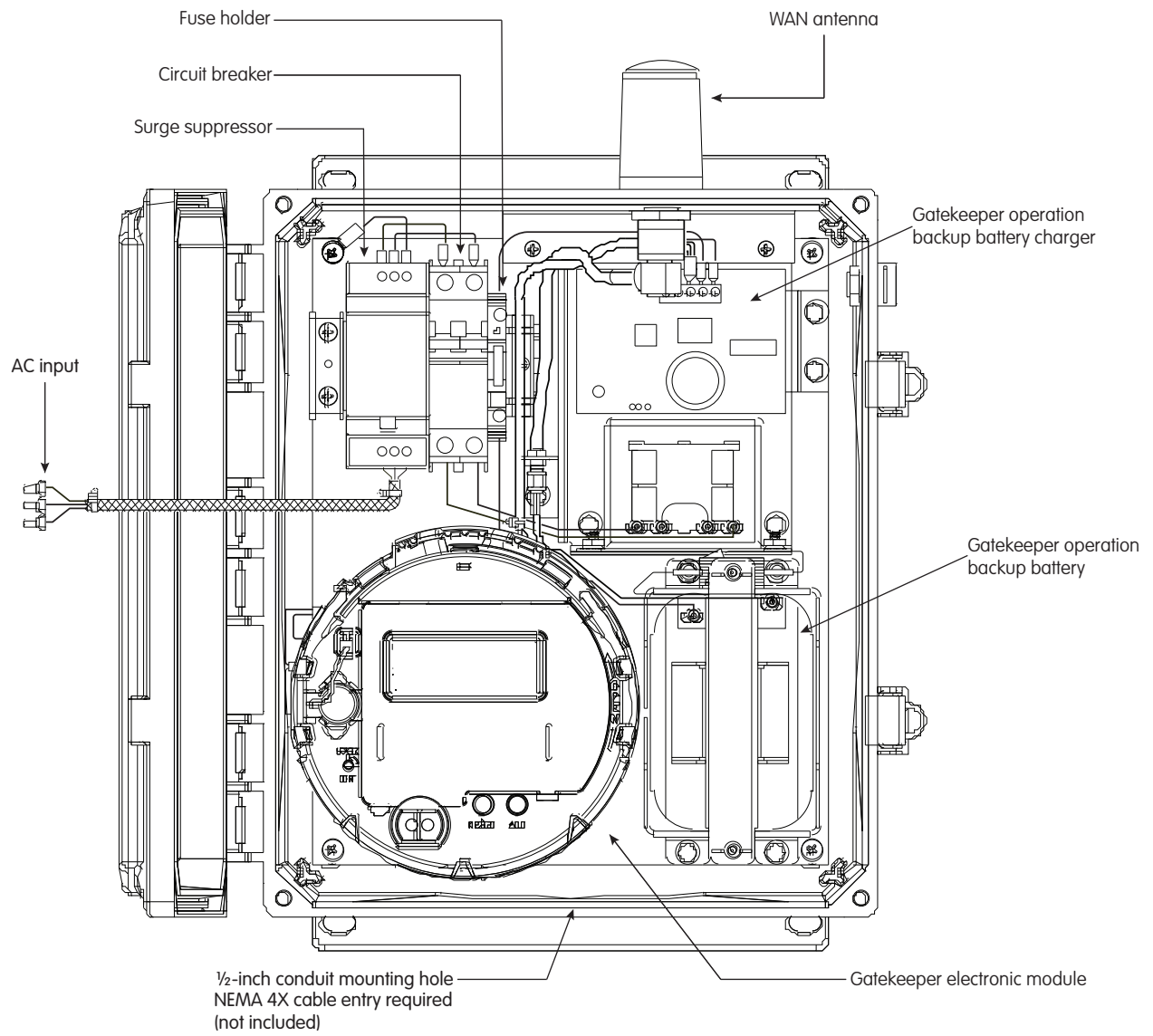


Figure 2. EA_Gatekeeper model 2110 (model 2111 is similar)

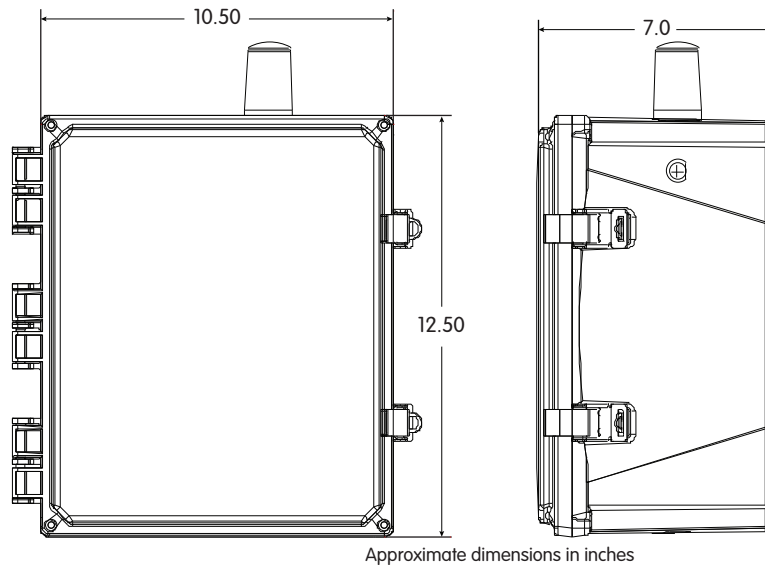


Figure 3. EA_Gatekeeper model 2110/2111 dimensions

Before you install

▲ WARNING

Use authorized utility procedures when installing the EA_Gatekeeper model 2110/2111. Equipment damage, personal injury, or death can result if authorized utility procedures are not followed when installing the EA_Gatekeeper model 2110/2111.

NOTICE

For optimal performance of the LAN antenna, Elster recommends that the EA_Gatekeeper model 2110/2111 be installed so that the enclosure is at least 5 feet (1.5 meters) off the ground. Failure to meet the minimum ground clearance can result in degraded performance of the EA_Gatekeeper model 2110/2111 communications within the EnergyAxis System.

The EA_Gatekeeper model 2110/2111 supports different mounting options, including mounting on 18-foot (5-meter) to 35-foot (11-meter) utility poles and telephone poles.¹ The gatekeeper may have been shipped with the necessary hardware to support your mounting option, or your utility may have ordered the mounting hardware separately. Regardless of how the mounting hardware is provided, be sure to follow your utility's instructions for mounting the EA_Gatekeeper model 2110/2111 at its installation location.

Antenna

Antennas are mounted on the unit itself (that is, local external antenna), so no additional steps are required when placing the EA_Gatekeeper model 2110/2111 into service.

¹ Pole mounting kit, available from Elster, is required. Contact Elster for ordering information.

Placing the EA_Gatekeeper model 2110/2111 into service

▲ WARNING

Use authorized utility procedures when installing the EA_Gatekeeper model 2110/2111. Dangerous voltages are present. Equipment damage, personal injury, or death can result if authorized utility procedures are not followed when installing the EA_Gatekeeper.

NOTICE

Be sure to properly ground the EA_Gatekeeper before placing the gatekeeper into service. See "Minimum recommended grounding guidelines (pole mount)" on page 6 for more information.

The EA_Gatekeeper model 2110/2111 is shipped with most of the wiring connections already made. To complete the wiring and place the gatekeeper into service:

1. Wire the power and ground to the EA_Gatekeeper.
Power is applied to the EA_Gatekeeper by a cable that enters the enclosure through the base of the unit and connects to the AC line surge suppressor. Line power is connected to the brown flying lead, Line 2 is connected to the blue flying lead, and ground is connected to the green flying lead.
A NEMA 4X cable entry is required (not included).
2. Insert the battery fuse into the fuse terminal.
To preserve battery life during shipment and storage, the EA_Gatekeeper is provided without the battery fuse installed. To ensure that the battery is available as a backup power supply, insert the battery fuse into the fuse terminal.
3. When you are ready to activate the EA_Gatekeeper, close the circuit breakers.

After completing these steps, verify proper EA_Gatekeeper operation.

Verifying EA_Gatekeeper operation

In addition to the operation of the LCD on the EA_Gatekeeper electronic assembly, the gatekeeper has two LEDs that indicate the status of the power supply. The green LED is located on the surge suppressor and indicates the presence of AC power. The red LED is located on the battery charger and indicates the status of the backup battery power supply.

LED color	Location	Indicator	Definition
Green	Surge suppressor	On (steady)	Gatekeeper is operating using the main power supply.
		Off	Main power supply is missing or below operating threshold.
Red	Battery charger	On (steady)	Backup battery is charging.
		Blinking	EA_Gatekeeper is operating using the backup battery.
		Off	The backup battery is fully charged. The gatekeeper is operating using the main power supply.

Minimum recommended grounding guidelines (pole mount)

NOTICE

Be sure to follow your utility's procedures for properly grounding equipment.

For different minimum recommended grounding guidelines, see Figure 4, Figure 5, and Figure 6.

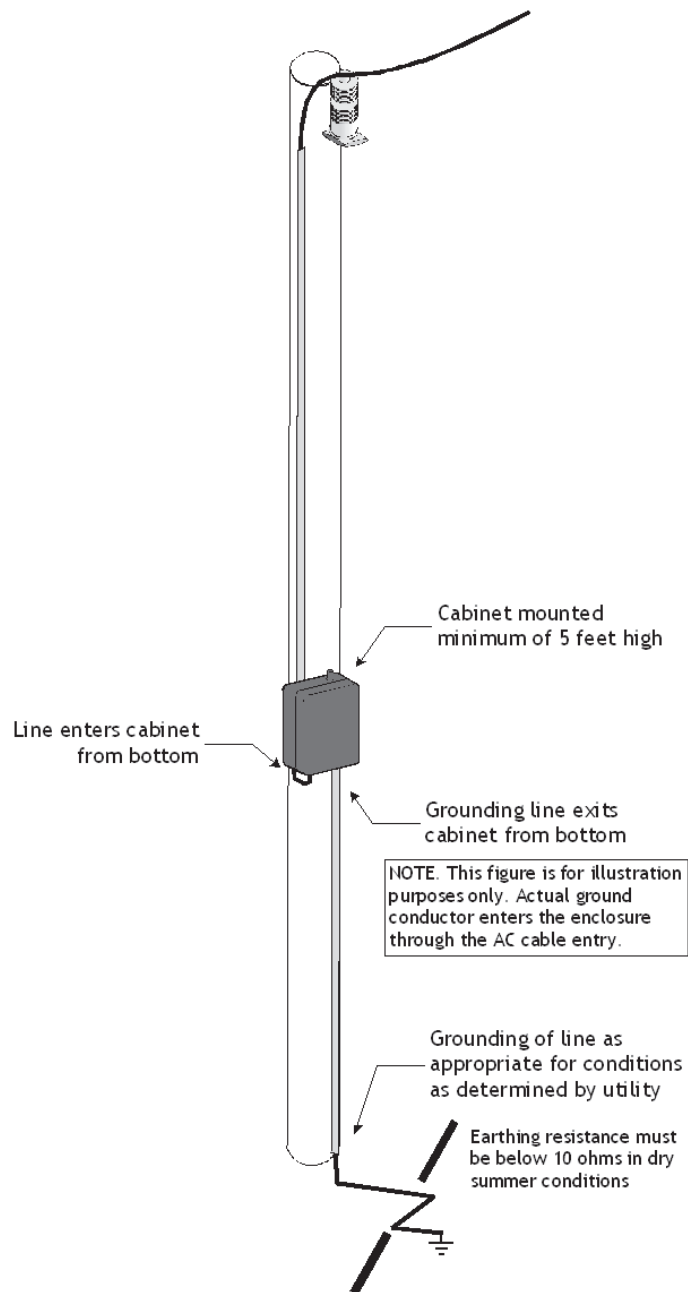


Figure 4. Gatekeeper mounting (no transformer)

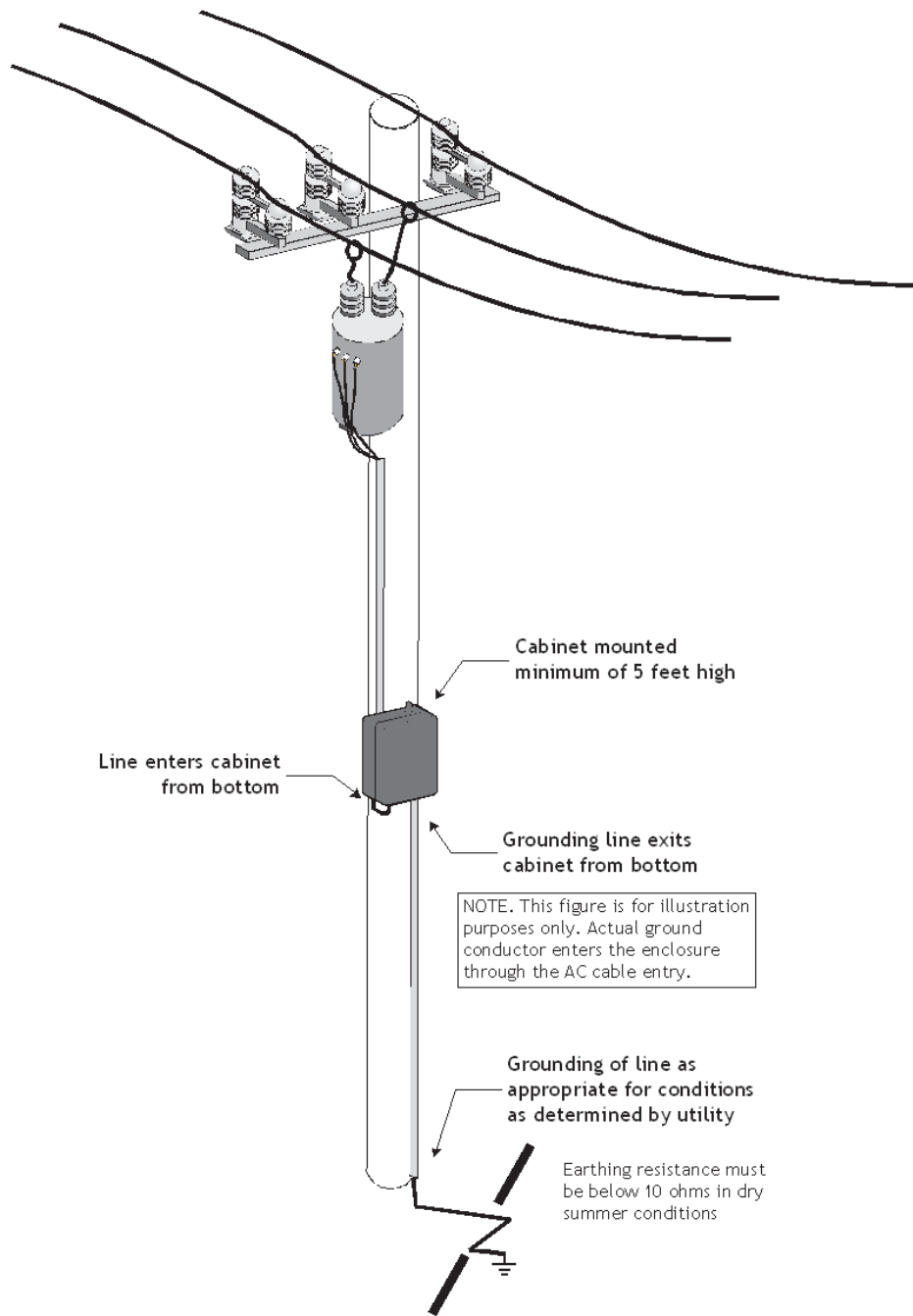


Figure 5. Gatekeeper grounding (transformer)

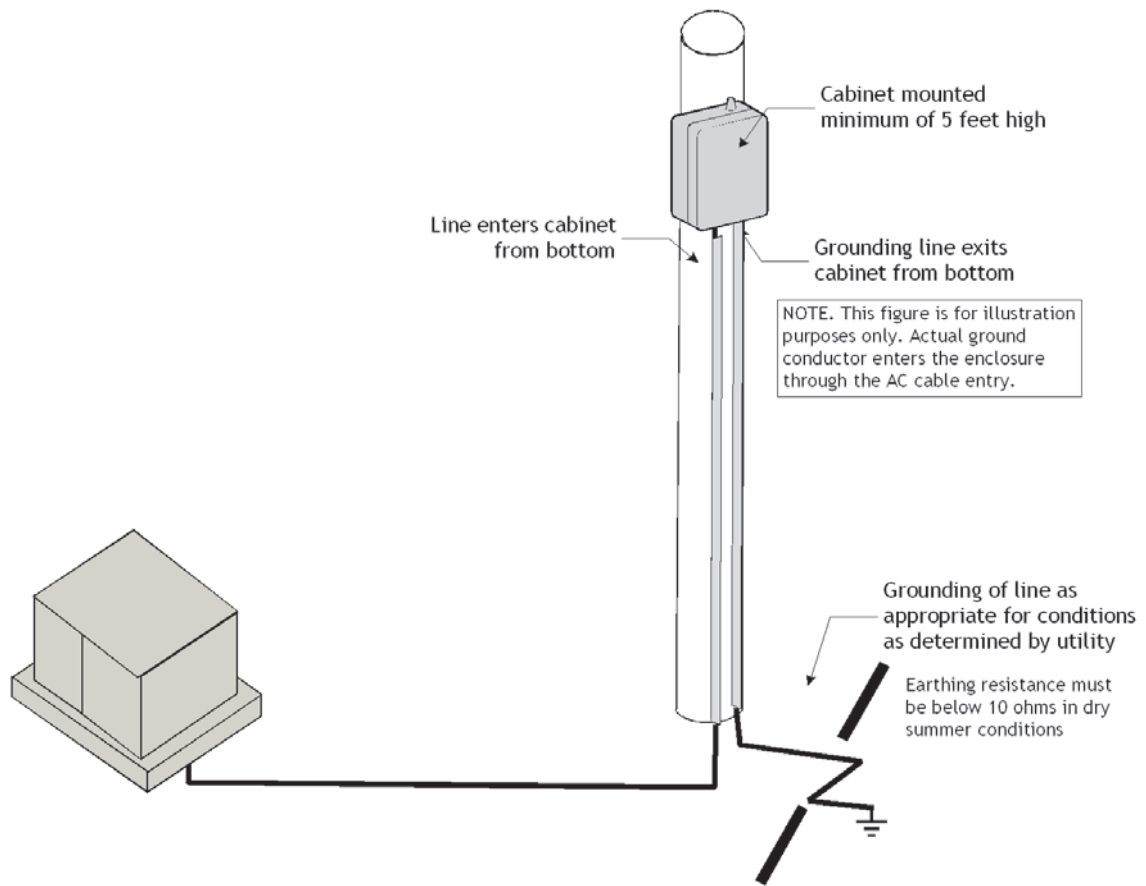


Figure 6. Gatekeeper grounding (underground transformer)

FCC Compliance and Industry Canada Compliance

Important

The EA_Gatekeeper complies with Part 15 of the FCC Rules. Changes or modifications not expressly approved by Elster could void the user's authority to operate the equipment.

FCC & IC Information

For CDMA 1xRTT versions of the EA_Gatekeeper module:

- Contains FCC ID: QZCWWIC-CM1
- Contains IC: 4557A-WWICCM1

For GSM GPRS version of the EA_Gatekeeper:

- Contains FCC ID: QZCWWIC-GM1
- Contains IC: 4557A-WWICGM1

Compliance Statement

This device complies with Part 15 of the FCC Rules and Class B digital apparatus requirements for ICES-003. 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.

Note

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 and ICES-003. 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 Request (RMR) feature available from Elster by calling +1 800 338 5251. Do not attempt to repair this equipment yourself.

Antenna Compliance

The EA_Gatekeeper has been tested and certified with the internal antenna(s) and external antenna(s) provided by Elster. The internal antenna(s) must not be modified or replaced.

Caution

The antennas used for these transmitters must be installed to provide a separation of at least 20 cm from all persons and must not be collocated or operated in conjunction with any other antenna or transmitter except as documented in the FCC application. These devices have been approved for simultaneous transmission of the collocated EA_LAN and cellular/PCS transmitters. Users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

Conformité aux règles de la FCC et d'Industrie Canada

Important

Le EA_Gatekeeper est conforme à la Partie 15 des règles de la FCC. Tout changement ou modification non approuvé explicitement par Elster pourrait annuler le droit de l'utilisateur à exploiter cet équipement.

Information relative à la FCC et à Industrie Canada

- Code d'identification de la FCC : QZCWWIC-CM1
- Code d'identification auprès d'Industrie Canada : 4557A-WWICCM1

Énoncé de conformité

Cet appareil est conforme à la Partie 15 des règles de la FCC et aux exigences relatives aux appareils numériques de classe B conformément à l'avis sur la compatibilité électromagnétique ACEM-3. 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.

Remarque

Cet équipement a été testé et jugé conforme aux limites définies pour les appareils numériques de classe B, conformément à la Partie 15 des règles de la FCC et à l'avis NMB-003. Ces limites sont conçues pour assurer une protection raisonnable contre les interférences nocives dans une installation résidentielle. Cet équipement produit, utilise et peut émettre de l'énergie de fréquence radio, et s'il n'est pas installé et utilisé conformément aux directives, celui-ci peut provoquer des interférences nocives aux communications radio. Toutefois, on ne peut garantir qu'aucune interférence ne surviendra dans le cadre d'une installation particulière. Si cet équipement provoque de l'interférence nocive à la réception des signaux de radio ou de télévision, tel que déterminé en mettant l'appareil hors circuit et en circuit, on invite l'utilisateur à essayer de corriger l'interférence en appliquant une ou plusieurs des mesures suivantes :

- réorienter ou déplacer l'antenne de réception
- augmenter la distance entre l'équipement et le récepteur
- raccorder l'équipement à une prise électrique faisant partie d'un circuit différent de celui auquel le récepteur est raccordé
- consulter le vendeur ou un technicien de radio/télévision chevronné pour obtenir de l'aide

Si vous éprouvez des problèmes avec cet appareil, veuillez utiliser le processus de demande de retour de matériel (RMR) offert par Elster en composant le +1 905 634 4895. Ne pas tenter de réparer soi-même cet équipement.

Conformité de l'antenne

Le EA_Gatekeeper a été testé et certifié pour son utilisation avec les antennes internes et externes fournies par Elster. L'antenne interne ne doit pas être modifiée ni remplacée.

Mise en garde

Les antennes utilisées pour ces émetteurs-récepteurs doivent être installées de façon à assurer une distance d'au moins 20 cm de toute personne, et ne doivent pas être cohabitées ou exploitées en conjonction avec une autre antenne ou un autre émetteur-récepteur, sauf tel que documenté dans la demande auprès de la FCC. Ces appareils ont été approuvés pour permettre une transmission simultanée avec les modules de réseau local EA_LAN et les émetteurs-récepteurs cellulaires/PCS cohabités. On doit fournir aux utilisateurs et aux installateurs des directives sur l'installation de l'antenne et les conditions d'exploitation de l'émetteur-récepteur afin de respecter les normes d'exposition aux fréquences radio.

Notes

DISCLAIMER OF WARRANTIES AND LIMITATIONS OF LIABILITY

There are no understandings, agreements, representations, or warranties either express or implied, including warranties of merchantability or fitness for a particular purpose, other than those specifically set out by any existing contract between the parties. Any such contract states the entire obligation of the seller. The contents of this document shall not become part of or modify any prior existing agreement, commitment, or relationship. The information, recommendations, descriptions, and safety notices in this document are based on Elster experience and judgment with respect to operation and maintenance of the described product. This information should not be considered as all-inclusive or covering all contingencies. If further information is required, Elster should be consulted.

No warranties, either expressed or implied, including warranties of fitness for a particular purpose or merchantability, or warranties arising from the course of dealing or usage of trade, are made regarding the information, recommendations, descriptions, warnings, and cautions contained herein.

In no event will Elster be responsible to the user in contract, in tort (including negligence), strict liability or otherwise for any special, indirect, incidental, or consequential damage or loss whatsoever, including but not limited to: damage or loss of use of equipment, cost of capital, loss of profits or revenues, or claims against the user by its customers resulting from the use of the information, recommendations, descriptions, and safety notices contained herein.

