

EA_Gatekeeper Series 1 with third party WAN connection

Installation instructions

General

▲ WARNING

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

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 an EA_Gatekeeper Series 1 with a third party WAN connection. More information about the Series 1 gatekeeper can be found in "EA_Gatekeeper in the AGI enclosure: Hardware series" product bulletin (PB42-2015).

The gatekeeper uses a NEMA-4 rated metal enclosure. Figure 1 shows an exploded view of the gatekeeper. Figure 2 and Figure 3 show illustrations of an assembled EA_Gatekeeper.

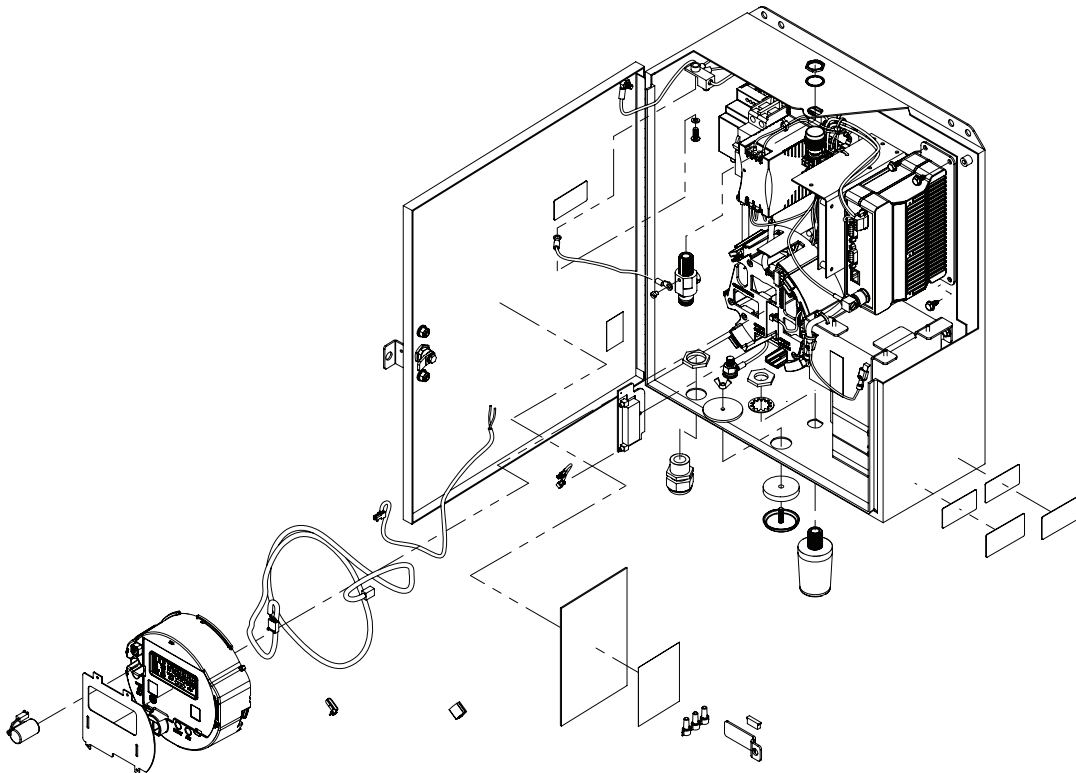


Figure 1. Exploded view, EA_Gatekeeper Series 1 with CalAmp Viper modem (other models are similar)

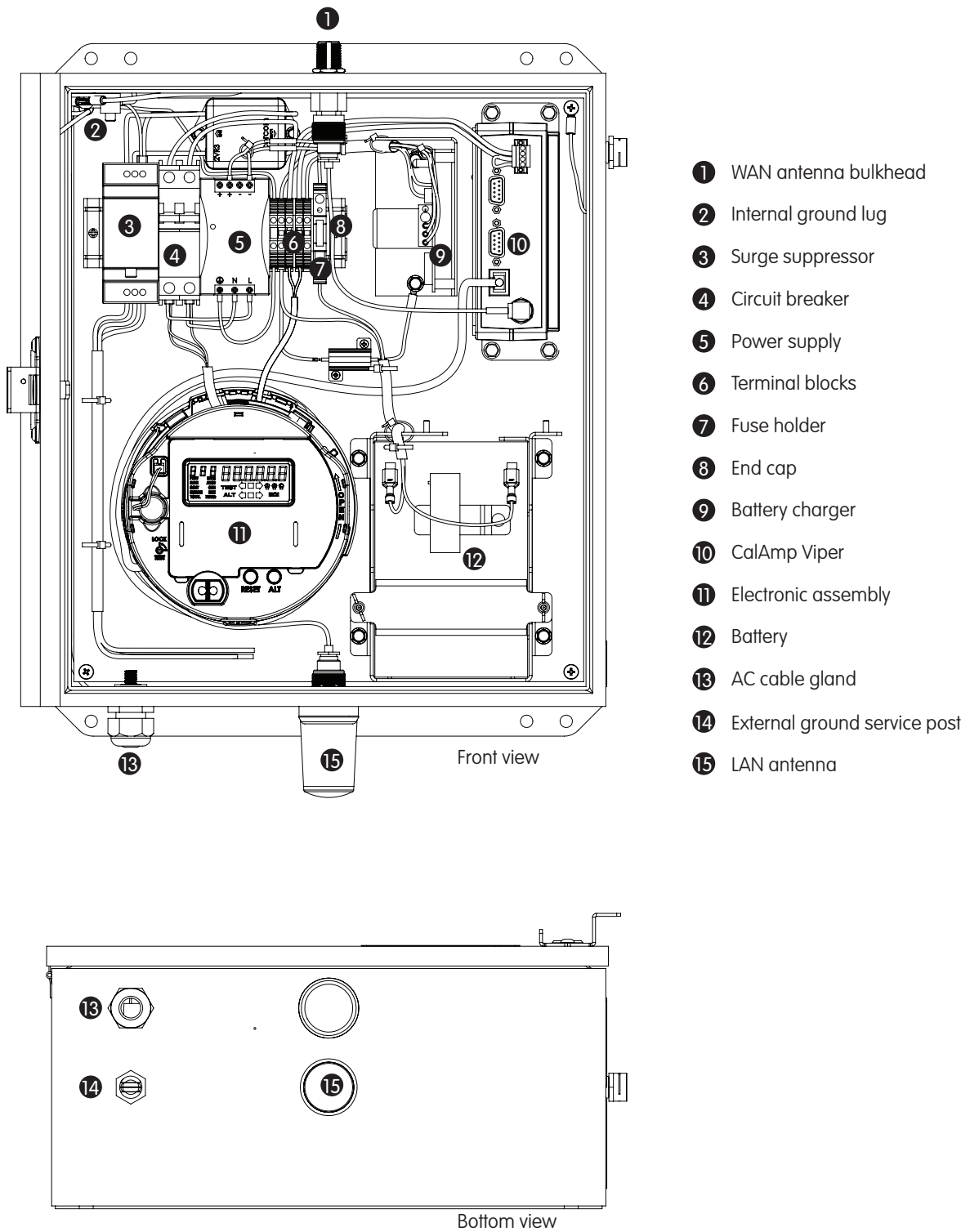


Figure 2. Major components of the EA_Gatekeeper Series 1 with CalAmp Viper modem

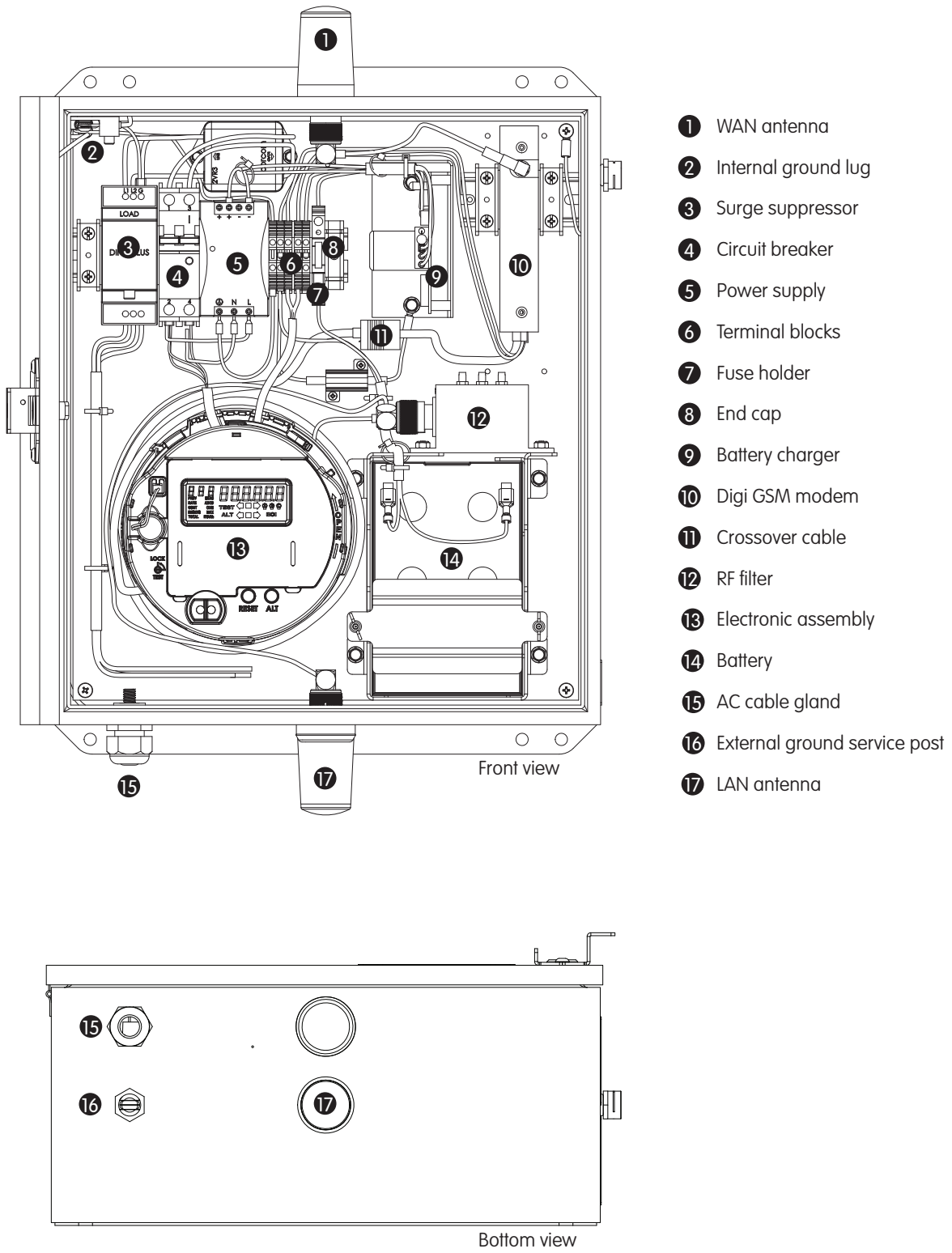


Figure 3. Major components of the EA_Gatekeeper Series 1 with Digi Connect WAN GSM modem

Before you install

▲ WARNING

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

NOTICE

For optimal performance of the LAN antenna, Elster recommends that the EA_Gatekeeper be installed so that the LAN antenna is at least 6 feet off the ground. Failure to meet the minimum ground clearance can result in degraded performance of the EA_Gatekeeper communications within the EnergyAxis System.

The EA_Gatekeeper supports different mounting options, including mounting on 18-foot to 35-foot utility poles and telephone poles.¹ The EA_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 at its installation location.

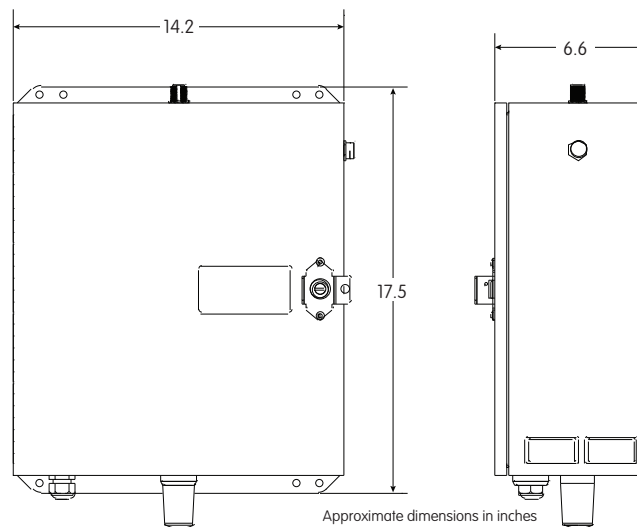


Figure 4. Dimensions

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

Antennas

The EA_Gatekeeper supports different antenna options.

- If the antennas are mounted to the unit itself (that is, local external antenna), then no additional steps are required when placing the EA_Gatekeeper into service.
- If the gatekeeper is using the CalAmp Viper modem, follow the instructions provided by CalAmp for placing the WAN antenna into service.

NOTICE

Be sure to waterproof the RF cable terminations (such as, using coax sealant) to help prevent water entering cable terminations.

Placing the EA_Gatekeeper into service

⚠ WARNING

Use authorized utility procedures when installing the EA_Gatekeeper. 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. A grounding post is located at the bottom of the enclosure. See "Minimum recommended grounding guidelines" on page 7 for more information.

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

1. Wire the power and ground to the EA_Gatekeeper (120/240 VAC, 50/60 Hz).
 - Power is applied to the EA_Gatekeeper by a cable that enters the enclosure through the base of the unit and connects to the wire leads connected to the surge suppressor.
 - Line power is connected to the brown flying lead.
 - Neutral/Line 2 is connected to the blue flying lead.
 - Ground is connected to the green flying lead.
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.
3. Close the breaker. The unit is now powered.

After completing these steps, verify proper EA_Gatekeeper operation.
4. Mount the WAN antenna in a suitable location using authorized utility procedures.

Verifying EA_Gatekeeper operation

The EA_Gatekeeper has two LEDs that indicate the status of the power supply. The green LED is located on the power supply and indicates the status of the main power supply. 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	Power supply	On (steady)	EA_Gatekeeper is operating using the main power supply.
		Off	Main power supply 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. EA_Gatekeeper is operating using the main power supply.

Verify that the third party communication device is working properly. Refer to the manufacturer's documentation for information regarding the proper operation of your WAN connection.

Minimum recommended grounding guidelines

Be sure to follow your utility's procedures for properly grounding equipment. See Figure 5, Figure 6, and Figure 7 for the different minimum recommended grounding guidelines.

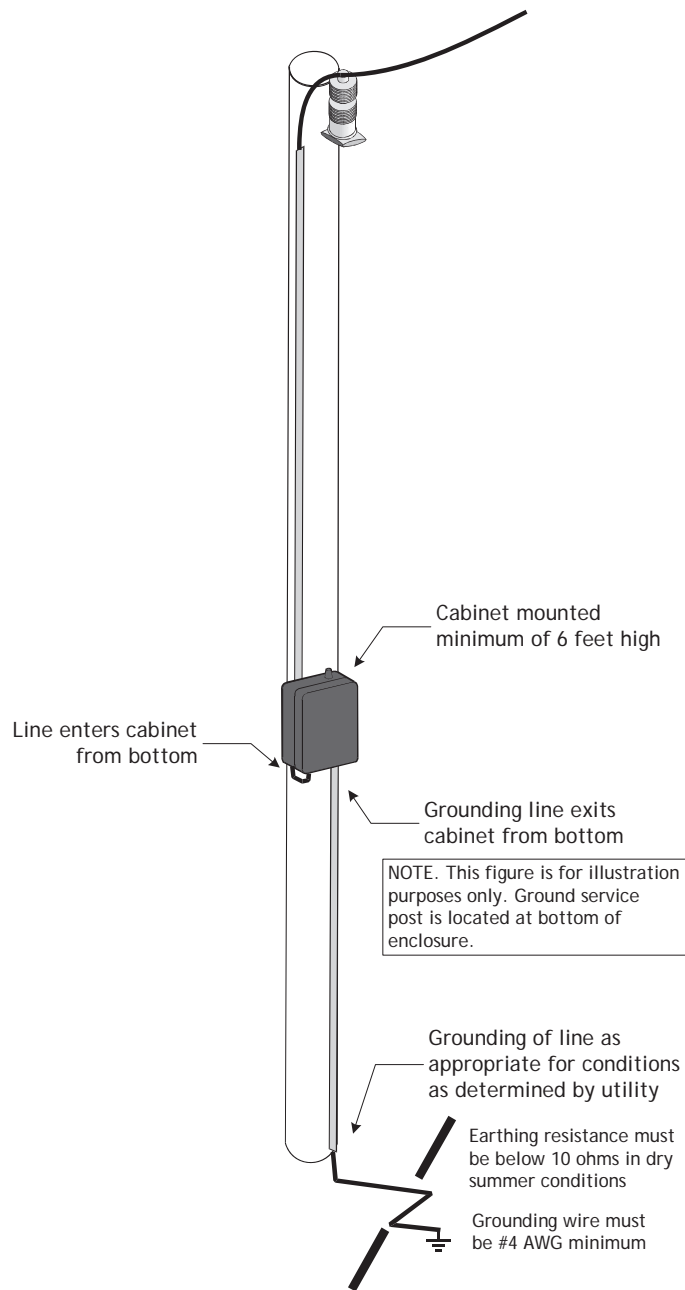


Figure 5. EA_Gatekeeper mounting (no transformer)

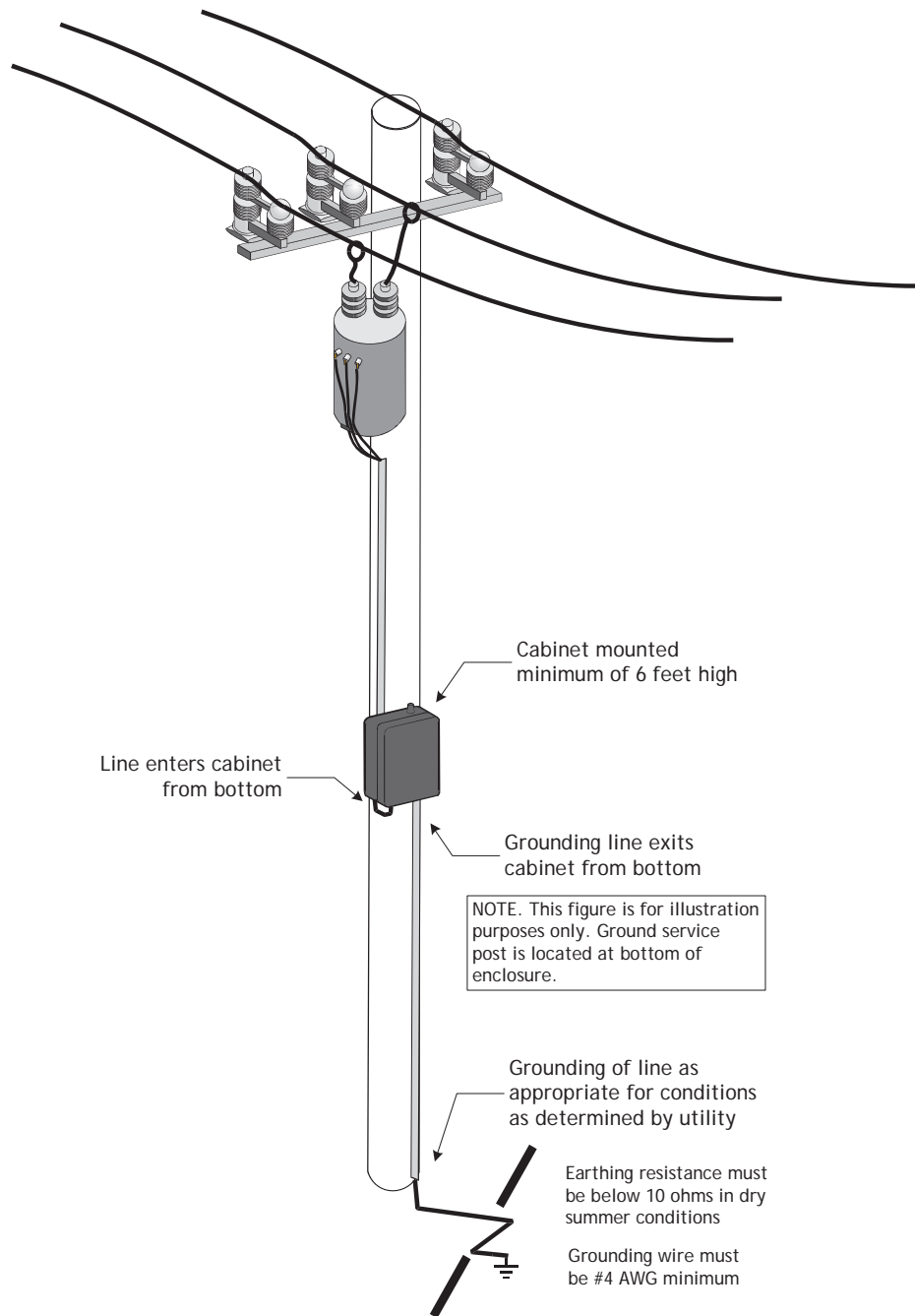


Figure 6. EA_Gatekeeper grounding (transformer)

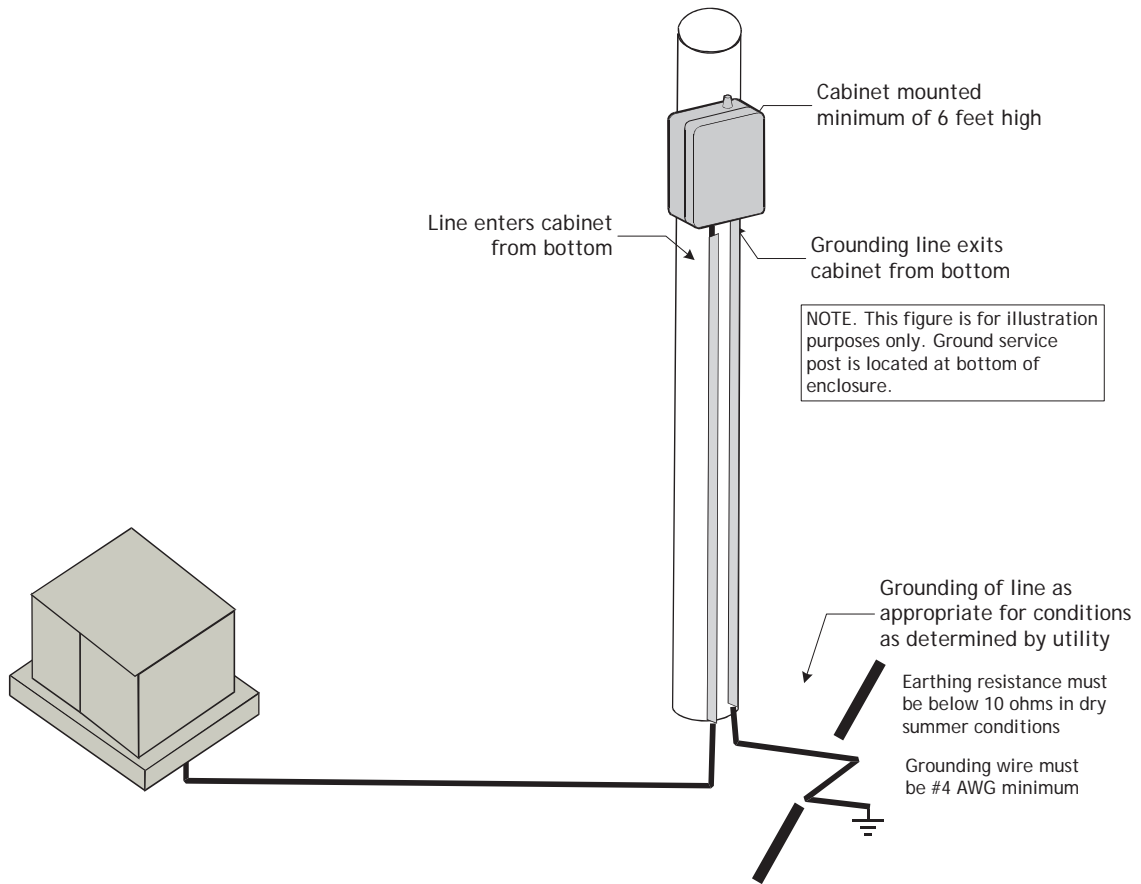


Figure 7. EA_Gatekeeper grounding (underground transformer)

FCC and Industry Canada Compliance

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, 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 at the Online Customer Services at www.elstersolutions.com. Do not attempt to repair this equipment itself unless you are replacing the entire module.

Compliance Statement (Part 15.19): This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. 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.

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

Énoncé de conformité: Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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 per Part 2 of FCC Rules and Regulations: The meter should be installed in a location where there will be a separation greater than 20 cm from locations occupied by humans.

Industry Canada Statement: The term "IC" before the certification/registration number only signifies that the Industry Canada technical specifications were met.

Collocation Statement: Collocation of simultaneously-transmitting (co-transmitting) antennas within 20 cm of each other in a final product is not allowed. 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.

Notes:

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.

