

EA_Repeater

Installation instructions

General

The EA_Repeater is network element within the EnergyAxis® System that reinforces network coverage where electricity meters are not sufficiently dense to support reliable communications between the EA_Gatekeeper and other network elements. The EA_Repeater can also be used to create the EA_LAN for water-only or gas-only utilities or utility service areas.

The EA_Repeater uses a NEMA4X-rated plastic enclosure that provides different installation options. Figure 1 shows the dimensions of the enclosure; Figure 2 and Figure 3 show illustrations of the different mounting options.

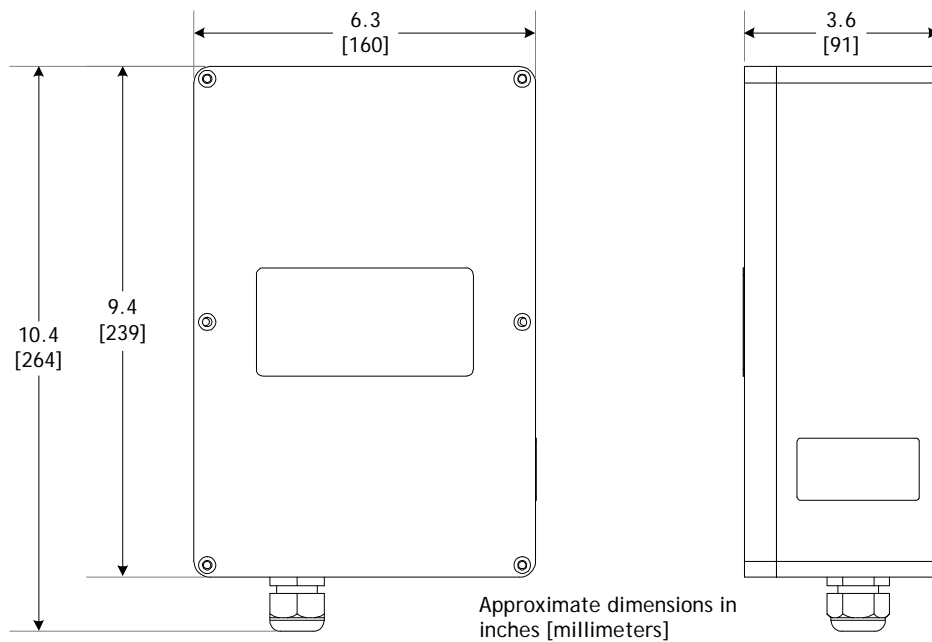


Figure 1. EA_Repeater dimensions

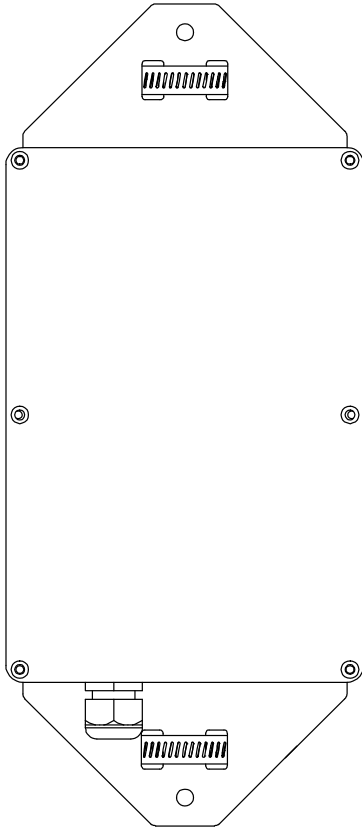


Figure 2. Pole mounting option

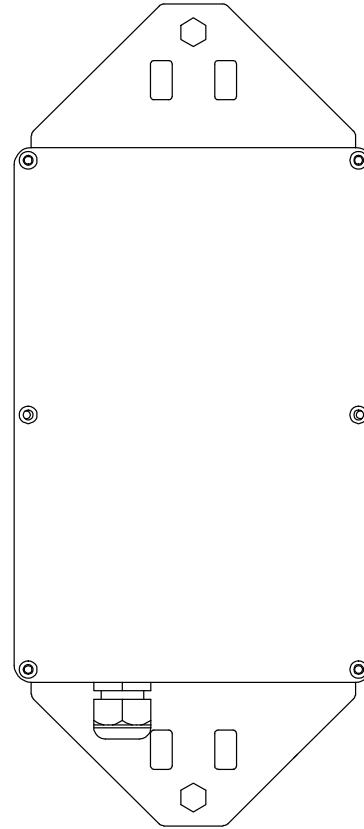


Figure 3. Lag bolt mounting option

EA_Repeater components

Visually inspect all parts for any damage that may have occurred during shipment. Contact Elster if you discover any components broken or missing.

NOTICE

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

The following table lists major components to the EA_Repeater:

Item	Quantity	Elster part number
NEMA 4X enclosure	1	7S1853H001
EA_Repeater module	1	5D25646G24 ¹ or 5D25646G25 ²
Repeater backplane	1	7S1850H001
Voltage conductors	2	1B12293H01

Item	Quantity	Elster part number
Screw terminal	1	N/A
Cable gland	1	7S1722H001
Cable gland locknut	1	7S1724H001
Wiring harness	1	7S1854G001
FCC label	1	7S1856H001
FCC label overlay	1	7S1052H001

¹ 120 VAC only unit

² 240 VAC only unit

The EA_Repeater may be mounted with one of 3 different mounting options:

- large pole mounting option
- small pole mounting option
- lag bolt mounting option

Large pole mounting kit

Item	Quantity	Elster part number
Mounting bracket	2	7S1851H001
Hose clamp (ID 10-7/8 inches to 13-3/4 inches)	2	11711P002
6-32/3/8-inch Phillips screw (panhead)	4	10502P011

Small pole mounting kit

Item	Quantity	Elster part number
Mounting bracket	2	7S1851H001
Hose clamp quick opening (ID 1 inch to 4 inches)	2	11711P001
6-32/3/8-inch Phillips screw (panhead)	4	10502P011

Lag bolt mounting kit

Item	Quantity	Elster part number
1/4-inch by 1.5-inch lag bolt	2	10602P001
18-8 stainless steel thick flat washer, 1/4-inch screw size	2	10802P003
Mounting bracket	2	7S1851H001
6-32/3/8-inch Phillips screw (panhead)	4	10502P001

Installing the EA_Repeater

▲ WARNING

Do not disassemble the EA_Repeater enclosure, service the unit, or service the components inside the unit with power present. Use authorized utility procedures to install and service equipment. Dangerous voltages are present. Equipment damage, personal injury, and death can result if safety precautions are not followed.

1. Align each mounting bracket to the back of the enclosure and secure with the Phillips panhead screws provided (see Figure 4).

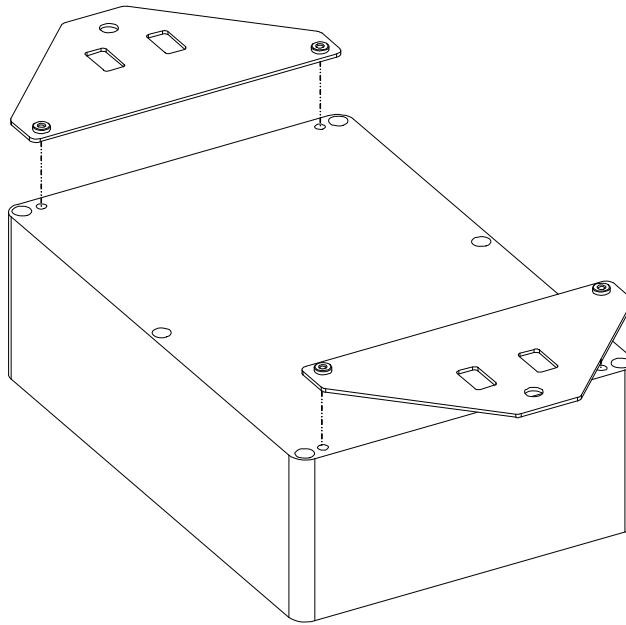


Figure 4. Attach mounting brackets

2. Attach the appropriate mounting device to the mounting bracket:
 - Thread the large pole hose clamp or the small pole quick clamp through the slots of each mounting bracket.
 - Thread the lag bolt through the hole of each mounting bracket. Make sure that the flat washer will be between the bracket and the mounting surface.
3. Mount and secure the EA_Repeater to a pole or mounting surface.

Connecting power to the EA_Repeater

After mounting the EA_Repeater, you must connect power to the unit.

1. Remove the front cover (see Figure 5) to expose the internal components of the unit (see Figure 6).
2. Insert the power cable through the cable gland. To ensure a proper seal with the gland, use a round power cable with a smooth jacket. The power cable should be mounted at the bottom of the enclosure in a drip loop fashion. A drip loop is formed by bringing the power cable to a point below the enclosure and then bending it back up to the cable gland. This forms a U-shape which allows water to run down the cable exterior.
3. Connect Line 1 and Line 2/Neutral from the power cable to the appropriate screw terminal inside the enclosure.
4. Tighten cable gland locknut to seal the power cable.
5. Apply power to the EA_Repeater to verify operation. The LCD will turn on and begin its display sequence.
6. Replace the cover. Torque the cover fasteners to 8 inch-pounds.

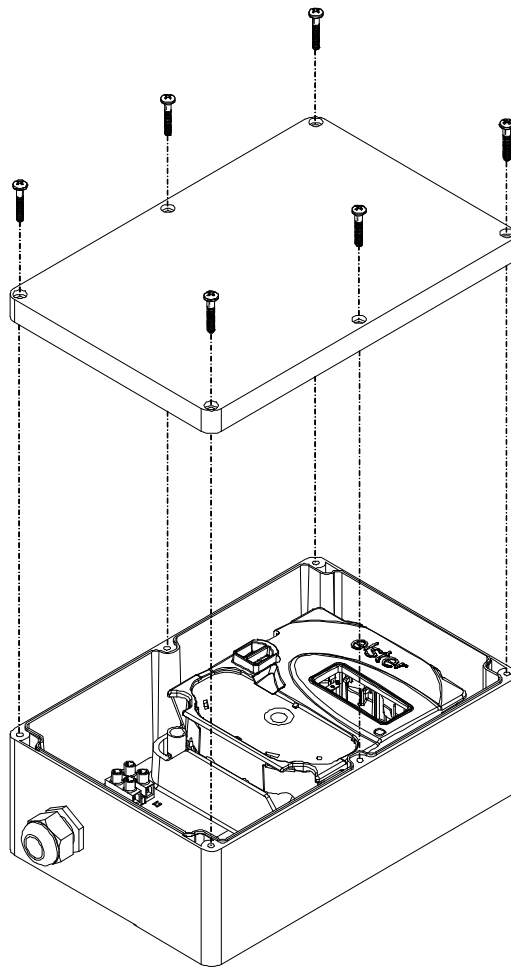


Figure 5. EA_Repeater cover

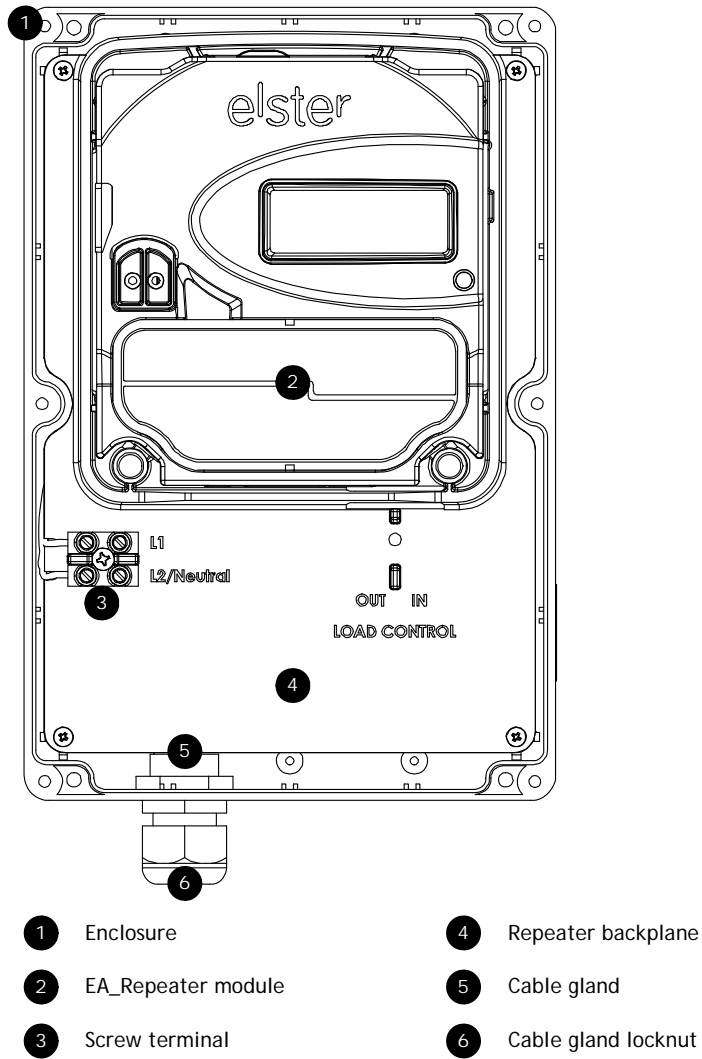


Figure 6. EA_Repeater components

Notes

Notes

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Elster
Raleigh, North Carolina USA



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