

## DESCRIPTION

**APPLICATIONS:** The Badger GALAXY Fixed Network repeaters extend the effective coverage range of GALAXY Gateways. Repeaters relay transmitter data to Gateways via RF (radio frequency) signals. A series of properly positioned repeaters maximizes use of system capacity.

Repeater components consist of an antenna/repeater assembly (Figure 1) and a power supply.

**OPERATION:** The GALAXY repeater receives RF broadcasts from GALAXY transmitters. The repeater verifies that the radio signals are from GALAXY transmitters, and relays them to a GALAXY Gateway.

A repeater processes valid transmitter signals through a set of programmed parameters. A repeater can be programmed to relay all incoming meter signals or only pre-selected signals. Repeater programming is accomplished via a two-way RF link with the Gateway. The Gateway, in turn, is programmed remotely from the central system computer.

A repeater attaches its own code to each transmitter signal. This allows the central system computer to identify each signal's path. Repeaters may also be programmed to pause for a brief delay before relaying a signal. Repeaters in RF range of each other can have different delay periods. Varying delays prevent transmitter signal collision at a Gateway if two adjoining repeaters relay the same signal.

**POWER SUPPLY – AC:** The AC power supply converts 120 VAC to 12 VDC for repeater usage. The AC power supply is designed for installation in a customer supplied protected environment, either indoors or in a weatherproof (NEMA 4 or better) enclosure (Figure 2).

**POWER SUPPLY – SOLAR:** The solar power supply includes a battery box with charging circuitry and a solar power panel with mounting bracket (Figure 3).

Pole mounting mast(s) are not supplied.

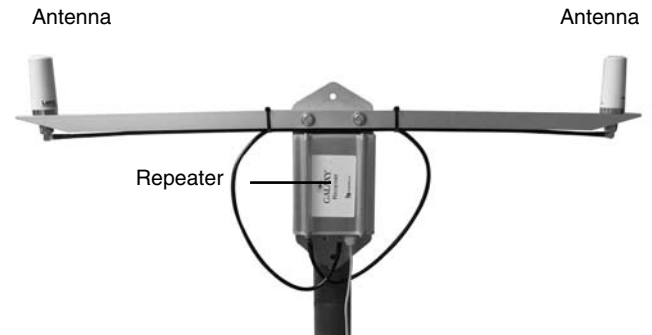


Figure 1. GALAXY Antenna/Repeater Assembly

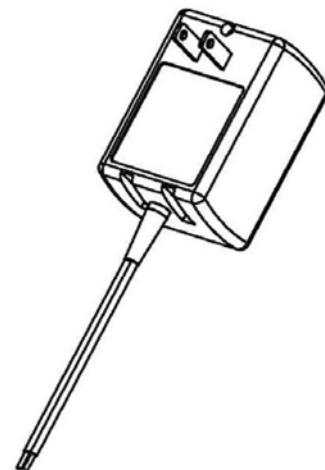
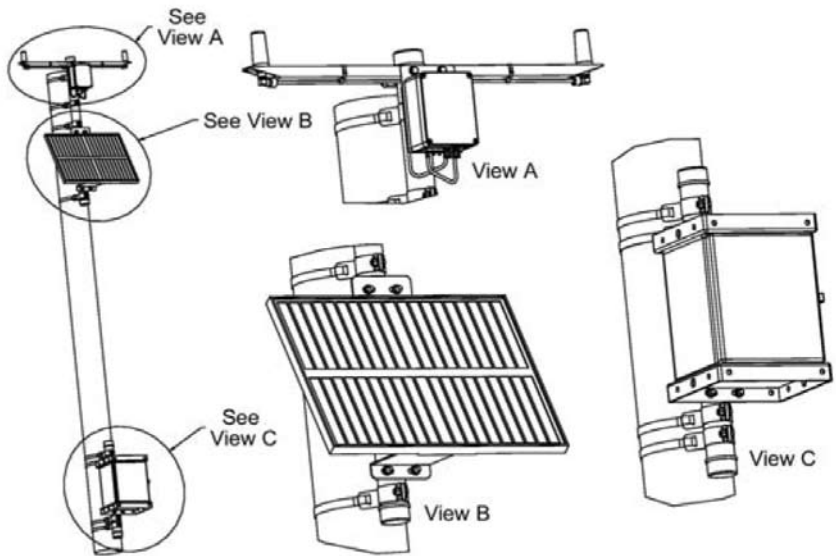


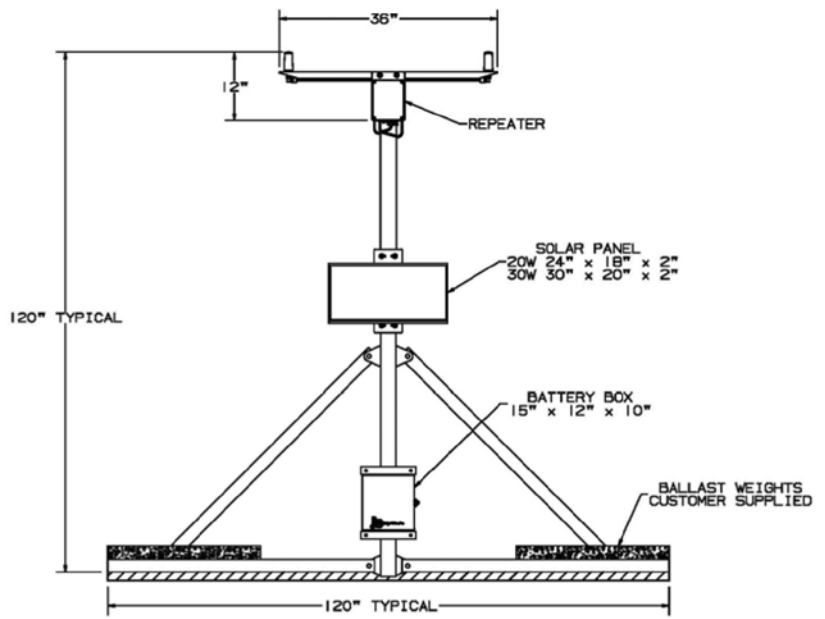
Figure 2. AC Power Supply to Repeater



**Figure 3. Antenna/Repeater and Solar Power Supply Components Mounted to Pipe**

**Optional Tripod-Mounting Stand**

An optional tripod-mounting stand is available for solar powered repeaters. The stand forms a strong, reliable base with interlinked components that provides a platform for antenna, repeater, solar collector and battery box mounting and operation (Figure 4). The tripod is designed for flat surface installations such as flat rooftops.



ALL MOUNTING REQUIREMENTS OF THE SOLAR ASSEMBLY AND ANTENNA (e.g., HEIGHT ON TRIPOD OF SOLAR PANEL, HEIGHT OF CONTROL BOX AND BALLAST REQUIREMENTS) NEED TO BE VERIFIED FOR EACH INSTALLATION BASED UPON ALL APPLICABLE RECOMMENDATIONS, CODES AND STANDARDS (e.g., TRIPOD MANUFACTURE WIND LOAD RECOMMENDATIONS, LOCAL BUILDING CODES, ANSI/TIA/EIA 222 -- STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES, ETC.)

**Figure 4. Repeater/Antenna on optional Mounting Tripod with Solar Power Supply Components**

**FCC COMPLIANCE**

This product complies with Part 90 of the Federal Communications Commission Rules. An FCC license is required for operation of the GALAXY system.

Due to continuous research, product improvements and enhancements, Badger Meter reserves the right to change product or system specifications without notice, except to the extent an outstanding contractual obligation exists.



Please see our website at [www.badgermeter.com](http://www.badgermeter.com) for specific contacts.



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