

## DESCRIPTION

**APPLICATIONS:** The Badger® GALAXY™ Data Collector receives and stores water meter account data from surrounding GALAXY meter transmitters and repeaters. The data is available to the central system computer via a telephone connection.

The Badger® GALAXY™ Data Collector consists of four major components: an antenna, a receiver, the data collector computer and an external modem (Figures 1 and 2).

**OPERATION – ANTENNA:** The GALAXY antenna features a “diversity” design that optimizes radio signal reception. The antenna assembly consists of two electrically separate antennas. The receiver acquires meter data from each antenna for alternating one-hour intervals. Remote meter transmitter signals which are not received by one antenna are captured during the alternating interval by the other antenna.

**OPERATION – RECEIVER:** The GALAXY receiver collects meter account data from the antenna in analog form. Transmissions are converted into a digital data stream, verified for authenticity and completeness, and then sent by cable to the Data Collector computer. Mounting of the receiver on the antenna minimizes analog signal interference or loss. Surge protection circuitry is built in. Receiver power is provided from the Data Collector computer, requiring no separate power source. The digital data / power line between the receiver and Data Collector may be up to 300 feet in length.

**OPERATION – DATA COLLECTOR COMPUTER:** The GALAXY Data Collector (Figure 2) receives meter account data in a digital stream from the receiver. The information is stored in a non-volatile flash memory. Previous data for each meter account is overwritten as each new reading comes in. Each data collector computer contains enough memory for up to 8,000 accounts. Meter account data is held in memory for upload to the central system computer upon demand.

The Data Collector features connections for a customer supplied keyboard and monitor (Figure 3). These allow account data to be programmed directly at the collector. Alternatively, account programming can be done remotely from the central system computer. A keyboard and monitor at the Data Collector are not necessary during normal data collection operations.

The Data Collector computer features internal surge protection circuitry. After a power failure, the unit automatically restarts and resumes operation with no loss of data.

The Data Collector is also capable of operating in a transmit mode for reconfiguration of repeater/transmitter assignments. In transmit mode, account data is sent to surrounding repeaters via an RF antenna link.

The GALAXY Data Collector computer is designed for indoor installation: protected from rain, condensing humidity, and temperature extremes. Refer to Installation Manual GXY-IOM-01 for details regarding installation.



Figure 1. Receiver/Antenna Assembly



Figure 2. Data Collector Computer

**OPERATION – MODEM:** The GALAXY™ Data Collector / receiver kit includes a telephone modem. The modem provides the data download connection between the Data Collector computer and the central system computer.

## SPECIFICATIONS

- Data Collector/Modem:
  - Min. Temperature: +32°F
  - Max. Temperature: +131°F
  - Humidity: 10-95% @104°F, non-condensing
- Receiver / Antenna:
  - Min. Temperature: -30°F
  - Max. Temperature: +140°F

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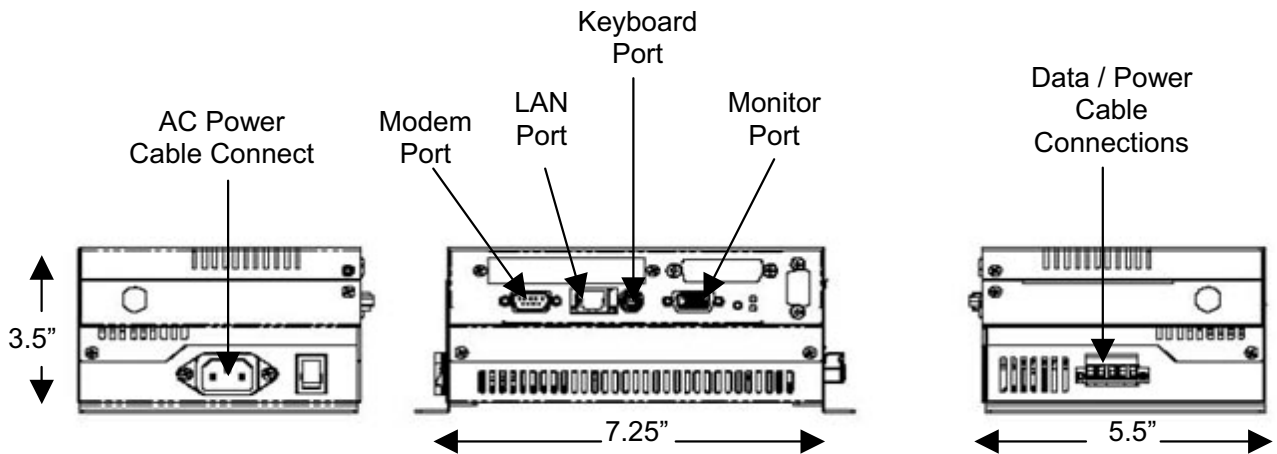


Figure 3. Data Collector Computer Dimensions and Cable Connections

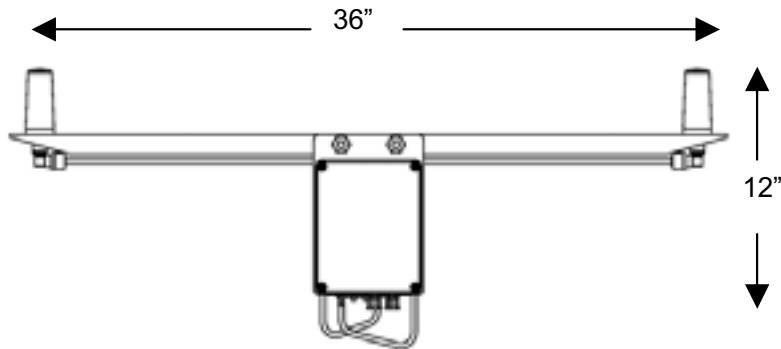


Figure 4. Receiver/Antenna Dimensions

**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.



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[www.badgermeter.com](http://www.badgermeter.com)  
 for specific contacts.

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 bid obligation exists.



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