Manuals+ — User Manuals Simplified.

eGauge BACnet Communication Protocol Instructions

Contents

eGauge BACnet Communication Protocol

Overview

Quick Links:

- BACnet register map and PICS
- Configuring BACnet service

What is BACnet

BACnet is a communication protocol designed for Building Automation and Control (Networks), for use with a Building Automation System (BAS) which controls and automates certain functions within a building. A BAS typically receives data from multiple remote devices, such as temperature, electrical consumption, air quality, and many other types of data depending on what is or can be automated in the building. Based on this data, the BAS can send alerts to building managers and control loads, such as turning on heating if an area becomes too cold or turning off non-critical systems to load shed when overall consumption becomes too high.

eGauge compatibility

The eGauge can provide BACnet data over an Ethernet LAN (BACnet IP) as well as over RS485 serial (BACnet MS/TP). Any data the eGauge collects, including from other remote devices, are available to send.
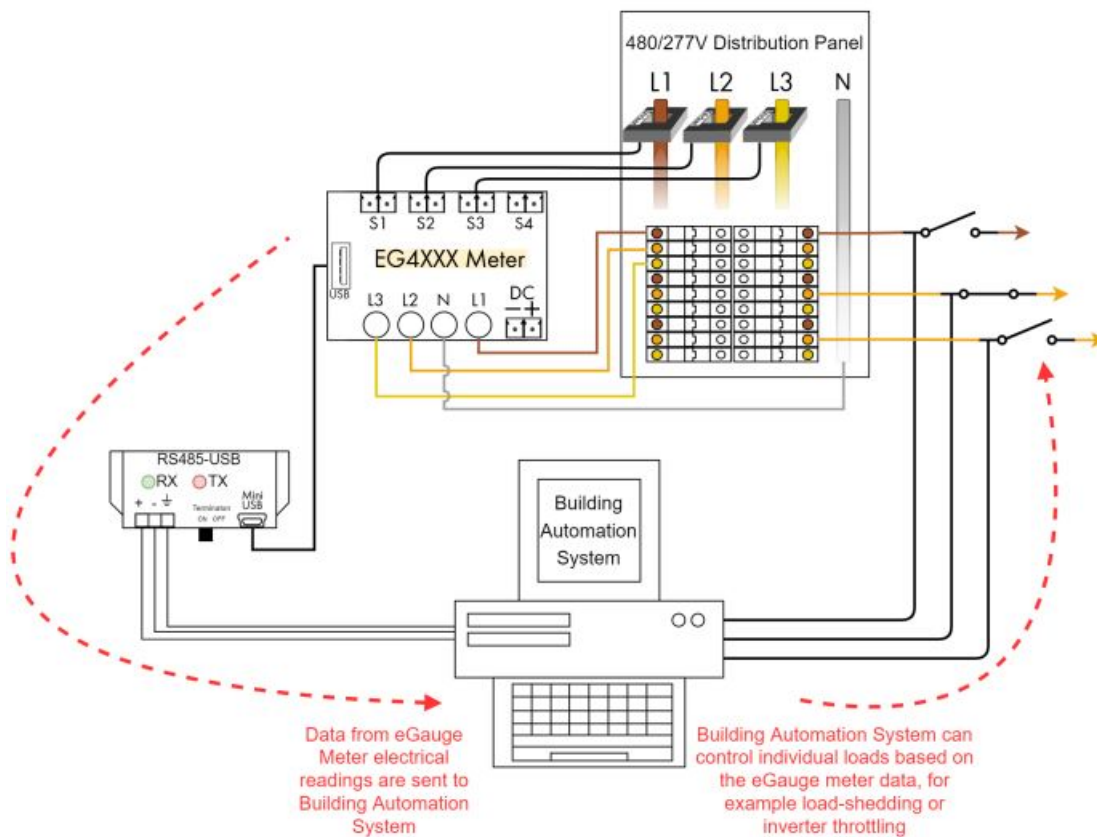
General overview

A building automation system (BAS) will periodically request data from a remote device (e.g., the eGauge meter), and based on this data it may do nothing, trigger an alarm, or switch on or off loads or other controllable equipment. BACnet is disabled by default on the eGauge meter and may be enabled through Settings → BACnet. For an example of the configuration and options available see this knowledgebase article.

BACnet MS/TP (Serial)
Using the eGauge USB485, the eGauge meter can provide data via BACnet to a building automation system.
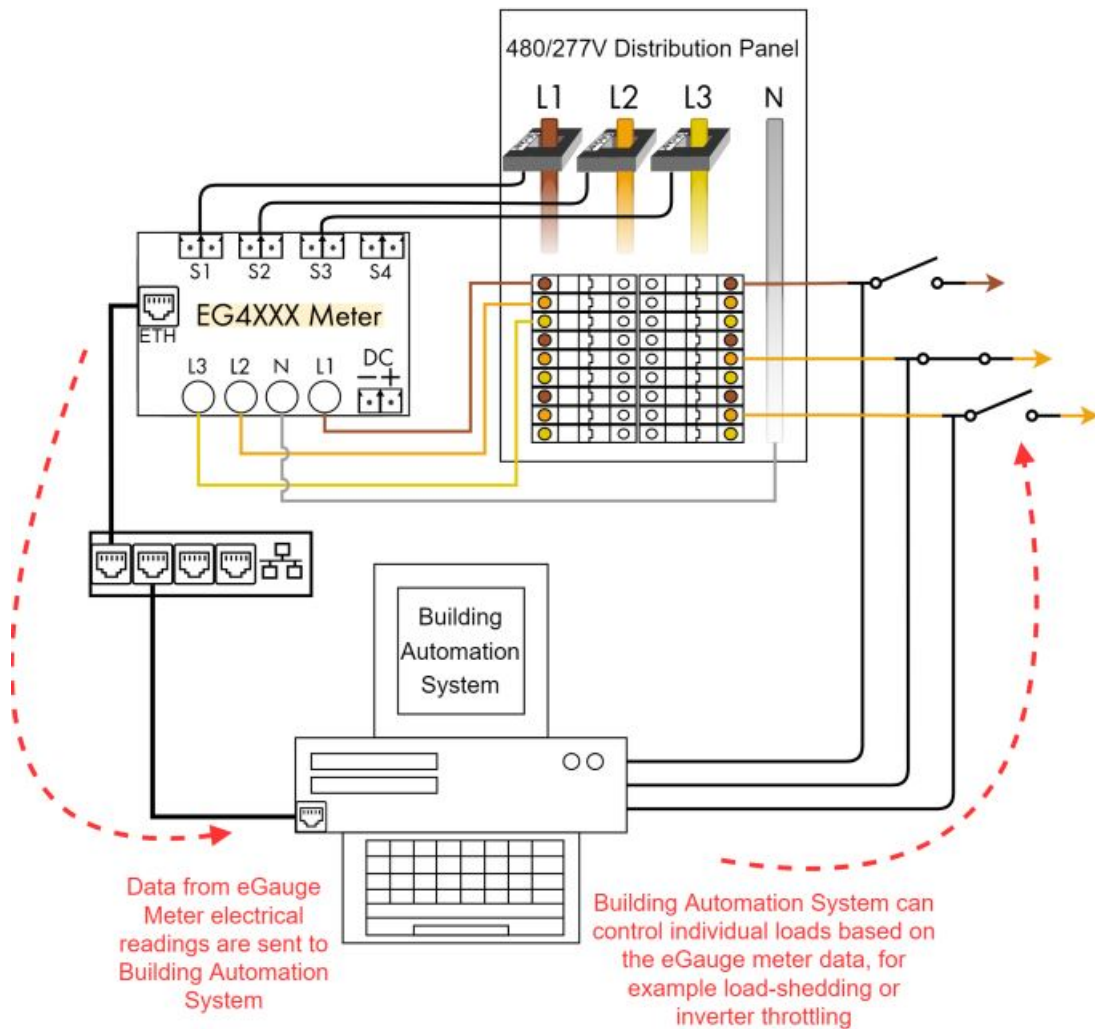
Be sure to review general (non-eGauge specific) serial communication considerations when considering serial lines for BACnet communication. This includes but not limited to:

- Using twisted pair wire for data +/- lines
- Choosing appropriate wire gauge and baud rate (becomes increasingly important with long wire runs)
- Appropriate termination methods (the eGauge USB485 has a selectable termination switch)
- Software and hardware configuration for BAS system controller

Data from eGauge Meter electrical readings are sent to Building Automation System

Building Automation System can control individual loads based on the eGauge meter data, for example load-shedding or inverter throttling

BACnet IP (over an Ethernet network)
BACnet over a LAN has the same functionality as BACnet MS/TP over serial, but it uses an Ethernet network and can connect to an existing LAN instead of requiring its own serial chain.

Data from eGauge
Meter electrical
readings are sent to
Building Automation
System

Building Automation System can
control individual loads based on
the eGauge meter data, for
example load-shedding or
inverter throttling

Revision #7
Created 29 August 2022 18:52:14 by aaron
Updated 30 August 2022 16:47:04 by aaron

Documents / Resources

eGauge BACnet Communication Protocol [pdf] Instructions
BACnet, Communication Protocol, BACnet Communication Protocol, BACnet Protocol