GE
Industrial Solutions

EntelliGuard*

Manager Gateway

Installation Instructions

Contents

Overview

The EntelliGuard Gateway Manager gives the option to monitor circuit breakers with embedded EntelliGuard Trip Units from a tablet or mobile device. This is done by launching an Android application from the smart device. The application will locate the gateway and load all networked circuit breakers' protection settings, real time metering, input/outputs, event log and current status.

The EntelliGuard Gateway Manager can monitor up to 8 breakers with EntelliGuard Trip Units. For the system to work properly, the trip units should have software version 8.00.27 or later.

The EntelliGuard Gateway consists of a wireless computer running GE Gateway software. The gateway comes with a +5Vdc Wall Wart power supply to power up the device.

To monitor the circuit breakers, the trip units need to be interfaced with the gateway. This is done by using the breakers communication ports and connect them to the gateway's RS-485 ports.

Figure 1 shows how the EntelliGuard Manager Gateway is connected to a typical breaker lineup with a maximum of 8 breakers.

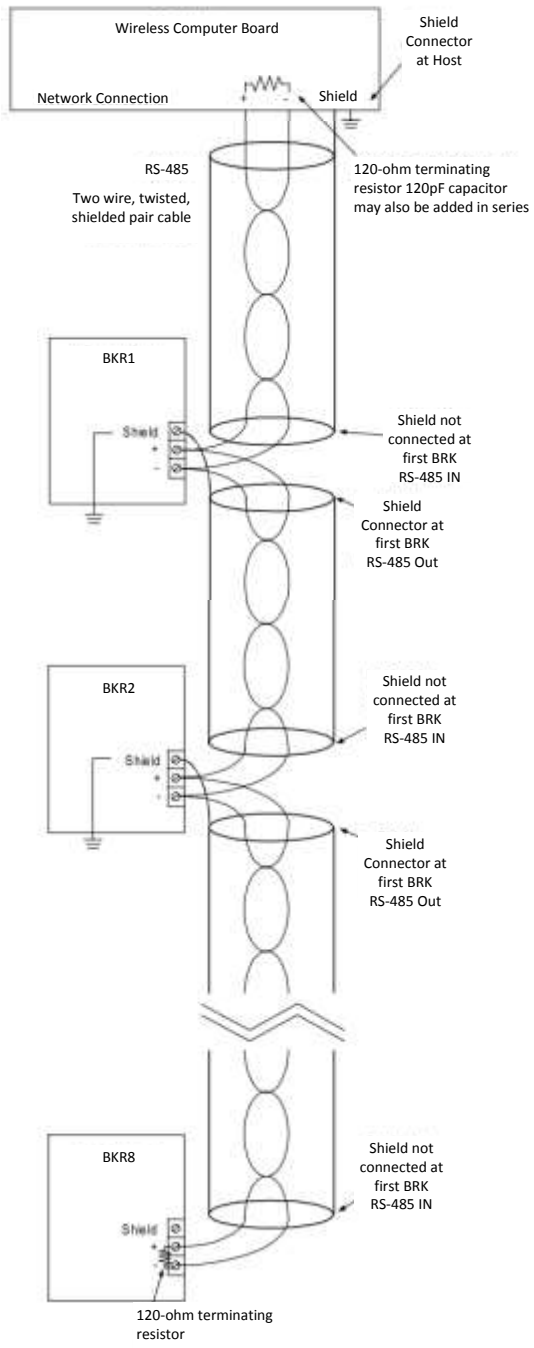

Figure 1. Network Illustration Wiring

Wiring Guidelines

Please refer to the following user guides when wiring EntelliGuard trip units:

- DEH-4567B EntelliGuard TU Trip Unit
- GEH-6502 Power Management Control System

Table 1 summarizes the EntelliGuard Gateway Manager configuration rules.

Table 1. Gateway Configuration Rules

Gateway is based on	Follow these rules for the Host	Follow these rules for the attached Modbus Network
Modbus	1. The EntelliGuard Gateway Manager is a single master. 2. Modbus network is connected to the Gateway via the RS-485 communication port (Com-B). 3. For fast response time by the application, it is recommended that up to 8 trip units be connected to the RS-485. **Note:** If more units are connected to the network, the refresh time of the system will significantly decrease. 4. The Gateway should be located outside the switchgear in a controlled temperature environment.	1. Each Modbus network must be properly terminated at each end of the network. 2. Maximum cable length of each Modbus network is 4000 feet. 3. All Modbus trip units attached to a single RS-485 network must communicate at the same baud rate. 4. RS-485 cable shields must be properly grounded. For maximum protection against surge and EMI damage, each IED on the network should have an isolated ground connection. See Figure 1 for an example of proper RS-485 wiring and grounding.

Hardware Dimensions and Appearance

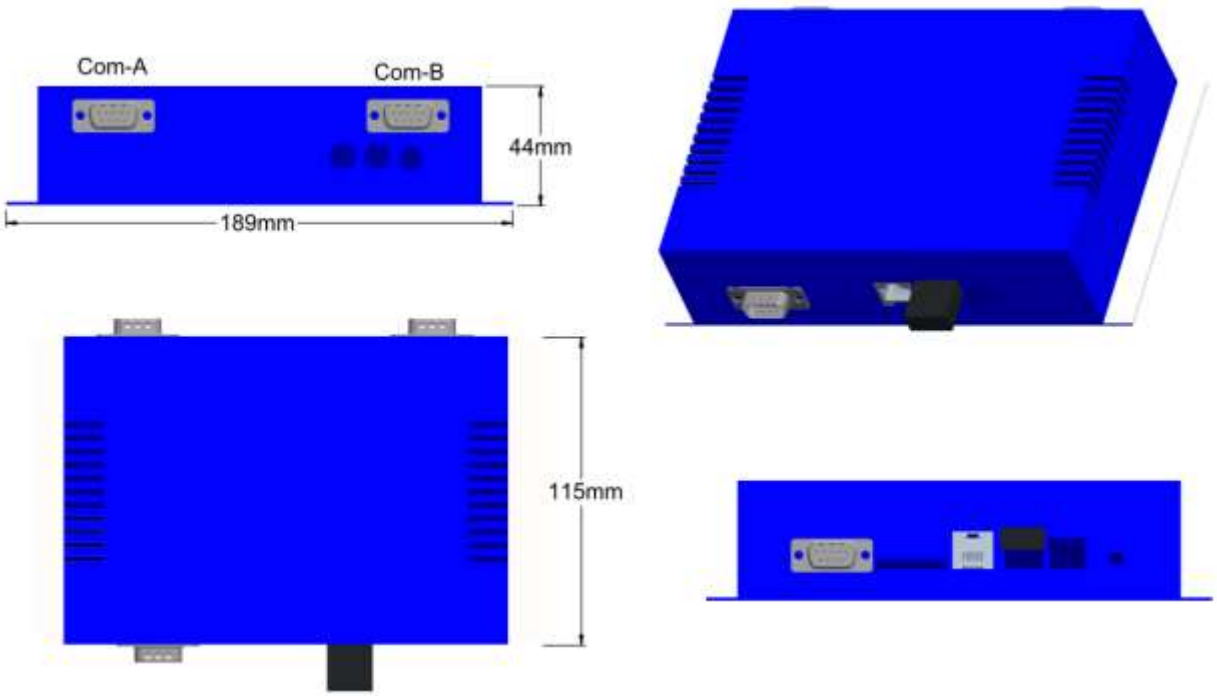

Figure 2. Hardware Dimensions (mm) and Appearances

RS-485 Connection to the EntelliGuard Gateway Manager

The Gateway requires a +5Vdc voltage source. This is provided with the EntelliGuard Gateway and is connected to the barrel connector in the back of the device.

The RS-485 connects to Com-B as seen in the Figure 2. Com-B is located on the back above the power connector. The Com-B connector must be wired as shown in the figure below for proper RS-485 connection.

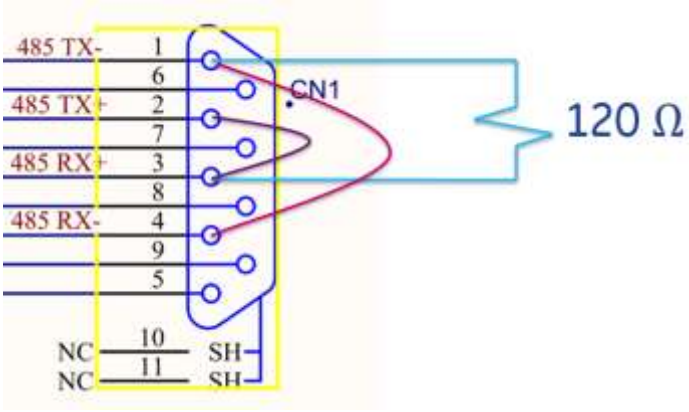

Figure 3. Wiring DB9 Connector

Pin 2 and 3 need to be jumper together, Pin 1 and 4 also need to be jumper together and a 120Ω resistor needs to be placed between Pin 1 and Pin3 as seen in Figure 3. Everything else should be left disconnected.

Mounting the Device

The Gateway is designed to be mounted via the 4 flanges. It is recommended that it gets installed outside the switchgear to allow for enhanced wireless signal range.

Setting up Breakers for EntelliGuard Gateway System

For the system to properly work, make sure the breaker has the following:

- Modbus Baud rate to 19.2K8N1
- Each breaker must have a unique slave address
- Each breaker must have a unique name. The breakers are named using the EntelliGuard Manager Toolkit TKS Software

Refer to the EntelliGuard Manager Gateway Installation Manual **(DEE-702)** for more information regarding system and application setup.

Application

The application is called **EntelliGuard Manager Mobile** and it is available on Google Play for download.

Figure 4. Application Icon

Please refer to the Instruction Manual **(DEE-701)** for more information about the application.

Once installed, the user will launch the application to automatically detect the network.

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