



GE Power Management Control System



[GE ED&C Home](#) | [Search ED&C](#) | [GE ED&C Power Management Home](#) | [GE ED&C PMCS Home](#)

Technical Note #56

Addressing the Devices

GE Power Management Control System

- [Description](#)
 - Software
 - Hardware
- [Operation](#)
- [Product Support](#)
- [Operator Interfaces](#)
- [F A Q's](#)
- [App Notes](#)
- [Download Area](#)
- [Manuals](#)

Useful Information

- [Glossary of Terms](#)
- [Useful Links](#)
- [Search Tech support](#)

We want to hear from you!

- Service and Support [locations](#) around the world .

Each device that will be attached to the PMCS network must have a unique address. Prior to installing any wiring you should plan the addresses for the devices to avoid any conflicts. The following are important points to remember when assigning network addresses to devices.

- Ensure that control power is present at all devices; refer to the individual device user manuals.
- Keep a table of device names and addresses to avoid address conflicts and to help with host configuration. Table 5 summarizes the devices that should occupy the various Modbus addresses, based on the following rules.
- Modbus Concentrator addresses must be in the range of 1 to 32.
- Modbus-native devices other than the Concentrator may occupy any address from 1 to 247.
- Commnet devices must have Modbus-equivalent addresses in the range of 33 to 247.
- The host PC does not require an address due to the master-slave organization of the PMCS.

Modbus Address	Appropriate Usage/Supported Devices
0	<ul style="list-style-type: none"> • Broadcast (not available to user)
1 – 32	<ul style="list-style-type: none"> • Modbus Concentrators must have addresses in this range • Other Modbus native devices may also have addresses in this range
33 – 247	<ul style="list-style-type: none"> • Modbus native devices • Commnet devices must have addresses in this range

Table 1. Appropriate usage for the Modbus address range.

- Commnet devices are preprogrammed with a factory-set address. You must change this address immediately upon installation of the device. Refer to the user manuals of the individual devices for instructions on assigning addresses at commnet devices.
- Because the commnet network accepts a different range of addresses than the Modbus network, commnet addresses must be mapped to corresponding Modbus addresses. The formula for this mapping is: desired Modbus address + 267 = commnet address to set at device. For example, to set a commnet device to Modbus address 33, the commnet address set at the device must be 300. Table 6 illustrates address mapping.

For Modbus Address:	Set commnet Device Address to:
33	300
34	301
35	302
...	...
246	513
247	514

Table 2. Modbus to commnet address mapping.

- You may want to block commnet address assignments by lineup and/or Modbus Concentrator segment. For example, start with 40 for the first lineup attached to one Modbus Concentrator, 50 for the second lineup attached, and so on. Addresses must be in the range 33 to 247. The example presented in Figure 18 demonstrates this.

- Increment the individual devices in each lineup by one. For example, if the first device in a lineup is Modbus address 101, the second device should be 102, the third device should be 103, etc.

- Addresses may be entered or changed at any time that control power is present.

NOTE: Per the EIA485 standard, each RS-485 network supports up to 32 'drops,' or electrical drains on the network. However, the Ethernet Gateway or RS-485 interface card counts as one drop. Thus, only 31 other devices may be attached to each RS-485 network, even though 32 Modbus addresses are available for use. Also, unlike commnet's POWER LEADER Repeaters, RS-485 repeaters are counted as devices, even though they have no Modbus address, because they do act as a drop on the network.

Keywords

addresses, Commnet, modbus

Related Notes

none

Last Revised 5/14/98

[GE home page](#)

[Search ED&C](#) | [GE home page](#) | [GE news](#) | [GE business finder](#) | [GE products & services](#)