

WMA-039 QUESTIONS & ANSWERS

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What are the uses for the NV storage?

If the unit is set for Autostore, each command will be backed up in non-volatile memory, so that if there is a power loss, the unit will come on in the same state as it was when power was lost.

If the unit has Autostore OFF, commands will not affect the non-volatile memory. When setting up a system, it may be desirable to set a default value, write it to NV, and leave Autostore OFF. In this configuration, the unit will always power up in the default state.

The NV Storage can also be used as a memory. By leaving the Autostore OFF, the Write to NV and Restore from NV commands can be used to control this memory. The unit will always power up in the last stored state before power down.

How can I be sure no two units have the same address in a multidrop system?

Each unit in a multidrop system should be assigned its unique address before it is installed in the multidrop system. If two units in a system have inadvertently been assigned the same address, the response will be garbled. In this case, it is only necessary to disconnect one to issue the commands to reassign the other. Then the disconnected unit may be re-installed.

Changing an address is a two-step process. This is done so that an address cannot be inadvertently changed. The first step is to clear the address (to ASCII 64 [@]). The second step is to assign the new address. The command to clear the address does not clear it from non-volatile memory, so that if one or more units get accidentally cleared, they can be restored to their original addresses by cycling the power.

I have incorporated the WMA-039 into my product and it works with the supplied software, but not in my customer's system. Why?

The most likely cause is a wire reversal, either a polarity reversal, if you are dealing with an RS-422 or RS-485 system; or a signal direction reversal, if you have an RS-232 or RS-422 system. The easiest way to determine the answer to the problem is to interchange the position of the wires. The worse case is the RS-422 system where there may be a problem with polarity as well as one of signal direction. A little troubleshooting with a scope should easily resolve the direction issue. That should reduce the problem to one of polarity. If troubleshooting with a scope, you can also definitively resolve the polarity issue. The WMA-039 (+) terminal (IN and OUT) exchanges positive pulses and remains low between data blocks. The (-) terminal on the WMA-039 remains high between data blocks and exchanges negative pulses.

Can I connect other devices with a different protocol to the same multi-drop bus as the WMA-039

Yes, providing the following requirements are met:

The basic definition for byte exchange are the same (baud, flow control, etc),

The other units have an addressable command/response structure,

There is no possibility that commands destined for one protocol could elicit a response by a device using the other, and

The system controller is capable of accommodating the various protocols.

Must all of the outputs be affected by the same command?

The standard WMA-039 controls all 14 outputs with one command. If it is desirable to have one command to control one set of the 14, and a different command to control the remaining, that can be done with a custom program. Inquiries about special units should be directed to engineering.

The mounting holes in the WMA-039 are not compatible with my current product. Can they be changed?

Custom mechanical designs can be accommodated. Inquiries about special units should be directed to engineering.