

BB2-3010 Client Write Behavior Change in v3.64.9

This behavior applies only when the BACnet client is writing from a local Output (commandable) object to a remote Output (commandable) object. A BACnet client write map would previously write the relinquish default value of the local object if none of the local object's command priorities were set. The new behavior is that the client will write a relinquish to the map's priority level in the remote object if none of the local object priorities are set.

Phantom Modbus Slave Registers Added in v3.64.9

The BB2-3010 can be configured as a Modbus slave and BACnet client, thus giving some other Modbus device like a PLC control over BACnet output objects via the BB2-3010 gateway. Because Modbus knows nothing about "relinquish" (or command priorities), there is no way to write to a Modbus register such that the BACnet object will relinquish a commandable priority level. When the BB2-3010 is acting as a Modbus slave, writing to holding register addresses that map to Output objects will result in the Modbus command priority 10 being set. But there has been no way to relinquish that command priority.

As of firmware version 3.64.9, phantom registers have been added which are recognized only by the Modbus slave. The phantom registers are accessible by calculating the slave register number of the Output object as defined in the user guide, and then adding 40,000 to the holding register number. If using the "ALT" mapping, add 5,000 to the ALT map register number instead. Writing any value to this register number will relinquish the Modbus command priority for that object. An exception will be returned if you try to relinquish a non-commandable object.

In order to give Modbus full control over a commandable object in some other BACnet device, it is necessary to program your Modbus master to write to one holding register to set the output, and write to a different register (the phantom register) to relinquish the output. The addresses you use will be derived from the local Output object number you choose as the local object in the gateway. To cause that object to then be transmitted to the remote BACnet device, you need to set up a client write map as illustrated below (example, your map may be different).

Babel Buster MS/TP-Modbus Gateway Configuration Tool v2.15

Connected: Target: 3010: Babel Buster BB2-3010 In Sync:

Local Port | Who-Is | Read/Write | Device | Object Map | Obj Map List | Modbus | Data List

Object Type/Instance: Analog Output 1 Units: no_units

Object Name: Test AO Description: Test relinquish feature

Read Periodic Write Periodic Set Default on Power-Up Enable Max Quiet Time

Write on Delta Set Default on Comm Fail

Poll Rate (Sec): 0 Slope/Scale Factor: 0 Timeout (Sec): 0

Initial COV Increment: 0 Intercept/Offset: 0 Max. Quiet Time (Sec): 0

Initial COV Period: 0 Delta for Send: 0 Default Value: 0

Initial Relinquish Default: 0 Read Fails before Fault: 0

Map Modbus Object Map BACnet Object

Remote Device Instance: 40180 Property: Present Value Bit Num: 0

Object Type: Analog Output Instance: 1 Data Type: Real

Mac address (no who-is): 0 Array Index: -1 Priority: 4

Insert Add Delete Read Device Write Device