Why my RS-485 remote I-7000 and I-87K Output module's host watchdog function doesn't work to reset its output channels to safe output value while the RS-485 communication cable is broken ?

If you are using ISaGRAF PAC – 7188EG, 7188XG, I-8xx7, I-8437-80 or I-8837-80 to connect RS-485 remote I-7000 and I-87K I/O modules, please set the "host_watchdog" parameter to 1 to enable the I-7000 and I-87K I/O modules's host_watchdog function.

The "watchdog_timer" paramter is for setting the timeout time if enable the host watchdog function. Its value is in hexadecimal, unit is 0.1 second. For example, setting as 1E means the timeout value is 3 seconds. If the RS-485 broken longer than 3 seconds, the I-7000 and I-87K I/O modules's output channels will be reset to safe output value.
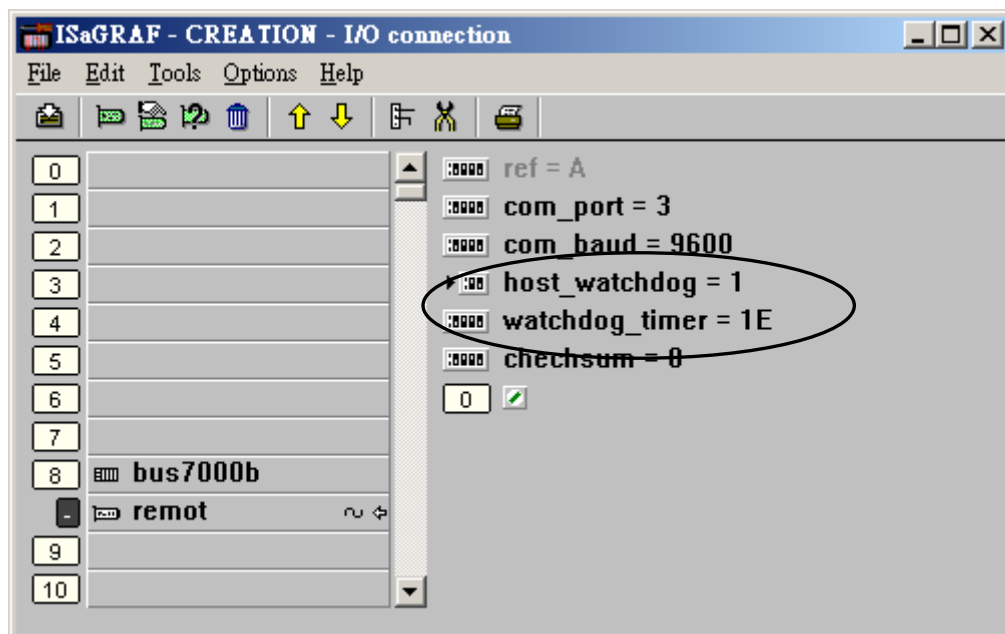
Very Important:

Please wire an terminal resistor about 110 to 330 ohms at I-7188EG/XG or I-8xx7 PAC's RS-485 port, between the D+ and D- pin (or between the RS485+ and RS485-).

This will ensure the host watchdog of I-7000 and I-87K output modules to work correctly when the communication between the controller and the I-7000/I-87K output modules is broken. (You can try 110 ohms first, then try 220 ohms, then others)

For example, if you don't wire any terminal resistor and enable the host watchdog function at "bus7000b" (Section 6.2 of ISaGRAF user manual, the "host_watchdog" parameter set as 1), when you just un-plug the I-7000's "DATA+" pin (keep "Data-" pin connected to the PAC), you will see the watchdog doesn't work in this I-7000.

If you wire a resistor about 110 ohms between the PAC's RS-485 D+ and D- pin, if you un-plug anyone of I-7000's "Data+" or "Data-" pin, the watchdog will work correctly.

Click the link for more ISaGRAF FAQ:
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