"E89" ERROR on 2500-Cxxx Family Processors

On rare occasions, your 2500-Cxxx Processor may exhibit an "E89" error on restart. This is cause by an irregular shutdown in memory and on startup, the internal CRC checksum value has been corrupted.

If this happens to you, do not be too alarmed!

In most cases, the error can be reset with a power up restart cycle of the processor. A restart cycle is a proper shutdown, meaning power is removed from the system (PS unit in the rack) and powered up again. Do not a pull the CPU out of the rack and reinsert it under power. Sometimes it may take a several power up cycles to get the CPU back into a functional state. (Have some patience, it will eventually come back!)

An upgrade of the CPU firmware to a version of 9.16 or higher will ensure that this error never returns.

Information on this subject can be found on the following link:
http://www.controltechnology.com/Files/Products/technical-advisory-(restricted)/2500-Cxxx-technical-advisory41

Should you choose to perform a CPU firmware update, one of the easiest methods to do so is via the SD card slot on the front of the CPU. Please follow the following sequence to update the firmware. The whole process should not take more than 5 minutes.

NOTE: This update process will erase the existing PLC program, so ensure that you have an up to date backup to re-install in the CPU once firmware update is complete.

(1) Remove the CPU and put dipswitch 12 (last in switch bank) in the <u>closed</u> position. (see below, switch is pushed down on right side of the picture below or pushed down on top in a vertical module position)
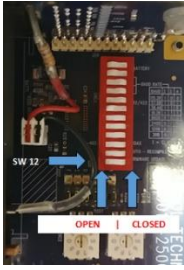
(2) Prepare your SD card. Download the latest firmware version from the CTI website. http://www.controltechnology.com/downloads
Ensure that this firmware version is 9.16 or higher. Place the firmware binary file in the root directory of the SD card. (Make sure there are no other version of the firmware in the root directory)

Compatible SD cards are as such:

Standard capacity SD card must be used if your existing firmware is V6.17 or less

High Capacity SD cards (SDHC) can be used if your existing firmware is V6.18 or greater (32Gb SDHC or less)

==DO not insert the SD card into the CPU yet.==

(3) Once the dipswitch setting has been made, put the CPU back into the PLC rack (Chassis).
(4) Power up and wait until you see "U01" on the front display. If you get "E89" again, recycle the power to see if you can get a normal startup with "U01". If you can't get a normal startup after about 10 cycles, the CPU will need to come back to the factory to be upgraded.
(5) Once you get a successful start with "U01", insert the prepared SD card into the SD card holder of the CPU. The upgrade process will begin within a couple of seconds and you will see the display change from U01 to U02 and states up to U39.
(6) The upgrade process is complete when the display stops & indicating U00. (about a minute or so)
(7) Once firmware update process is complete, power down the CPU and return switch 12 to the original OPEN setting.
(8) Once this firmware is upgraded, you will no longer get "E89" errors on startup.

Control Technology Inc.

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