

## The non-volatile V-memory in the D2-230, D2-240 and DL05/06

This document shows how to use the non-volatile V-memory.

### 1. The non-volatile V-memory area

D2-230: V4000 – V4177

D2-240: V4000 – V4377

DL05: V7400 – V7577

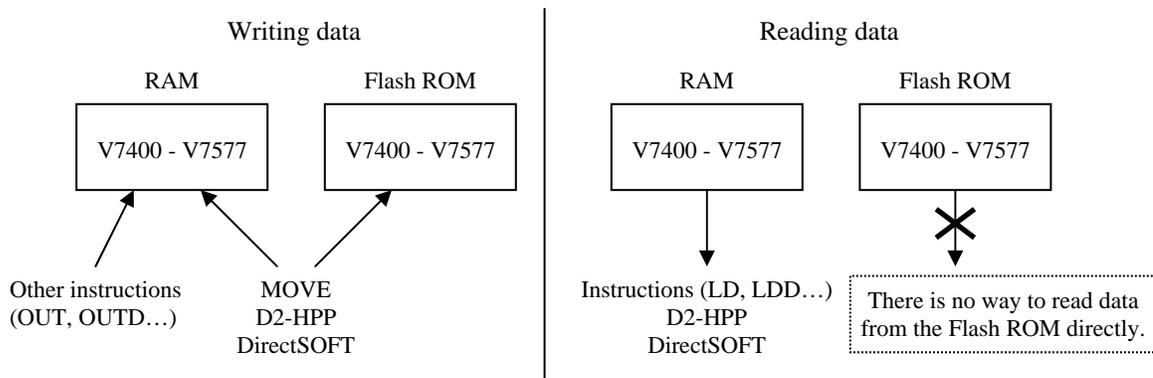
DL06: V7400 – V7577

Note: These memory areas always keep their data regardless of the retentive range setup.

In the following explanation, the DL05 is used as an example.

### 2. Access to the non-volatile V-memory

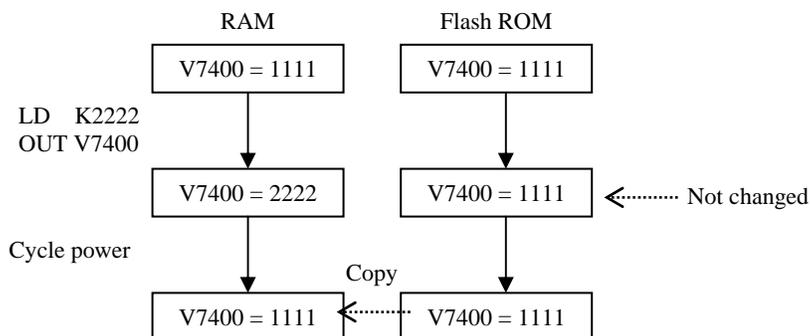
There are 2 types of memory assigned for the non-volatile V-memory area. They are RAM and flash ROM (or EEPROM). They are sharing the same V-memory addresses. However, you can only use the MOVE instruction, D2-HPP and DirectSOFT (with K-sequence protocol) to write data into the flash ROM. When you write data into the flash ROM, the same data is written into the RAM too. If you use other instructions, you can write data into the RAM only. When you read data from the non-volatile V-memory area, the data is always read from the RAM.



After a power cycle, the PLC always copies the data in the flash ROM to the RAM.

### 3. A possible problem

If you use any instructions except the MOVE instruction to write data into the non-volatile V-memory area, you only update the data in the RAM. After a cycle power, the PLC copies the previous data from the flash memory to the RAM, so the data written only to RAM will be over-written. To avoid this problem, use the MOVE instruction.



This seems previous data comes back.