

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

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

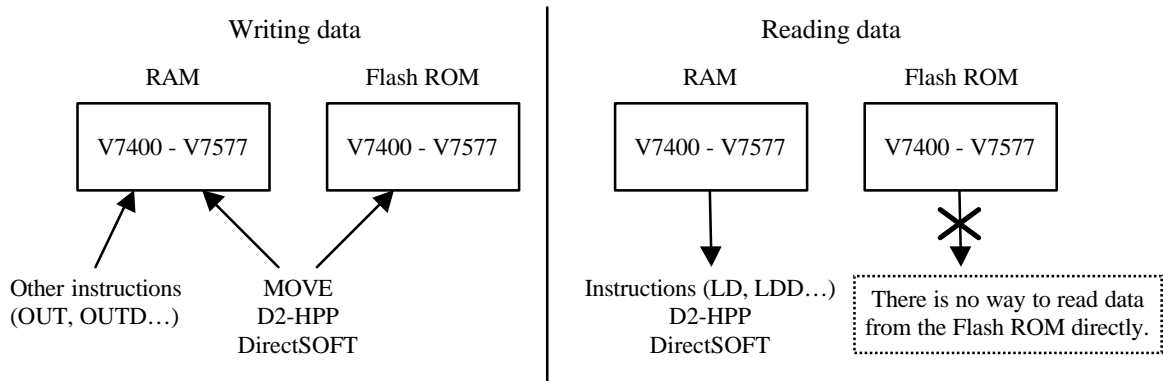
DL05: V7400 – V7577

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 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 the 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 you may think the data you changed was disappeared. To avoid this type of trouble, we recommend you to use the MOVE instruction.

