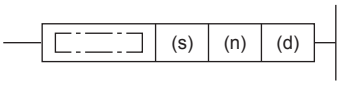
Writing extended file register

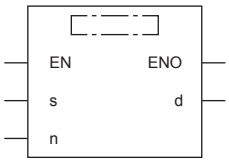
ERWRITE

FX5S FX5UJ FX5U FX5UC

Writes the current value of the file register (R) in the CPU built-in memory to the extended file register (ER).

Ladder diagram	Structured text
	ENO:=ERWRITE(EN,s,n,d);

FBD/LD



Setting data

■Descriptions, ranges, and data types

Operand	Description	Range	Data type	Data type (label)
(s)	The device number of file register (R) in the data storage destination (Extended file register (ER) in the data transfer source and (s) is the same number.)	—	Word	ANY16_ARRAY
(n)	Number of write (transfer) points	0 to 32767	16-bit unsigned binary	ANY16_U
(d)	Head device number which turns on when the instruction is completed When the reading is completed abnormally, (d)+1 turns on.	—	Bit	ANYBIT_ARRAY (Number of elements: 2)
EN	Execution condition	—	Bit	BOOL
ENO	Execution result	—	Bit	BOOL

■Applicable devices

Operand	Bit	Word			Double word		Indirect specification	Constant			Others
	X, Y, M, L, SM, F, B, SB, S	T, ST, C, D, W, SD, SW, R	U□\G□	Z	LC	LZ		K, H	E	$	
(s)	—	○*1	—	—	—	—	—	—	—	—	—
(n)	○	○	—	○	—	—	○	○	—	—	—
(d)	○	○*2	—	—	—	—	—	—	—	—	—

*1 Only R can be used.
*2 T, ST, and C cannot be used.

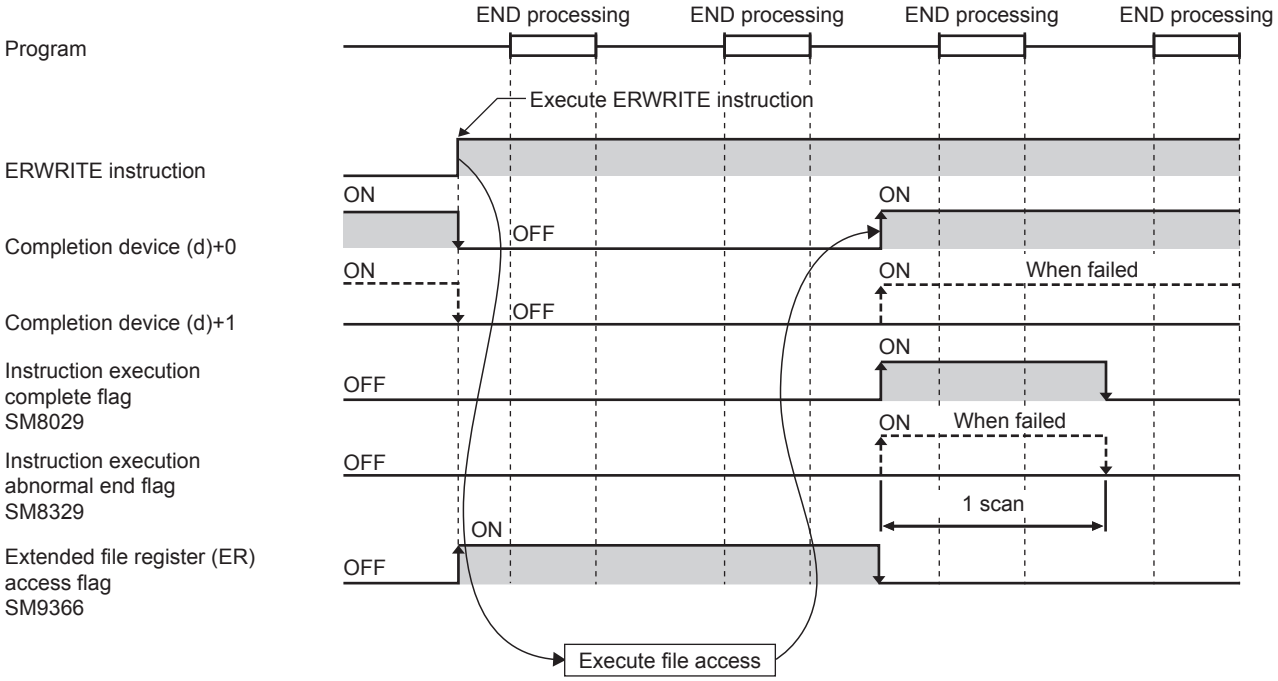
Processing details

The current value of the file register (R) in the CPU built-in memory is written (transferred) for (n) points to the extended file register (ER) in the SD memory card specified with (s).

The normal or abnormal completion of the ERWRITE instruction can be confirmed with the instruction completion device (d) specified with the setting data.

- Instruction completion device (d)+0: Turns off when the ERWRITE instruction is activated, and turns on during the instruction processing for the scan in which the ERWRITE instruction has completed normally.
- Instruction completion device (d)+1: Turns off when the ERWRITE instruction is activated, and turns on during the instruction processing for the scan in which the ERWRITE instruction has completed abnormally.

Also, when the ERWRITE instruction has completed normally/abnormally, instruction execution complete flag (SM8029) and instruction execution abnormal end flag (SM8329) turn on only for one scan at the same timing with the instruction completion device (d). After the contact of the ERWRITE instruction turns on, the extended file register (ER) access flag (SM9366) turns on during access to the extended file register (ER).



Point

- When (s)=0 (R0), and (n)=0 (the number of write points: 0) are specified, all the points (32768 points) of the file register (R) in the CPU built-in memory are written to the extended file register (ER) in a batch.
- The following action takes place when (s) = 1 or more (from R1) and (n) = 0 (number of write points: 0) is set.

- FX5S/FX5U/FX5UC CPU module: R (s) to the range of assigned device points in the CPU built-in memory are written to the extended file register (ER).
- FX5UJ CPU module: R (s) to R32767 in the CPU built-in memory are written to the extended file register (ER).

- Even if the command input of ERWRITE instruction is set to OFF while the extended file register is being written, ERWRITE instruction is executed until writing is completed.

■Related devices

Device	Name	Description
SM8029	Instruction execution complete	Turns on when an instruction is finished normally.
SM8329	Instruction execution abnormal end	Turns on when an instruction is finished abnormally.
SM9366	Extended file register (ER) access flag	Turns on during access to extended file register (ER).

Point

SM8029 and SM8329 are the flags shared by multiple instructions. Program flag contacts directly under each instruction. For details, refer to ☞ Page 45 Handling general flags.

Precautions

- If the ERWRITE instruction is executed, an access to the SD memory card occurs and the scan time is extended.
- This instruction cannot be executed with the extended file register operation instruction simultaneously.
- When executing the following extended file register operation instruction, detect the extended file register (ER) access flag: SM9366 switching from ON to OFF, and turn on the drive contact of the extended file register operation instruction.
- The ERWRITE instruction cannot be executed in the interrupt program.
- Do not change the value of the file register (R) during transferring the extended file register (ER).
- Do not turn off the power supply of the CPU module during access to the extended file register (ER).

Operation error

Error code (SD0/SD8067)	Description
2121H	The SD memory card is not formatted.
2820H	The last device number of the device to be transferred (s) exceeds the device points assignment setting of the file register (R).
2821H	The device other than the target device is specified to each operand.
3583H	The extended file register operation instruction is executed in the F/W of the serial number 16X**** or earlier. (FX5U/FX5UC CPU modules only)
3584H	Write protect of the SD memory card is enabled.
3585H	• A storage capacity in the SD memory card for the extended file register "EXFILER.ERD" is insufficient. • A storage capacity in the SD memory card for the copy file "~$EXFILER.ERD" is insufficient.
3586H	• The SD memory card is not inserted. • The SD memory card is removed or unmounted during transferring the extended file register (ER).
3587H	The writing to the SD memory card did not complete normally.