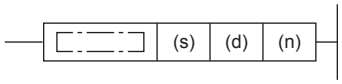
Separating 4 bits from 16-bit data

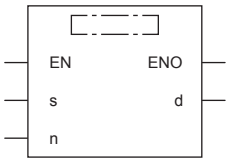
DIS(P)

FX5S FX5UJ FX5U FX5UC

These instructions store the data equivalent of the (n) nibbles (1-nibble/ 4-bits) of the 16-bit binary data specified by (s) in to the lower-order 4 bits of (n) number of devices starting from the one specified by (d).

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

FBD/LD



Setting data

■Descriptions, ranges, and data types

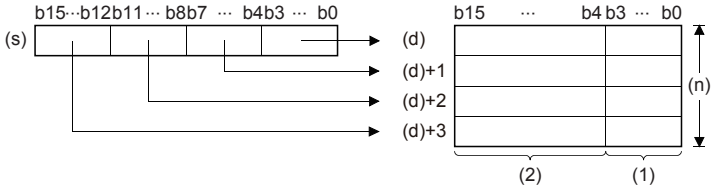
Operand	Description	Range	Data type	Data type (label)
(s)	Head device for storing the data to be separated	—	16-bit signed binary	ANY16
(d)	Head device storing separated data	—	16-bit signed binary	ANY16
(n)	Number of separations (0 indicates no processing is performed)	1 to 4	16-bit unsigned binary	ANY16
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)	○	○	○	○	—	—	○	○	—	—	—
(d)	—	○	—	—	—	—	○	—	—	—	—
(n)	○	○	○	○	—	—	○	○	—	—	—

Processing details

- These instructions store the data equivalent of the (n) nibbles (1-nibble/ 4-bits) of the 16-bit binary data specified by (s) in to the lower-order 4 bits of (n) number of devices starting from the one specified by (d).

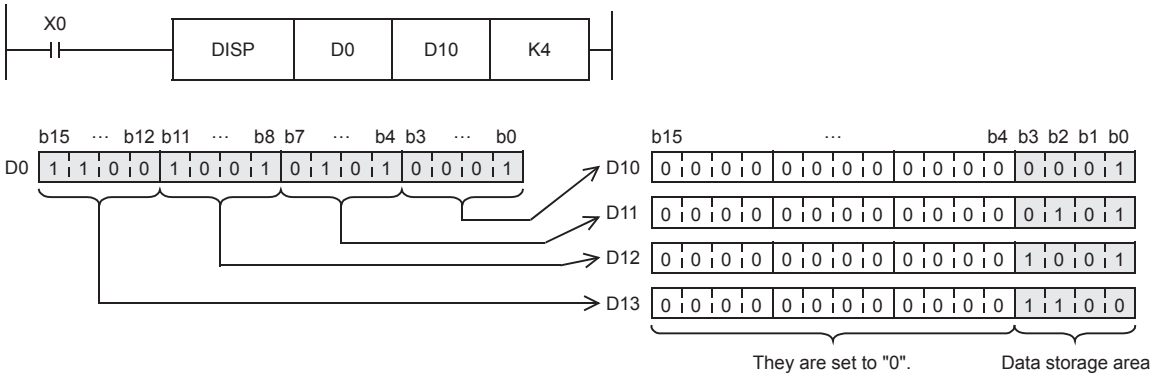


(1): Data storage area

- The higher-order 12 bits of (n) number of devices starting from the one specified by (s) becomes 0.
- When (n) is 0, no processing is performed, and the contents of the (n) number of devices starting from the one specified by (d) do not change.

Program example

In the program below, D0 is separated into 4 bit units and stored in D10 to D13 when X0 turns ON.



Operation error

Error code (SD0/SD8067)	Description
2820H	The range of (n) number of points from (d) exceed the corresponding device range.
3401H	(n) is other than 0 to 4.