Inserting data to the data table

FINS(P)

FX5S **FX5UJ** **FX5U** **FX5UC**

These instructions insert 16-bit data specified by (s) to the data table specified by (d) as the (n)th data.

After these instructions are executed, the data after the (n)th data in the data table is moved down by one data point.

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

FBD/LD

Setting data

■Descriptions, ranges, and data types
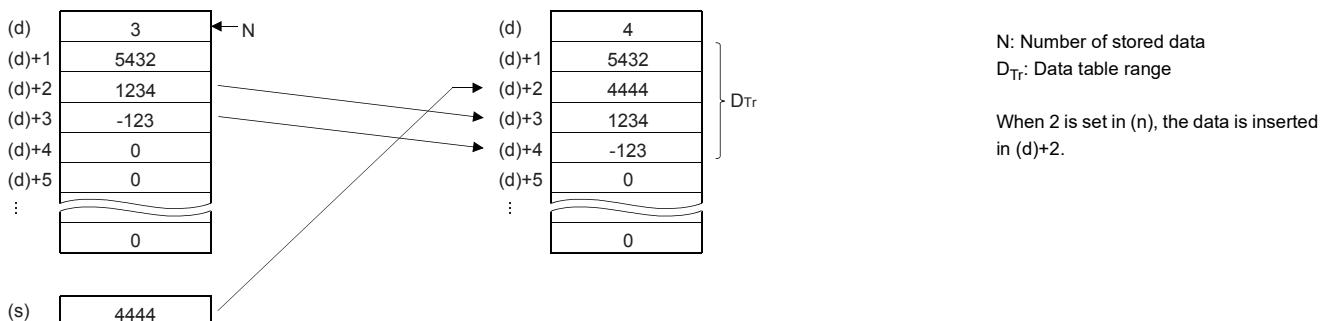
Operand	Description	Range	Data type	Data type (label)
(s)	Head device number where the insertion-target data is stored	—	16-bit signed binary	ANY16
(d)	Start number of the table	—	Word	ANY16
(n)	Data insertion position in the table	1 to 32767	16-bit unsigned binary	ANY16
EN	Execution condition	—	Bit	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 insert 16-bit binary data specified by (s) to the data table specified by (d) as the (n)th data. After these instructions are executed, the data after the (n)th data in the data table is moved down by one data point.

N: Number of stored data
D_{Tr}: Data table range

When 2 is set in (n), the data is inserted in (d)+2.

Precautions
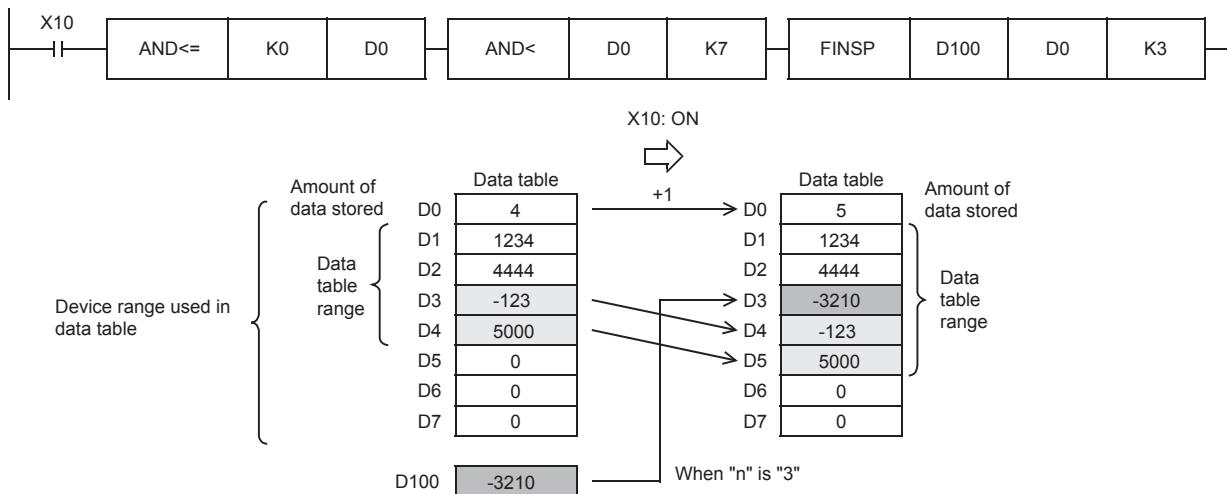
- The device range used in a data table should be controlled by the user.
- The data table has (d) number of stored data starting from ((d)+1).

Program example

In the program shown below, data stored in D100 is inserted into the 3rd position of the data table stored in D0 to D4 when X10 is set to ON.

However, when the amount of data stored exceeds "7", the FINSP instruction is not executed.

(The device range used in the data table is D0 to D7).

X10										
─┤├─	AND<=	K0	D0	AND<	D0	K7	FINSP	D100	D0	K3

X10: ON

Operation error

Error code (SD0/SD8067)	Description
2820H	When the FINS(P) instructions are executed, the data table range exceeds the corresponding device range.
3405H	When the FINS(P) instructions are executed, the value (n) exceeds the corresponding device range of the table (d).
	When the FINS(P) instructions are executed, the table position (n) where the data is inserted exceeds "the number of stored data points + 1".
	The value set in (n) is other than the following. $2 \le (n) \le 32767$