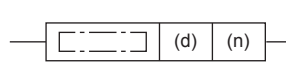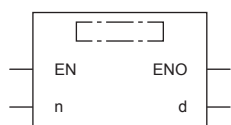# Shifting 16-bit data to the right by n bit(s)

SFR(P)

FX5S　FX5UJ　FX5U　FX5UC

These instructions shift the 16-bit data in the device specified by (d) to the right by (n) bit(s).

Ladder diagram	Structured text
▭ (d) (n)	ENO:=SFR(EN,n,d); ENO:=SFRP(EN,n,d);

FBD/LD
EN　ENO n　d

Setting data

■Descriptions, ranges, and data types

Operand	Description	Range	Data type	Data type (label)
(d)	Head device number where the shift-target data is stored	—	16-bit signed binary	ANY16
(n)	Number of shifts	0 to 15	16-bit unsigned binary	ANY16
EN	Execution condition	—	Bit	BOOL
ENO	Execution result	—	Bit	BOOL

■Applicable devices

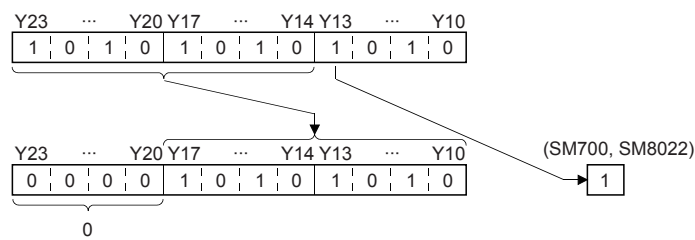| Operand	Bit	Word			Double word		Indirect specification	Constant			Others
	X, Y, M, L, SM, F, B, SB, S	T, ST, C, D, W, SD, SW, R	U□\G□	Z	LC	LZ		K, H	E	$	
(d)	○	○	○	○	—	—	○	—	—	—	—
(n)	○	○	○	○	—	—	○	○	—	—	—

Processing details

- This instruction shifts the 16-bit data in the device specified by (d) to the right by (n) bit(s) from the most significant bit. The (n) bit(s) from the most significant bit is/are filled with 0(s).

When (n)=6

• When (d) is a bit device, bits are shifted to the right within the device range specified by digit specification.
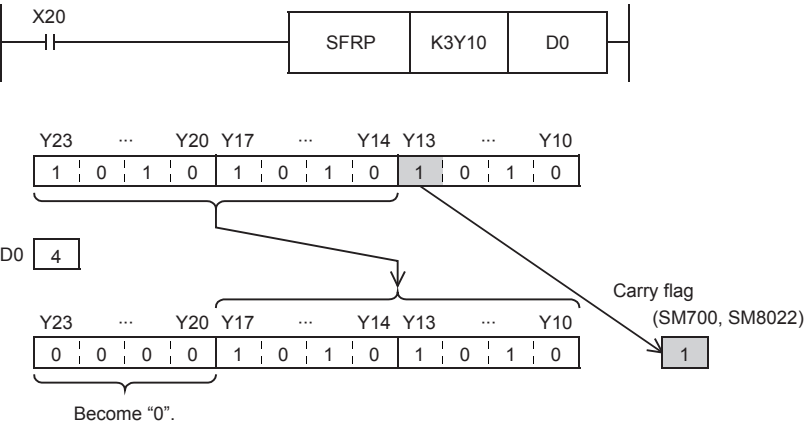
When (n)=4

• Specify any value between 0 and 15 for (n). If a value 16 or larger is specified for (n), bits are shifted to the right by the remainder value of (n)÷16. For example, when (n) is 18, data is shifted by 2 bits to the right because 18 divided by 16 equals 1 with a remainder of 2.

■**Related devices**

Device	Name	Description
SM700	Carry	ON/OFF according to the status (1/0) of the (n-1)th bit.
SM8022		

Program example

In the program example shown below, the contents of Y10 to Y23 are shifted rightward by the number of bits specified by D0 when X20 turns ON.

Operation error

There is no operation error.