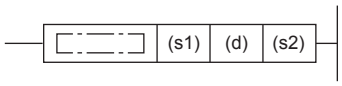
Storing the specified number of character strings

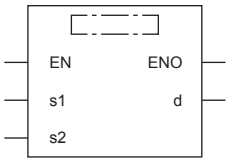
MIDR(P)

FX5S FX5UJ FX5U FX5UC

These instructions extract the number of characters specified by (s2)+1 of the character string data stored in the device specified by (s1) and later from the position specified by (s2), and store the extracted characters in the device specified by (d) and later.

Ladder diagram	Structured text
	ENO:=MIDR(EN,s1,s2,d); ENO:=MIDRP(EN,s1,s2,d);

FBD/LD



Setting data

■Descriptions, ranges, and data types

Operand	Description	Range	Data type	Data type (label)
(s1)	Character string or head device number storing a character string	—	Character string	ANYSTRING_SINGLE
(d)	Head device number for storing the character string data of the operation result	—	Character string	ANYSTRING_SINGLE
(s2)	Head device number for storing the number of characters and position of the start character (s2)+0: Position of the start character, (s2)+1: Number of characters	—	16-bit signed binary	ANY16_ARRAY (Number of elements: 2)
EN	Execution condition	—	Bit	BOOL
ENO	Execution result	—	Bit	BOOL

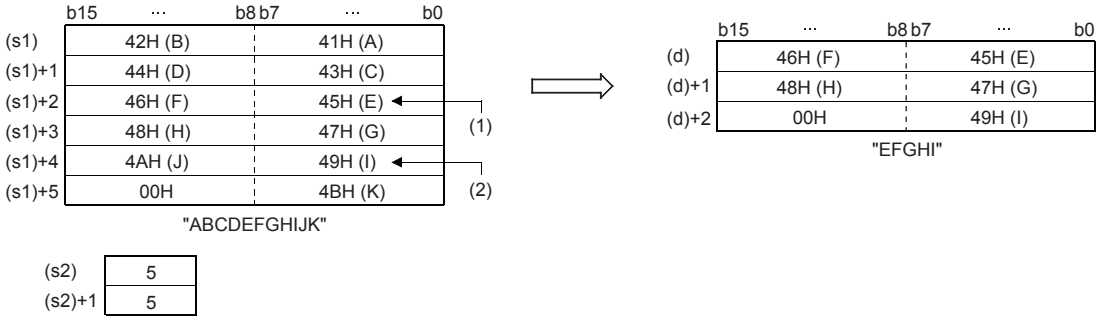
■Applicable devices

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	$	
(s1)	—	○*1	—	—	—	—	○	—	—	○	—
(d)	—	○*1	—	—	—	—	○	—	—	—	—
(s2)	○	○	○	○	—	—	○	—	—	—	—

*1 T, ST, and C cannot be used.

Processing details

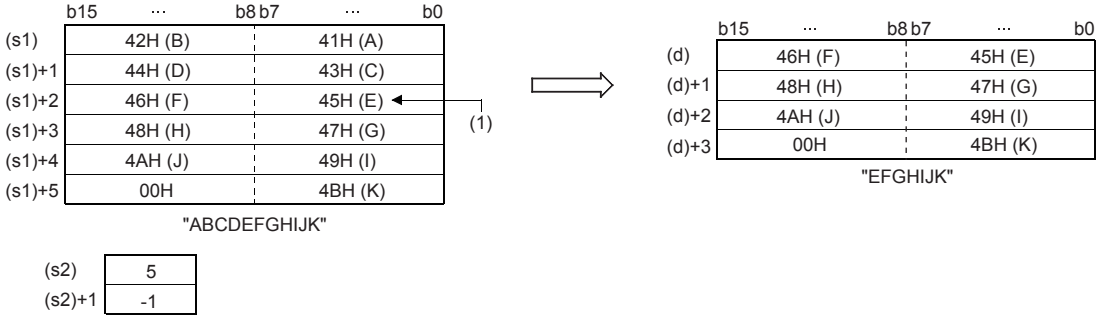
- These instructions extract the number of characters specified by (s2)+1 of the character string data stored in the device specified by (s1) and later from the position specified by (s2), and store the extracted characters in the device specified by (d) and later.



(s2)	5
(s2)+1	5

(1): 5th character position (s2)
(2): ASCII code for 5th character (s2)+1

- A character string stored in (s1) indicates data stored in devices from the specified device until "00H" is first detected in units of byte.
- A NULL code (00H), which indicates an end of a character string, is automatically added at the end of the character string data.
- When the number of extracted characters "(s2)+1" is odd, "00H" is stored in the upper byte of a device storing the last character. When the number of extracted characters "(s2)+1" is even, "0000H" is stored in the device after the last character.
- If the number of characters specified by (s2)+1 is 0, no processing is performed.
- When (s2)+1 (the number of characters to be extracted) is "-1", the entire character string stored in (s1) and later is stored to (d) and later.



(s2)	5
(s2)+1	-1

(1): 5th character position (s2)

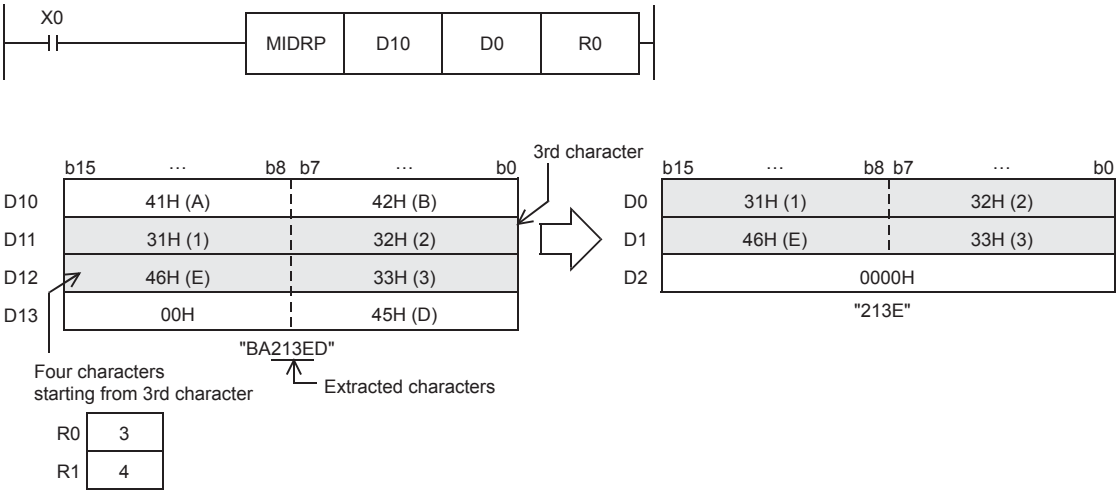
Precautions

When handling character codes other than ASCII codes, note the following points:

- The number of characters is handled in byte units (8 bits). Accordingly, in the case of character codes in which 2 bytes express 1 character such as shift JIS codes, 1 character is detected as "2".
- When extracting characters from a character string including character codes in which 2 bytes express 1 character such as shift JIS codes, consider the number of characters to be extracted in units of character codes for 1 character. Note that the expected character code is not retrieved if only 1 byte is extracted out of a 2-byte character code.

Program example

In the program example shown below, four characters are extracted from the 3rd character from the left end of the character string data stored in D10 and later, and then stored to D0 and later when X0 turns ON.



Operation error

Error code (SD0/SD8067)	Description
2820H	In the corresponding device range of the device specified by (s1) and later, "00H" does not exist.
3405H	The value stored in a device specified in (s2)+1 is -2 or lower.
	The value stored in a device specified in (s2) exceeds the number of characters of (s1).
	A negative value is specified in (s2).
	The value stored in a device specified in (s2)+1 exceeds the number of characters of (s1).
	The character string specified by (s1) has more than 16383 characters.
	The total of the values stored in devices specified in (s2) and (s2)+1 exceeds the number of characters of (s1).
3406H	The number of characters from the position specified by (d) to (s2)+1 exceeds the corresponding device range.