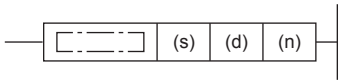
Searching the maximum value of 16-bit data

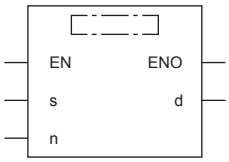
MAX(P)(_U)

FX5S FX5UJ FX5U FX5UC

These instructions search the maximum value from the (n) point(s) of 16-bit binary data in the device starting from the one specified by (s), and store the maximum value in the device specified by (d).

Ladder diagram	Structured text*1	
	ENO:=MAXP(EN,s,n,d);	ENO:=MAXP_U(EN,s,n,d);

FBD/LD*1



*1 The MAX and MAX_U instructions are not supported by the ST language and the FBD/LD language. Use MAX of the standard function.
☞ Page 1327 MAX(_E), MIN(_E)

Setting data

■Descriptions, ranges, and data types

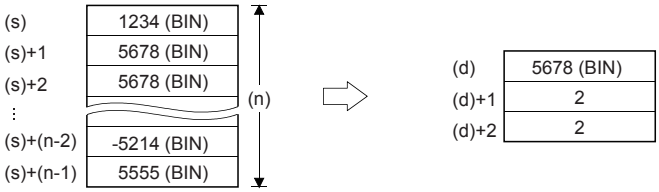
Operand		Description	Range	Data type	Data type (label)
(s)	MAX(P)	Head device number where the maximum value is searched	—	16-bit signed binary	ANY16_S
	MAX(P)_U			16-bit unsigned binary	ANY16_U
(d)	MAX(P)	Head device number for storing the maximum value	—	16-bit signed binary	ANY16_S_ARRAY (Number of elements: 3)
	MAX(P)_U			16-bit unsigned binary	ANY16_U_ARRAY (Number of elements: 3)
(n)		Number of data to be searched	0 to 65535	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 search the maximum value from the (n) point(s) of 16-bit binary data in the device starting from the one specified by (s), and store the maximum value in the device specified by (d). These instructions start searching from the device specified by (s), and store the location from (s) of the first maximum value in (d)+1 and the number of maximum values in (d)+2.



(d): Maximum value
(d)+1: Position
(d)+2: Number of data

Operation error

Error code (SD0/SD8067)	Description
2820H	The (n) point(s) of data in the device starting from the one specified by (s) exceed the corresponding device range.
	The device specified by (d) exceeds the corresponding device range.