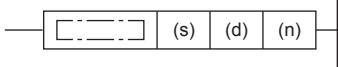
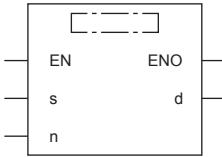


# Searching the maximum value of 32-bit data

## DMAX(P)(\_U)

FX5S FX5UJ FX5U FX5UC

These instructions search the maximum value from the (n) point(s) of 32-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 <sup>*1</sup>	
	ENO:=DMAXP(EN,s,n,d);	ENO:=DMAXP_U(EN,s,n,d);
FBD/LD <sup>*1</sup>		
		

\*1 The DMAX and DMAX\_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

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### ■ Descriptions, ranges, and data types

Operand		Description			Range	Data type		Data type (label)	
(s)	DMAX(P)	Head device number where the maximum value is searched			—	32-bit signed binary		ANY32_S	
	DMAX(P)_U					32-bit unsigned binary		ANY32_U	
(d)	DMAX(P)	Head device number for storing the maximum value			—	32-bit signed binary (*1) (ANY32_S_ARRAY)		— (*1) (ANY32_S_ARRAY)	
	DMAX(P)_U					32-bit unsigned binary (*1) (ANY32_S_ARRAY)		— (*1) (ANY32_S_ARRAY)	
(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	

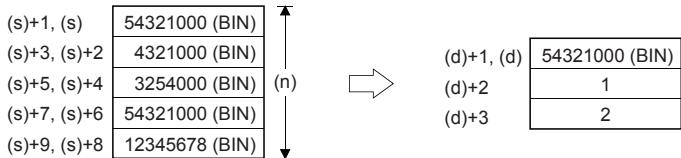
\*1 Regardless of the program language to be used, the data type is specified by a device. Do not specify a label.

### ■ 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		K, H	E	\$	
(s)	—	○	—	—	—	—	○	—	—	—	—
(d)	—	○	—	—	—	—	○	—	—	—	—
(n)	○	○	○	○	○	—	○	○	—	—	—

## Processing details

- These instructions search the maximum value from the (n) point(s) of 32-bit binary data in the device starting from the one specified by (s), and store the maximum value in the device specified by (d) and (d)+1. These instructions start searching from the device specified by (s), and store the location from (s) of the first minimum value in (d)+2 and the number of maximum values in (d)+3.



(d)+1, (d): Maximum value

(d)+2: Position

(d)+3: 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.