

# 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>		

<sup>\*1</sup> 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

### ■Descriptions, ranges, and data types

Operand	Description	Range	Data type	Data type (label)
(s)	DMAX(P)	—	32-bit signed binary	ANY32_S
	DMAX(P)_U		32-bit unsigned binary	ANY32_U
(d)	DMAX(P)	—	32-bit signed binary	— <sup>*1</sup> (ANY32_S_ARRAY)
	DMAX(P)_U		32-bit unsigned binary	— <sup>*1</sup> (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

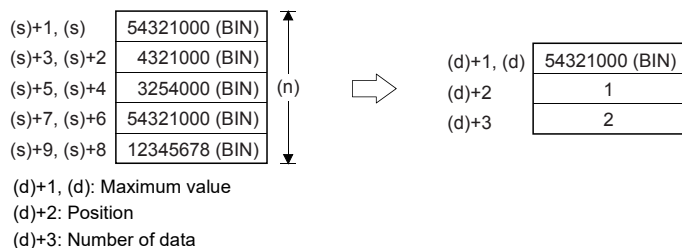
<sup>\*1</sup> Regardless of the program language to be used, the data type is specified by a device. Do not specify a label.

### ■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	LZ		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.



## 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.