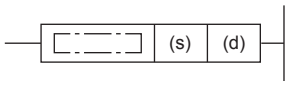
Saving the selected data of the index register and long index register

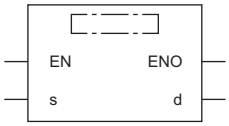
ZPUSH(P)

FX5S FX5UJ FX5U FX5UC

These instructions save the contents of index registers and long index registers within the range specified by (s) in the devices specified by (d) and later.

Ladder diagram	Structured text
	ENO:=ZPUSH_2(EN,s,d); ENO:=ZPUSHP_2(EN,s,d);

FBD/LD



("ZPUSH_2", "ZPUSHP_2" enters □.)

Setting data

■Descriptions, ranges, and data types

Operand	Description	Range	Data type	Data type (label)
(s)	Type of the index register or long index register to be saved	0 to 2	16-bit unsigned binary	ANY16
(d)	Head device number for saving the data of index registers	—	16-bit signed 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)	—	○	—	—	—	—	○	—	—	—	—

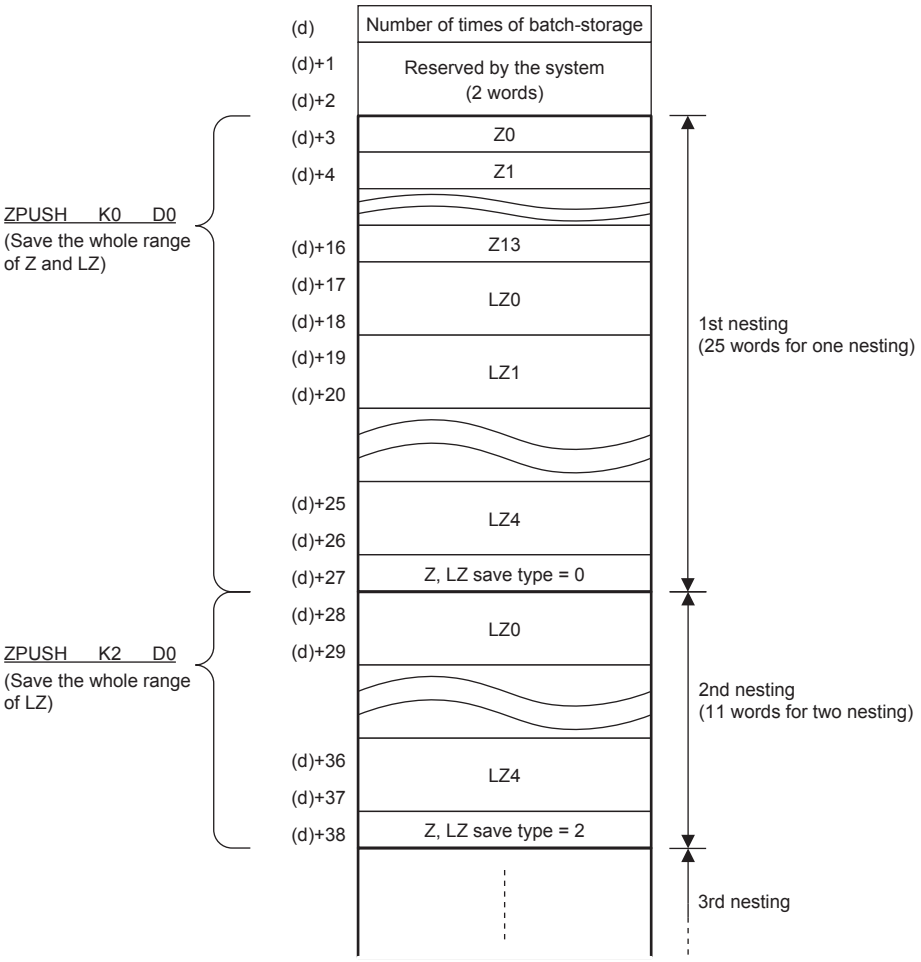
Processing details

- These instructions save the contents of index registers and long index registers within the range specified by (s) in the devices specified by (d) and later. The type of the index register or long index register saved is stored in the end of the saved data.
- When the contents of the index registers and long index registers are saved, "1" is added to (d).
- The following shows values specified by (s) and the index register or long index register to be saved.

(s) value	Z or LZ to be saved
0	Z, LZ (whole range)
1	Z (whole range)
2	LZ (whole range)

- The selected data of index register/long index register return instructions (ZPOP(P) instructions) are used to return the data. The selected data of index register/long index register save instructions (ZPUSH(P) instructions) and the selected data of index register/long index register return instructions (ZPOP(P) instructions) can be used in pairs and to adopt a nesting structure. (☞ Page 742 Returning the selected data of the index register and long index register)

- When a nesting structure is adopted, the areas to be used are added to (d) and later every time the selected data of index register/long index register save instructions (ZPUSH(P) instructions) are executed. Check the number of index registers and long index registers by SD300 and SD302, and secure the areas for the number of instructions to be used in advance.
- The following shows the areas of (d) and later used for the instructions (when Z0 to 13 and LZ0 to 4 are used).



Precautions

- When a nesting structure is not adopted, clear (d) before executing the ZPUSH(P) instructions.
- When a nesting structure is adopted, clear (d) before executing the first ZPUSH(P) instructions.
- When the ZPOP(P) instructions are used to return the data of index registers, use the ZPOP(P) instructions corresponding to the ZPUSH(P) instructions that were used for saving the data.
  ZPUSH(P) (One setting data) → ZPOP(P) (One setting data)
  ZPUSH(P) (Two setting data) → ZPOP(P) (Two setting data)
- Do not change the values of (d)+1 and (d)+2 because they are used by the system. Do not change the values of the Z and LZ save types stored in the devices specified by (d) and later because they are used by the system.
- Secure the areas so that the save destination specified by (d) does not exceed the device range.

Operation error

Error code (SD0/SD8067)	Description
2820H	The range of points used in (d) or later exceeds the range of the target device/label area.
3405H	A value other than 0 to 2 is specified in (s).
	When the number of index registers is 0, "1" is specified in (s).
	When the number of long index registers is 0, "2" is specified in (s).