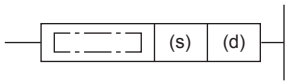
Converting single-precision real number to 16-bit signed binary data

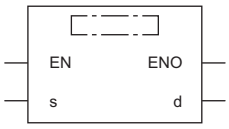
FLT2INT(P)

FX5S FX5UJ FX5U FX5UC

These instructions convert the single-precision real number in the device specified by (s) to 16-bit signed binary data, and store the converted data in the device specified by (d). After conversion, the digits after the decimal point of the single-precision real number, specified with (s), are truncated.

Ladder diagram	Structured text*1
	ENO:=FLT2INT(EN,s,d); ENO:=FLT2INTP(EN,s,d);

FBD/LD



*1 Supported by engineering tool version "1.035M" and later.

Setting data

■Descriptions, ranges, and data types

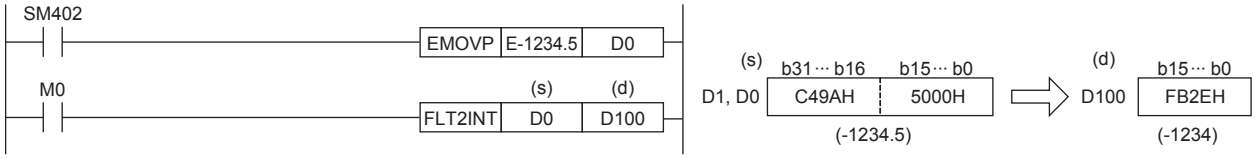
Operand	Description	Range	Data type	Data type (label)
(s)	Data before conversion	-32768 to +32767	Single-precision real number	ANYREAL_32
(d)	Data after conversion	—	16-bit signed binary	ANY16_S
EN	Execution condition	—	Bit	BOOL
ENO	Execution result	—	Bit	BOOL

■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 convert the single-precision real number in the device specified by (s) to 16-bit signed binary data, and store the converted data in the device specified by (d). After conversion, the digits after the decimal point of the single-precision real number, specified with (s), are truncated.



- The table below shows the related devices.

Device	Name	Description	
		Condition	Operation
SM700	Carry	The input value is out of range.	The operation result is not reflected to (d) and the carry flag (SM700) turns on.
SM8020	Zero	The input value is 0.	The value of (d) becomes 0 and the zero flag (SM8020) turns on.
SM8021	Borrow	The input value is ignored when it is less than 1.	The value of (d) becomes 0 and the borrow flag (SM8021) turns on.
SM8022	Carry	The input value is out of range.	The operation result is not reflected to (d) and the carry flag (SM8022) turns on.

Operation error

Error code (SD0/SD8067)	Description
3402H	When the contents of the specified device are outside the following range: 0, $2^{-126} \leq$ |specified value (stored value)| $< 2^{128}$
	The specified device value is -0, denormalized number, NaN (not a number), or $\pm\infty$.