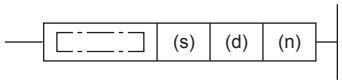
Calculating the mean value of 16-bit data

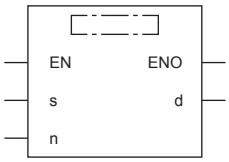
MEAN(P)(_U)

FX5S FX5UJ FX5U FX5UC

These instructions calculate the mean value of the (n) point(s) of 16-bit data units starting from the one specified by (s), and store the operation result in (d).

Ladder diagram	Structured text	
	ENO:=MEAN(EN,s,n,d); ENO:=MEANP(EN,s,n,d);	ENO:=MEAN_U(EN,s,n,d); ENO:=MEANP_U(EN,s,n,d);

FBD/LD



Setting data

■Descriptions, ranges, and data types

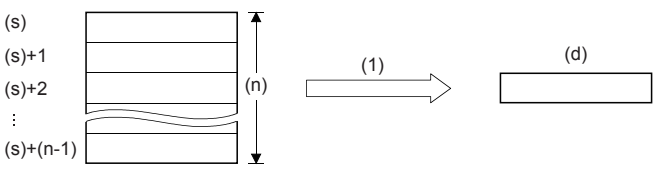
Operand		Description	Range	Data type	Data type (label)
(s)	MEAN(P)	Head device number where the mean value target data are stored	—	16-bit signed binary	ANY16_S
	MEAN(P)_U			16-bit unsigned binary	ANY16_U
(d)	MEAN(P)	Head device number storing mean value	—	16-bit signed binary	ANY16_S
	MEAN(P)_U			16-bit unsigned binary	ANY16_U
(n)		Number of data or the device number storing the number of data	1 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 calculate the mean value of the (n) point(s) of 16-bit data starting from the one specified by (s), and store the operation result in a device specified by (d).



(1): Mean

- The sum is obtained as algebraic sum, and divided by (n).
- The remainder is ignored.

Precautions

When a device number is exceeded, (n) is handled as a smaller value in the possible range.

Program example

In the program example shown below, the data of D0, D1 and D2 are summed, divided by "3", and then stored to D10.

Operation error

Error code (SD0/SD8067)	Description
3405H	The value stored in a device specified by (n) is 0.