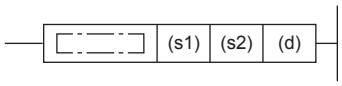
Reset 32-bit data comparison

DHSCR

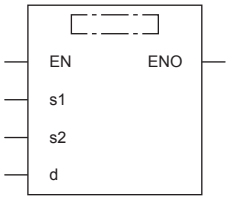
FX5S FX5UJ FX5U FX5UC

This instruction compares the value counted by a high-speed counter with a specified value, and immediately resets a bit device if the two values are equivalent to each other, or resets the high speed counter.

The high-speed pulse input/output module is not supported.

Ladder diagram	Structured text
	ENO:=DHSCR(EN,s1,s2,d);

FBD/LD



Setting data

■Descriptions, ranges, and data types

Operand	Description	Range	Data type	Data type (label)
(s1)	Data to be compared with the current value of a high-speed counter or word device number storing the data to be compared	-2147483648 to +2147483647	32-bit signed binary	ANY32
(s2)	Channel number of a high-speed counter	K1 to 8	32-bit signed binary	ANY32
(d)	Bit device number to be reset (set to OFF) when both values become equivalent to each other, or channel number of self-reset high speed counter	—	Bit/32-bit signed binary	ANY_ELEMENTARY
EN	Execution condition	—	Bit	BOOL
ENO	Execution result	—	Bit	BOOL

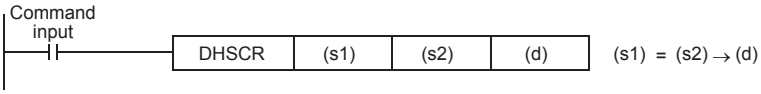
■Applicable devices

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	$	
(s1)	○	○	○	○	○	○	○	○	—	—	—
(s2)	○	○	○	○	○*1	○	○	○	—	—	—
(d)	○	○	—	—	○	—	○	○	—	—	—

*1 Enable the FX3 compatible function, and specify a device between LC35 and 55 that is designated as an FX3 compatible high-speed counter.
For FX3 compatible function, refer to MELSEC iQ-F FX5 User's Manual (Application).

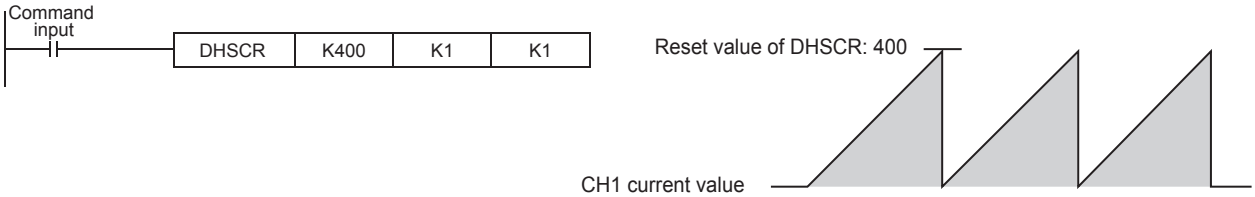
Processing details

- When the current value of a high-speed counter of the channel specified in (s2) becomes the comparison value (s1) (for example, when the current value changes from "199" to "200" or from "201" to "200" if the comparison value is K200), the bit device (d) is reset to OFF regardless of the scan time. For details, refer to MELSEC iQ-F FX5 User's Manual (Application).

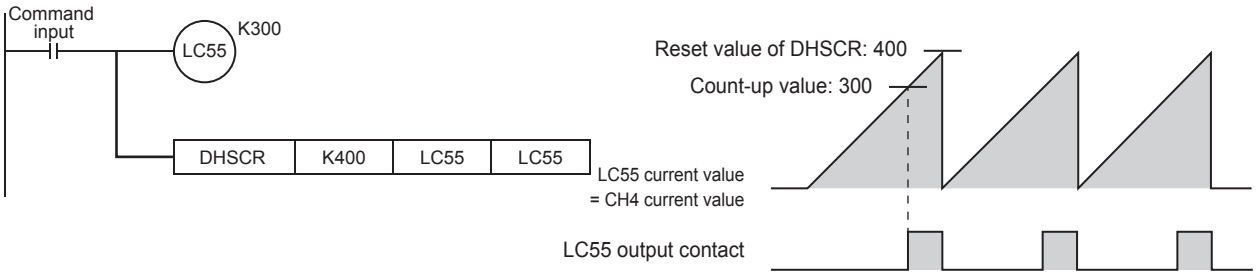


- The same channel number as (s2) or the LC device is specified in (d), (d) is reset to OFF by itself.

Example of specifying the same channel number as (s2) in (d)
When the current value of the high-speed counter of CH1 becomes 400, the current value is overwritten to the preset value.
[Program example]



Example of specifying the LC device in (d)
When the current value of LC55, the high-speed counter of CH4 with 2-phase 2-input (1-multiplication/4-multiplication) becomes 300, the output contact of LC55 turns ON. When the current value of LC55 becomes 400, the current value is cleared to 0 and the output contact turns OFF.
[Program example]



Point

Use DHSCR if the output should be given when the counting result becomes equivalent to the comparison value regardless of the scan time of the CPU module.
When the number of instructions that can be simultaneously used is exceeded, use a general-purpose comparison instruction.

Precautions

The value specified in (s2) should only be the channel of high-speed counter number (1 to 8) set by the parameter.
An operation error occurs in the following cases.

- When a channel which is not set by the parameter or a value other than K1 to 8 is specified
- When an LC device number which is not set by the parameter is specified

For other precautions, refer to MELSEC iQ-F FX5 User's Manual (Application).

Operation error

Error code (SD0/SD8067)	Description
1810H	The channel specified by instructions using communication functions or built-in I/O is already used by other instructions.
2820H	A device used as an instruction operand is outside the allowable device range.
3405H	A channel number outside the range or the LC device is specified.
3582H	The DHSCR instruction is executed in an interrupt program.
3600H	A channel number for which the channel setting is not set is specified in the operand in channel number specification of the high-speed counter.
3780H	The DHSCS, DHSCR, and DHSZ instructions are used exceeding the maximum limit of the in number of these instructions.