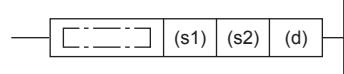
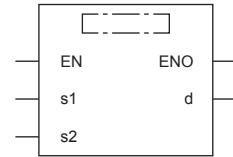


Comparison output 16-bit binary data

CMP(P)(_U)

FX5S FX5UJ FX5U FX5UC

These instructions perform a comparison operation between the 16-bit binary data in the devices specified by (s1) and (s2).

Ladder diagram	Structured text
	ENO:=CMP(EN,s1,s2,d); ENO:=CMPP(EN,s1,s2,d); ENO:=CMPP_U(EN,s1,s2,d);
FBD/LD	
	

Setting data

■Descriptions, ranges, and data types

Operand	Description		Range	Data type	Data type (label)
(s1)	CMP(P)	Comparison value data or the device where the comparison value data is stored	-32768 to +32767	16-bit signed binary	ANY16_S
	CMP(P)_U		0 to 65535	16-bit unsigned binary	ANY16_U
(s2)	CMP(P)	Comparison source data or the device where the comparison source data is stored	-32768 to +32767	16-bit signed binary	ANY16_S
	CMP(P)_U		0 to 65535	16-bit unsigned binary	ANY16_U
(d)	The starting bit device to which the comparison result is output	—	—	Bit	ANYBIT_ARRAY (Number of elements: 3)
EN	Execution condition	—	—	Bit	BOOL
ENO	Execution result	—	—	Bit	BOOL

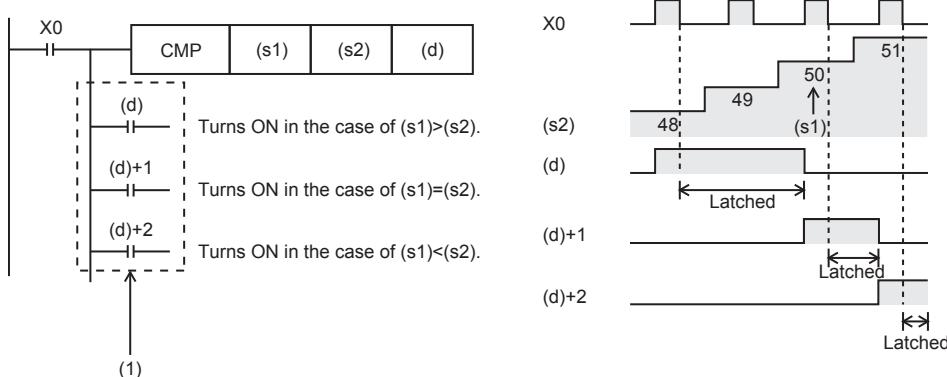
■Applicable devices

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		K, H	E	\$	
(s1)	○	○	○	○	—	—	○	○	—	—	—
(s2)	○	○	○	○	—	—	○	○	—	—	—
(d)	○	○*1	—	—	—	—	—	—	—	—	—

*1 T, ST, and C cannot be used.

Processing details

- These instructions perform a comparison operation between the 16-bit binary data in the device specified by (s1) and the 16-bit binary data in the device specified by (s2) and according to the result (small, equal, large), (d), (d) + 1, or (d) + 2 is turned ON.
- (s1) and (s2) are handled as binary values within the range of above data setting.
- Large and small comparison is executed algebraically.
- With sign...-10 (FFF6H) < 2 (0002H)
- Without sign...32767 (7FFFH) < 65280 (FF00H)



(1): Even if the command input turns OFF and the CMP instruction is not executed, (d) to (d)+2 latches the status just before the command input turns from ON to OFF.

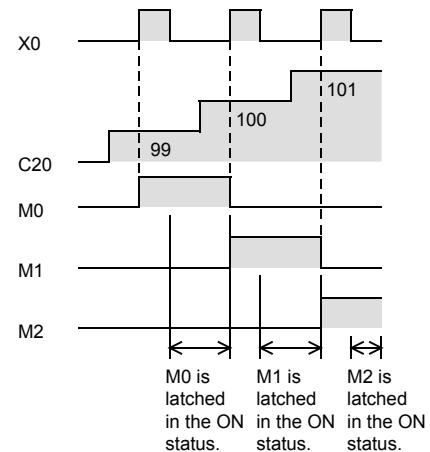
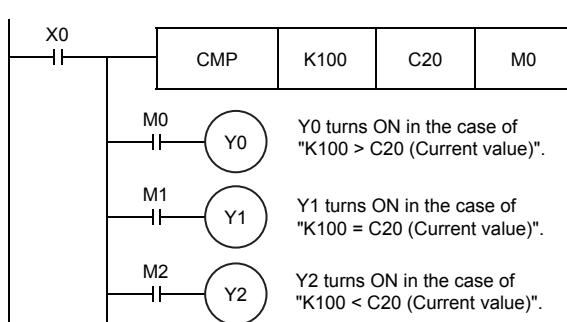
7

Precautions

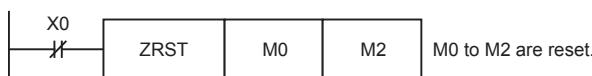
Three devices are occupied from the device specified in (d). Make sure that these devices are not used in other controls.

Program example

- When comparing the current value of a counter



If it is necessary to clear the comparison result when the instruction is not executed, add the following contents under the above program.



Operation error

Error code (SD0/SD8067)	Description
2820H	The range of 3 points of data starting from the device specified by (d) exceeds said device.