

Comparing date data

LDDT□, ANDDT□, ORDT□

FX5S

FX5UJ

FX5U

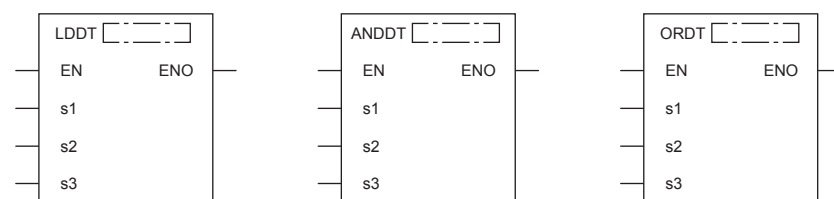
FX5UC

These instructions compare the date data in the devices specified by (s1) and (s2). Or, these instructions compare the date data in the device specified by (s1) with the current date.

Set the comparison target by (s3).

Ladder diagram	Structured text ^{*1}
<p>("=", "<>", ">", "<=", "<", ">=" enters □.)</p>	<pre> ENO:=LDDT_□(EN,s1,s2,s3); ENO:=ANDDT_□(EN,s1,s2,s3); ENO:=ORDT_□(EN,s1,s2,s3); ("EQ", "NE", "GT", "LE", "LT", "GE" enters □.)*² </pre>

FBD/LD



("_EQ", "_NE", "_GT", "_LE", "_LT", "_GE" enters □.)*²

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

*2 EQ is =, NE is <>, GT is >, LE is <=, LT is <, and GE is >=.

Setting data

■Descriptions, ranges, and data types

Operand	Description	Range	Data type	Data type (label)
(s1)	Head device number where the comparison data is stored	—	16-bit signed binary	ANY_DT
(s2)	Head device number where the comparison data is stored	—	16-bit signed binary	ANY_DT
(s3)	Comparison target setting value or the number of comparison target data	0001H to 0007H, 8001H to 8007H	16-bit signed binary	ANY16
EN	Execution condition	—	Bit	BOOL
ENO	Execution result	—	Bit	BOOL

■Applicable devices

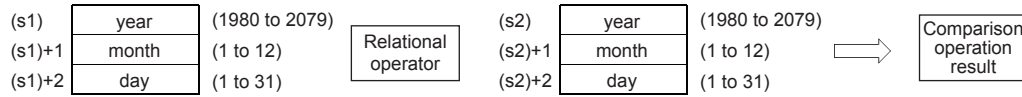
Operand	Bit	Word			Double word		Indirect specification	Constant			Others
	X, Y, M, L, SM, F, B, SB, S	T, ST, C, D, W, SD, SW, R	U□\G□	Z	LC	LZ		K, H	E	\$	
(s1)	—	○	—	—	—	—	○	—	—	—	—
(s2)	—	○	—	—	—	—	○	—	—	—	—
(s3)	—	○	○	○	—	—	○	○	—	—	—

Processing details

- These instructions compare the date data in the devices specified by (s1) and (s2), or compare the date data in the device specified by (s1) with the current date. Set the comparison target by (s3).

- Comparing two specified date data

These instructions compare the date data in the device specified by (s1) with the date data in the device specified by (s2) in accordance with the conditions set by (s3). (Devices are used as a normally open contact.)

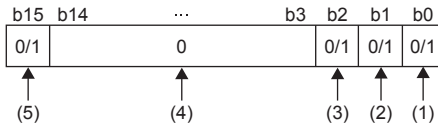


- Comparing the specified date data with the current date

These instructions compare the date data in the device specified by (s1) with the current date data in accordance with the conditions set by (s3). (Devices are used as a normally open contact.) The date data in the device specified by (s2) is regarded as dummy data and ignored.



- Set each data in binary.
- Set the 4 digit "year" data in the devices specified by (s1) and (s2) within the range 1980 to 2079.
- Set the "month" data in the devices specified by (s1)+1 and (s2)+1 within the range 1 to 12.
- Set the "date" data in the devices specified by (s1)+2 and (s2)+2 within the range 1 to 31.
- Set the following in (s3) as comparison target setting values. The following shows the bit configuration of (s3).



- (1) Set "day" as comparison target.
- (2) Set "month" as comparison target.
- (3) Set "year" as comparison target.
- (4) Set 0. If a value other than 0 is set, the operation result will be non-continuity.
- (5) When 1 is set to the 15 bit, the data in the device specified by (s1) is compared with the current date in accordance with the conditions set in the 0 to 2 bits.

- When 0 is set to the 0 to 2 bits, the date data are not compared. When 1 is set, the entire date data (year, month, and day) are compared.
- When 0 is set to the 15 bit, the data in the device specified by (s1) and the date data in the device specified by (s2) are compared. When 1 is set, the data in the device specified by (s1) is compared with the current date. The date data in the device specified by (s2) is ignored.
- The following table lists processing details of each bit.

(s3) value when comparing two specified date data	(s3) value when comparing the specified date data with the current date	Comparison target	Contents of processing
0001H	8001H	Day	Only data in the device specified by (s1)+2 is compared.
0002H	8002H	Month	Only data in the device specified by (s1)+1 is compared.
0003H	8003H	Month, day	Data in the device areas specified by (s1)+2 and (s1)+2 are compared.
0004H	8004H	Year	Only data in the device specified by (s1) is compared.
0005H	8005H	Year, day	Data in the device areas specified by (s1) and (s1)+2 are compared.
0006H	8006H	Year, month	Data in the device areas specified by (s1) and (s1)+1 are compared.
0007H	8007H	Year, month, day	The entire date data in the device areas specified by (s1), (s1)+1, and (s1)+2 are compared.
Other than 0001H to 0007H, 8001H to 8007H		None	The entire date data in the device areas specified by (s1), (s1)+1, and (s1)+2 are not compared. (The operation result will be non-continuity.)

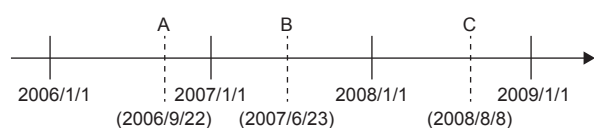
- If the comparison target data in the device are not recognized as date data, SM709 turns on after the instruction is executed and the operation result will be non-continuity. Even if the data are not recognized as date data, SM709 does not turn on if the data are within the setting range. If the device areas specified by (s1) to (s1)+2 or (s2) to (s2)+2 exceed the corresponding device range, SM709 turns on after the instruction is executed and the operation result will be non-continuity as well. Once SM709 turns on, the on state is held until the CPU module is powered off or reset. Turn off SM 709 as needed.

- The following table lists the comparison operation results of each instruction.

Instruction symbol	Condition	Result
DT=	(s1)=(s2)	Conductive state
DT<>	(s1)≠(s2)	
DT>	(s1)>(s2)	
DT<=	(s1)≤(s2)	
DT<	(s1)<(s2)	
DT>=	(s1)≥(s2)	
DT=	(s1)≠(s2)	Non-conductive state
DT<>	(s1)=(s2)	
DT>	(s1)≤(s2)	
DT<=	(s1)>(s2)	
DT<	(s1)≥(s2)	
DT>=	(s1)<(s2)	

Ex.

The date data A, B, and C are compared.



- The following table lists the comparison operation results between A, B, and C. Even when the data are compared under the same conditions, the results differ depending on the comparison target data.

○: Continuity, ×: Non-continuity

Comparison target data	Condition		
	A<B	B<C	A<C
Day	○	×	×
Month	×	○	×
Month, day	×	○	×
Year	○	○	○
Year, day	○	○	○
Year, month	○	○	○
Year, month, day	○	○	○
None	×	×	×

- Even though the specified date does not exist, the comparison operation is performed in accordance with the conditions in the following table as long as the date data are within the valid range.

- Date A: 2006/02/30 (Even though the date does not exist, this date can be set.)
- Date B: 2007/03/29
- Date C: 2008/02/31 (Even though the date does not exist, this date can be set.)

○: Continuity, ×: Non-continuity

Comparison target data	Condition		
	A<B	B<C	A<C
Day	×	×	○
Month	×	×	×
Month, day	○	×	○
Year	○	○	○
Year, day	○	○	○
Year, month	○	○	○
Year, month, day	○	○	○
None	×	×	×

Operation error

There is no operation error.