

5. Parallel link

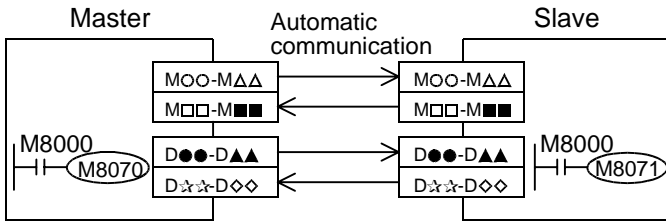
Data transfer with FX_{2N}, FX_{2NC}, FX_{1N}, FX, FX_{2C} programmable controllers can be performed on a 1:1 basis for 100 auxiliary relays and 10 data registers. Data transfer with FX_{1S}, FX_{0N} programmable controller can be performed on a 1:1 basis for 50 auxiliary relays and 10 data registers. For system configuration, refer to subsection 1.2.2.

5.1 Related Flags and Data Registers

Device	Operation
M8070	Driven when the programmable controller is a master station in a parallel link.
M8071	Driven when the programmable controller is a slave station in a parallel link.
M8072	ON while the programmable controller is operating in a parallel link.
M8073	ON when M8070/M8071 are incorrectly set during parallel link operations.
M8162	High speed mode for parallel link, 2 data words read/write only.
M8070	Parallel link watchdog time (Default: 500 ms).

5.2 Mode and Link Device

5.2.1 Normal Mode (Special auxiliary relay M8162: OFF)



		FX2N, FX2NC, FX1N, FX, FX2C	FX1S, FX0N
Communication devices	Master → Slave	M800 to M899 (100 points), D490 to D499 (10 points)	M400 to M449 (50 points), D230 to D239 (10 points)
	Slave → Master	M900 to M999 (100 points), D500 to D509 (10 points)	M450 to M499 (50 points), D240 to D249 (10 points)
Communication time		70 (ms) + Scan time of master (ms) + Scan time of slave (ms)	



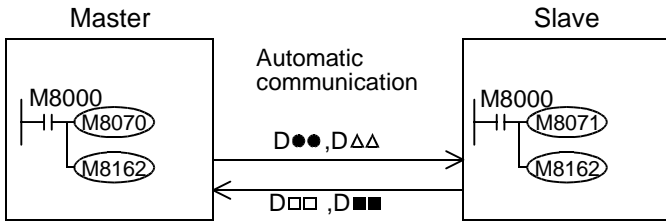
Note;

Parallel link is possible between PLC's in the same series, or in other series as long as they are in the group. However, parallel link between each different group cannot be achieved.

Groups are separated as follows.

Group No.	Series
Group 1	FX2N, FX2NC
Group 2	FX1N
Group 3	FX1S
Group 4	FX0N
Group 5	FX, FX2C

5.2.2 High Speed Mode (Special auxiliary relay M8162: ON)



		FX2N, FX2NC, FX1N, FX, FX2C	FX1S, FX0N
Communication devices	Master → Slave	D490, D491 (2 points)	D230, D231 (2 points)
	Slave → Master	D500, D501 (2 points)	D240, D241 (2 points)
Communication time		20 (ms) + Scan time of master (ms) + Scan time of slave (ms)	



Note;

Parallel link is possible between PLC's in the same series, or in other series as long as they are in the group. However, parallel link between each different group cannot be achieved.

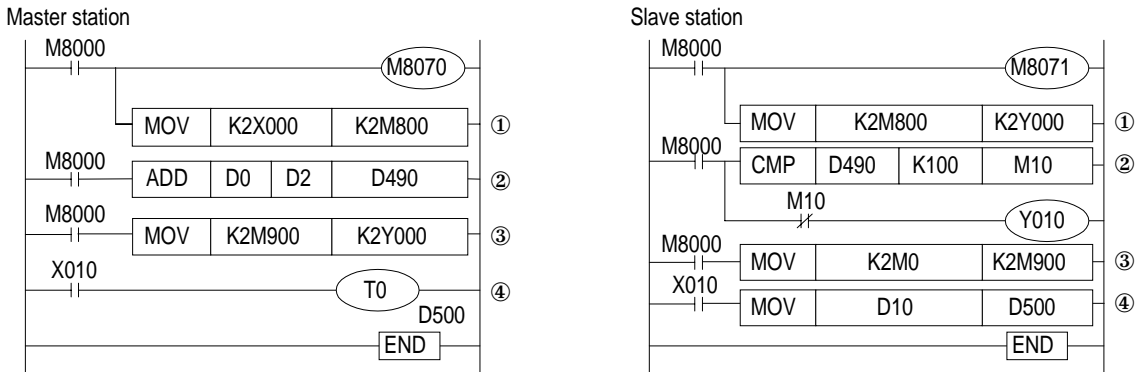
Groups are separated as follows.

Group No.	Series
Group 1	FX2N, FX2NC
Group 2	FX1N
Group 3	FX1S
Group 4	FX0N
Group 5	FX, FX2C

5.3 Example Program

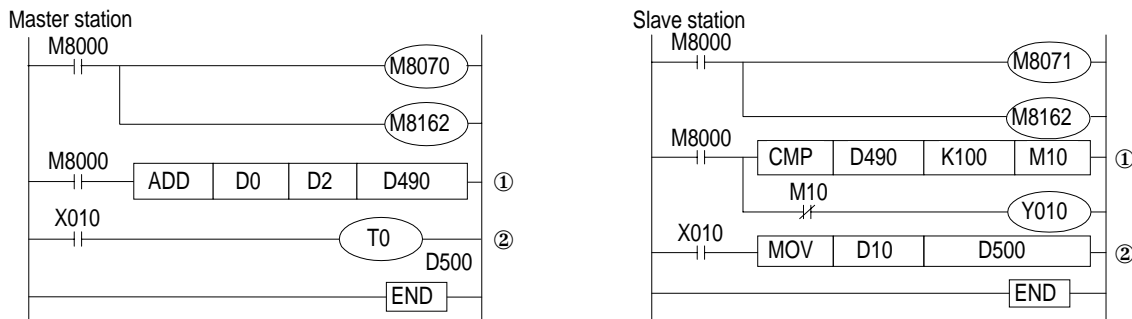
5.3.1 Normal Mode

The ON/OFF status of the inputs X000 to X007 in the master station is output to Y000 to Y007 in the slave station (①). When the calculation result (D0+D2) in the master station is 100 or less, Y010 in the slave station is turned on (②). The ON/OFF status of M0 to M7 in the slave station is output to Y000 to Y007 in the master station (③). The value of D10 in the slave station is set to the timer (T0) in the master station (④).



5.3.2 High Speed Mode

When the calculation result (D0+D2) in the master station is 100 or less, Y010 in the slave station is turned on (①). The value of D10 in the slave station is set to the timer (T0) in the master station (②).



Note;

In the normal mode, “FNC 81 PRUN” instruction can be used for ①. However, This instruction is only supported FX, FX2C, FX2N, FX2NC.