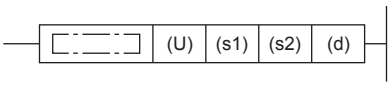
13.6 Ethernet Module

Opening a connection

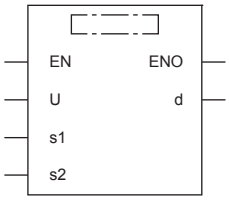
GP.OPEN

~~FX5S~~ FX5UJ FX5U FX5UC

This instruction opens a connection.

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

FBD/LD



("GP_OPEN" enters □.)

Setting data

■Descriptions, ranges, and data types

Operand	Description	Range	Data type	Data type (label)
(U)	Position number of the module connected	■FX5UJ CPU module 1H to 8H ■FX5U/FX5UC CPU module 1H to 10H	16-bit unsigned binary	ANY16
(s1)	Connection number	1 to 32	16-bit unsigned binary	ANY16
(s2)	Head device number for storing the control data	Refer to Control data (☞ Page 1065)	Word	ANY16_ARRAY (Number of elements: 10)
(d)	Head device number which turns ON when the execution of the instruction is completed and remains on for 1 scan. If the instruction is completed with an error, (d)+1 is also turned on.	—	Bit	ANYBIT_ARRAY (Number of elements: 2)
EN	Execution condition	—	Bit	BOOL
ENO	Execution result	—	Bit	BOOL

■Applicable devices

Operand	Bit	Word			Double word		Indirect specification	Constant			Others (U)
	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	$	
(U)	—	○	—	—	—	—	○	○	—	—	○
(s1)	○	○	—	—	—	—	○	○	—	—	—
(s2)	—	○	—	—	—	—	○	—	—	—	—
(d)	○	○*1	—	—	—	—	—	—	—	—	—

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

■Control data

Device	Item	Description	Setting range	Set by[*1]
(s2)+0	Execution type/ completion type	Specify whether to use the parameter value set using the engineering tool or to use the set values of the control data (s2)+2 to (s2)+6 during the open processing of the connection. 0000H: The open processing is performed with the settings configured using "External Device Configuration" of the engineering tool. 8000H: The open processing is performed with the set values of the control data (s2)+2 to (s2)+6.	0000H 8000H	User
(s2)+1	Completion status	The status at the completion of the instruction is stored. 0000H: Completed successfully Other than 0000H: Completed with an error (error code) For error codes, refer to the manual below. MELSEC iQ-F FX5 Ethernet Module User's Manual MELSEC iQ-F FX5 EtherNet/IP Module User's Manual	—	System
(s2)+2	Application setting area	b15b14 b13 to b9 b8 b7 to b0 (s2)+2 [2] 0 [1] 0 [1] Communication method (protocol) 0: TCP/IP 1: UDP/IP [2] Open method 00: Active open or UDP/IP 10: Unpassive open 11: Fullpassive open	As shown on the left	User
(s2)+3	Host station port number	Specify the host station port number.	1 to 5548, 5570 to 65534 (0001H to 15ACH, 15C2H to FFFEH)[*3]	
(s2)+4 (s2)+5	Target device IP address[*2]	Specify the IP address of the target device.	1 to 3758096382 (00000001H to DFFFFFFEH)	
(s2)+6	Target device port number[*2]	Specify the port number of the target device.	1 to 65534 (0001H to FFFEH)	
(s2)+7 to (s2)+9	—	Use prohibited	—	System

*1 User: Data to be set before the execution of the instruction. System: The Ethernet module stores the execution result of the instruction.

*2 When Unpassive open is selected, the target device IP address and target device port number are ignored.

*3 Of the host station port numbers, 1 to 1023 (0001H to 03FFH) are generally reserved port numbers and 61440 to 65534 (F000H to FFFEH) are used by other communication functions. Thus, using 1024 to 5548 and 5570 to 61439 (0400H to 15ACH and 15C2H to EFFFH) as the port numbers is recommended. Do not specify 5549 to 5569 (15ADH to 15C1H) since they are used by the system.

Processing details

This instruction opens the connection specified by (s1).

The setting value used by the open processing is selected by (s2)+0.

The completion of the GP.OPEN instruction can be checked using the completion devices (d)+0 and (d)+1.

- Completion device (d)+0: Turns ON during the END processing for the scan in which the GP.OPEN instruction is completed, and turns OFF during the next END processing.
- Completion device (d)+1: Turns ON or OFF depending on the status of when the GP.OPEN instruction is completed.

Status	Description
When completed normally	The device does not change (remains OFF).
When completed with an error	The device turns ON during the END processing for the scan in which the GP.OPEN instruction is completed, and turns OFF during the next END processing.

The connection in which no protocol is set with the parameter can be opened and used. In this case, specify 8000H in (s2)+0 and the contents of the open processing in (s2)+2 to (s2)+6.

Operation error

Error code ((s2)+1)	Description
C000H to CFFFH	Refer to MELSEC iQ-F FX5 Ethernet Module User's Manual. Refer to MELSEC iQ-F FX5 EtherNet/IP Module User's Manual.