

Bit	Error	Status	Manipulated by	Unit operation
5	(Not Used.)			
6	Routing table error	ON	Unit	ON if the routing table information is incorrect.
		OFF	Unit	OFF when the routing table is normal.
7 to 11	(Not used.)	---	---	---
12	Memory Card Unit Setup setting error	ON	Unit	ON if there is an error in the setup file on the Memory Card.
		OFF	Unit	OFF when the Unit is set correctly or when the Memory Card Unit Setup Error Clear Bit is turned ON.
13	Memory Card Unit Setup access error	ON	Unit	ON if there is an access error when setting the Unit using a text file on a Memory Card. When this bit turns ON, an error code will be stored in the Memory Card Unit Setup Error Code storage word.
		OFF	Unit	OFF when the Unit is set correctly or when the Memory Card Unit Setup Error Clear Bit is turned ON.
14	Address disagreement	ON	Unit	ON if the remote IP address is set to automatic generation but the local IP address host number and FINS node address do not agree.
		OFF	Unit	OFF under all other circumstances.
15	EEPROM error	ON	Unit	ON if an error has occurred in the EEPROM memory.
		OFF	Unit	OFF when the EEPROM memory is normal.

8-3 Error Log

The Ethernet Unit provides an error log that records errors that have occurred during Ethernet Unit operation. The contents of the error log can be read or cleared from a Programming Device, such as the CX-Programmer, or it can be read or cleared using FINS commands from a workstation or computer. (See 7-2-8 *ERROR LOG READ* and 7-2-9 *ERROR LOG CLEAR*).

Logged Errors

The following errors are recorded in the error log.

- Errors in network operation
- Errors in data transfers
- Error in the CPU Unit

Error Log Table

Each error is recorded as one record in an error log table. Up to 64 records can be saved. If more than 64 errors occur, the oldest errors will be deleted from the error log and the most recent error will be recorded.

The following information is recorded in the error log table.

- Main error code (See table later in this section.)
- Detailed error code (See table later in this section.)
- Time stamp (from the clock in the CPU Unit)

Error Log Location

When an error is detected, the error codes and time stamp are recorded in the error log in RAM inside the Ethernet Unit. Serious errors are also recorded in EEPROM. The maximum number of errors that can be saved to EEPROM is 64 for the CS Series. The errors recorded in EEPROM will be saved even if the Unit is restarted or power is turned OFF. When the Ethernet Unit is started, the contents of the error log in EEPROM is copied to RAM.

When a FINS command is used to read the error log, the log held in RAM is read. When a FINS command is used to clear the error log, the logs held in both RAM and EEPROM are cleared.

FINS Commands for Error Logs

The following FINS commands can be used to read or clear the error log. Refer to *SECTION 7 FINS Commands Addressed to Ethernet Units*.

Command code		Function
MRC	SRC	
21	02	ERROR LOG READ
	03	ERROR LOG CLEAR

8-3-1 Error Log Error Codes

The error codes are described in the following table. The detailed error code will provide detailed information on an error.

Error code	Meaning	Detailed error code		Correction	EE-PROM
		1st byte	2nd byte		
0001	Watchdog timer error in CPU Unit	00	00	Replace the CPU Unit.	Saved
0002	CPU Unit service monitor error	Monitor time (ms)		Check the operating environment.	Saved
0006	Other CPU error	Bit 11: Unit not in Registered I/O Tables Other bits are reserved for system use.		Create the I/O tables.	Saved
000F	CPU Unit initialization error	00	00	Replace the CPU Unit.	Saved
0010	Insufficient System Setup Area	00	00	Reduce the number of CPU Bus Units.	Saved
0011	Event timed out	MRC	SRC	Replace the CPU Unit.	Saved
0012	CPU Unit memory error	01: Read error 02: Write error	03: Routing table 04: Setup error 05: CPU Bus Unit Words (CIO/DM)	01: Recreate the data specified by the 2nd byte of the detailed error code. 02: Clear memory using procedure in the PLC operation manual.	Saved
0013	CPU Unit protected	00	00	Remove protection from CPU Unit memory.	Saved

Error code	Meaning	Detailed error code		Correction	EE-PROM
		1st byte	2nd byte		
0103	Resend count exceeded (send failed)	Commands Bit 15: OFF Bits 08 to 14: SNA Bits 00 to 07: SA1 Responses Bit 15: ON Bits 08 to 14: DNA Bits 00 to 07: DA1		Check transceiver at remote node.	---
0105	Node address setting error (send failed)			Set the IP address correctly.	---
0107	Remote node not in network (send failed)			Check the connection to the remote node.	---
0108	No Unit with specified unit address (send failed)			Check the unit address at the remote node.	---
010B	CPU Unit error (send failed)			Troubleshoot the error in the CPU Unit using the PLC operation manual.	---
010D	Destination address not in routing tables (send failed)			Set the destination address in the routing tables.	---
010E	No routing table entry (send failed)			Set the local node, remote node, and relay nodes in the routing tables.	---
010F	Routing table error (send failed)			Create the routing tables correctly.	---
0110	Too many relay points (send failed)			Reconstruct the network or correct the routing tables so that commands are sent to within a 3-level network range.	---
0111	Command too long (send failed)			Check the command format and set the correct command data.	---
0112	Header error (send failed)			Check the command format and set the correct command data.	---
0117	Internal buffers full; packet discarded			Change the network so that traffic is not concentrated.	---
0118	Illegal packet discarded			Check for nodes sending illegal packets.	---
0119	Local node busy (send failed)			Change the network so that traffic is not concentrated.	---
0120	Unexpected routing error			Check the routing tables.	---
0121	No setting in IP address table; packet discarded			Set the remote node in the IP address table.	---
0122	Service not supported in current mode; packet discarded	Select the IP address table or both methods for the address conversion method.	---		
0123	Internal send buffer full; packet discarded	Change the network so that traffic is not concentrated.	---		
0124	Maximum frame size exceeded; routing failed	Reduce the size of events.	---		
021A	Logic error in setting table	00	01: Data link table 02: Network parameters 03: Routing tables 04: Unit Setup 05: CPU Bus Unit Words (CIO/DM)	Recreate the data specified by the 2nd byte of the detailed error code.	Saved

Error code	Meaning	Detailed error code		Correction	EE-PROM
		1st byte	2nd byte		
0300	Parameter error; packet discarded	Commands Bit 15: OFF Bits 08 to 14: SNA Bits 00 to 07: SA1 Responses Bit 15: ON Bits 08 to 14: DNA Bits 00 to 07: DA1		Check the command format and set the correct command data.	---
03C0	FINS/TCP setting error	01 to 10: Connection number	01: Automatically allocated FINS node address duplication 02: Destination IP address error 03: Destination port number error	Refer to <i>1-5-1 FINS Communications Service</i> in this manual and the <i>Operation Manual, Construction of Applications: Creating FINS Applications</i> and set the FINS/TCP settings correctly.	---

Error code	Meaning	Detailed error code		Correction	EE-PROM
		1st byte	2nd byte		
03C2	FINS/TCP packet discarded	01 to 10: Connection number	02: Reopened because remote node closed	Have the FINS/TCP connection status checked when a SEND(090), RECV(098), or CMND(490) instruction is executed in the ladder program.	---
			03: Reopened because of reception error		
			04: Reopened because of transmission error		
			05: Reopened because RST received from remote node		
			06: Reopened because of no keep-alive response		
			07: Illegal FINS/TCP procedure	Refer to <i>Operation Manual, Construction of Applications: Creating FINS Applications</i> , and correct the remote node (application on a personal computer).	---
			08: Insufficient memory during server processing	There is too much load (traffic) on the Ethernet Unit. Correct the system so that traffic is not concentrated.	---
			09: Insufficient memory during client processing		
			0A: Insufficient memory during node switching		
03C3	FINS/UDP packet discarded	00	01 to FE: Transmission source node address	The automatic generation (static) method was used as the IP address conversion method, so remote IP address information in internal memory could not be changed.	---
0601	CPU Bus Unit error	Arbitrary		Restart the CPU Unit. If the problem persists, replace the Ethernet Unit.	Saved
0602	CPU Bus Unit memory error	01: Read error 02: Write error	06: Error log	Restart the CPU Unit. If the problem persists, replace the Ethernet Unit.	Saved (except for error log)

Error code	Meaning	Detailed error code		Correction	EE-PROM
		1st byte	2nd byte		
0206	Participating nodes decreased (local node separated)	00	Number of separated nodes	Inspect the separated node, cables, and hub.	---
0207	Participating nodes decreased (local node not separated)	00	Number of separated nodes		---
0220	Separated nodes when participating nodes decreased	Nodes 1 to 16 (correspond to bits 00 to 15) (Byte 1: Bits 0 to 15, Byte 2: Bits 0 to 7)			---
0221		Nodes 17 to 32 (correspond to bits 00 to 15) (Byte 1: Bits 0 to 15, Byte 2: Bits 0 to 7)			---
0222		Nodes 33 to 48 (correspond to bits 00 to 15) (Byte 1: Bits 0 to 15, Byte 2: Bits 0 to 7)			---
0223		Nodes 49 to 64 (correspond to bits 00 to 15) (Byte 1: Bits 0 to 15, Byte 2: Bits 0 to 7)			---
0224		Nodes 65 to 80 (correspond to bits 00 to 15) (Byte 1: Bits 0 to 15, Byte 2: Bits 0 to 7)			---
0225		Nodes 81 to 96 (correspond to bits 00 to 15) (Byte 1: Bits 0 to 15, Byte 2: Bits 0 to 7)			---
0226		Nodes 97 to 112 (correspond to bits 00 to 15) (Byte 1: Bits 0 to 15, Byte 2: Bits 0 to 7)			---
0227		Nodes 113 to 128 (correspond to bits 00 to 15) (Byte 1: Bits 0 to 15, Byte 2: Bits 0 to 7)			---
0228		Nodes 129 to 144 (correspond to bits 00 to 15) (Byte 1: Bits 0 to 15, Byte 2: Bits 0 to 7)			---
0229		Nodes 145 to 160 (correspond to bits 00 to 15) (Byte 1: Bits 0 to 15, Byte 2: Bits 0 to 7)			---
022A		Nodes 161 to 176 (correspond to bits 00 to 15) (Byte 1: Bits 0 to 15, Byte 2: Bits 0 to 7)			---
022B		Nodes 177 to 192 (correspond to bits 00 to 15) (Byte 1: Bits 0 to 15, Byte 2: Bits 0 to 7)		---	
022C		Nodes 193 to 208 (correspond to bits 00 to 15) (Byte 1: Bits 0 to 15, Byte 2: Bits 0 to 7)		---	

Error code	Meaning	Detailed error code		Correction	EE-PROM
		1st byte	2nd byte		
022D		Nodes 209 to 224 (correspond to bits 00 to 15) (Byte 1: Bits 0 to 15, Byte 2: Bits 0 to 7)			---
022E		Nodes 225 to 240 (correspond to bits 00 to 15) (Byte 1: Bits 0 to 15, Byte 2: Bits 0 to 7)			---
022F		Nodes 241 to 254 (correspond to bits 00 to 15) (Byte 1: Bits 0 to 15, Byte 2: Bits 0 to 7)			---

- Note**
- (1) The time information in the CPU Unit is used in the CPU Bus Units.
 - (2) If the time information cannot be read from the CPU Unit, the time stamp in the error log will be all zeros. This can occur due to CPU Unit startup error, unit number errors, CPU error, and model number errors. If the time is read out from a Programming Device, the time will be shown as all zeros in the year 2000.
 - (3) The battery must be installed in the CS/CJ-series CPU Unit, the power turned ON, and then the time set before the clock in the CPU Unit can be used. The time will not be set correctly in the error log unless the clock time is set correctly.
 - (4) An error record is not created in EEPROM when a CPU Bus Unit memory error occurs.