

Time Information

The time is recorded in BCD with one byte each for the year (the rightmost two digits), month, day, hour, seconds, and minutes of the time the error occurred.

- Note**
1. The PLC's time information can be read and used in the Controller Link Unit. When the time cannot be read from the PLC, all error log times will but 0. This can occur for PLC startup errors, Unit No. errors, CPU Unit errors, or PLC model errors. When error logs like these are read from the Controller Link Support Software, they will be dated 0 s, 0 min, 0 hr, 0 day, 0 month, 2000.
 2. When replacing the battery for CS/CJ-series PLCs, it will be necessary to switch the power supply ON and reset the internal clock. If the internal clock is not reset, time information in the error log will not be recorded correctly.
 3. The time information will be all zeros for CQM1H-series PLCs unless a Memory Cassette with a clock is mounted in the CPU Unit. The time information will be all zeros in the year 2000 if it is read from Support Software.

9-3-2 Error Codes

The following table lists the error codes (in 4-digit hexadecimal) and the contents of the errors.

Error code	Contents	Detail code		Correction	Written to EEPROM	Applicable PLC
		1st byte	2nd byte			
0001 Hex	PLC watchdog timer error	00 Hex	00 Hex	Replace PLC's CPU Unit.	Yes	All
0002 Hex	PLC service monitor error	Monitor time (unit: ms)		Check operating environment.	Yes	CV, CS/CJ
0003 Hex	PLC shared RAM error	01 Hex: Cyclic 02 Hex: Event 04 Hex: CPU bus link	00 Hex	Check operating environment.	Yes	CV
0004 Hex	CPU Bus Unit ID number error	00 Hex	00 Hex	Check I/O Connecting Cables.	Yes	CV, CS/CJ
0005 Hex	Unit number error	Unit set value	The value recognized by the CPU Unit	Check the Unit number setting. Recreate the I/O table.	Yes	CV
0006 Hex	CPU Unit error	Bit 11: No relevant Unit in I/O table. Bit 12: Hardware test unit number recognized. Bit 13: Incorrect unit number. Bit 14: Duplicated unit number.		Check the Unit number settings. Recreate the I/O table.	Yes	CV, CS/CJ
000D Hex	PLC model error	Not set		Refer to 1-2-4 Controller Link Unit Models and PLCs and PLCs and check the PLC model.	Yes	C200HX/HG/HE

Error code	Contents	Detail code		Correction	Written to EEPROM	Applicable PLC
		1st byte	2nd byte			
000E Hex	I/O Bus error	00 Hex	00 Hex	Check the operating environment.	Yes	CS/CJ
000F Hex	PLC initialization error			Check the operating environment.	Yes	CS/CJ
0010 Hex	PLC Setup exceeds capacity			Reduce the number of CPU Bus Units mounted on each CPU Unit by one.	Yes	CS/CJ
0011 Hex	PLC initialization error (Time out)			Check the operating environment.	Yes	CS/CJ
0012 Hex	CPU Unit memory error	01 Hex: Read error	01 Hex: Data link table	Reset the appropriate data.	Yes	CS/CJ
0013 Hex	CPU Unit write-protected	02 Hex: Write error	02 Hex: Network parameters 03 Hex: Routing table 04 Hex: PLC Setup Area	Release the CPU Unit write protect.	Yes	CS/CJ

Error code	Contents	Detail code		Correction	Written to EEPROM	Applicable PLC
		1st byte	2nd byte			
0101 Hex	Transmission failed; local node not in Network	Command block Bits 0 to 7: Source node address Bits 8 to 14: Source Network address Bit 15: OFF Response block Bits 0 to 7: Destination node address Bits 8 to 14: Destination Network address Bit 15: ON (1st byte: bits 8 to 15; 2nd byte, bits 0 to 7)		Refer to page 272 <i>Troubleshooting Using Indicators</i> and place the local node into Network.	No	All
0103 Hex	Transmission failed; retry count exceeded			Using the Controller Link Support Software or FINS commands, run echoback test and check operating environment if errors occur.	No	All
0104 Hex	Transmission failed; maximum number of frames exceeded.			Reduce the number of events per communications cycle or increase the maximum number of network parameter frames.	No	All
0105 Hex	Transmission failed; node address incorrect			Refer to 4-2 <i>CJ-series Controller Link Units</i> or 4-4 <i>CVM1 and CV-series Controller Link Units</i> and check node address settings to be sure they are within range and unique.	No	All
0106 Hex	Transmission failed; redundant node address			Correct node addresses so that they are unique within the same Network.	No	All
0107 Hex	Transmission failed; destination node not in Network			Refer to 9-1 <i>Troubleshooting Using Indicators</i> and place destination node into Network.	No	All
0108 Hex	Transmission failed; specified Unit does not exist			Refer to 4-4 <i>CVM1 and CV-series Controller Link Units</i> and check unit address and unit number of destination.	No	All

Error code	Contents	Detail code		Correction	Written to EEPROM	Applicable PLC
		1st byte	2nd byte			
0109 Hex	Transmission failed; destination busy	Command block Bits 0 to 7: Source node address Bits 8 to 14: Source Network address		Increase number of retries or reconfigure system to distribute load.	No	All
010A Hex	Transmission failed; communications controller error	Bit 15: OFF Response block Bits 0 to 7: Destination node address Bits 8 to 14: Destination Network address		Conduct an echo-back test and if the effects of noise are considerable, reconsider the operating environment. Restart the Controller Link Unit. If the error occurs again, replace the Unit.	Yes	All
010B Hex	Transmission failed; PLC error	Bit 15: ON (1st byte: bits 8 to 15; 2nd byte, bits 0 to 7)		Refer to the PLC operating manual. If the error occurs again, replace the PLC.	No	All
010C Hex	Transmission failed; unit number incorrect			Check unit number settings to be sure they are within range and unique.	No	CV, CS/CJ
010D Hex	Transmission failed; destination address incorrect			Check routing tables.	No	All
010E Hex	Transmission failed; routing tables not registered			Check routing tables	No	All
010F Hex	Transmission failed; routing table error			Check routing tables.	No	All
0110 Hex	Transmission failed; too many relay points			Check routing tables and system configuration. Do not try to access Networks separated by more than one other Network.	No	All
0111 Hex	Transmission failed; command packet too long			Be sure to use the FINS command format.	No	All
0112 Hex	Transmission failed; header error.			Be sure to use the correct FINS command format.	No	All
0113 Hex	Transmission failed; I/O setting error			Check I/O table accuracy.	No	CV, CS/CJ
0114 Hex	Transmission failed; CPU bus error			Check Unit and cable connections and clear error.	No	CV, CS/CJ
0115 Hex	Transmission failed; redundant I/O allocations			Check unit numbers for redundancy within the same PLC.	No	CV, CS/CJ
0116 Hex	Transmission failed; CPU Bus Unit error			Check Unit and cable connections and clear error.	No	CV, CS/CJ

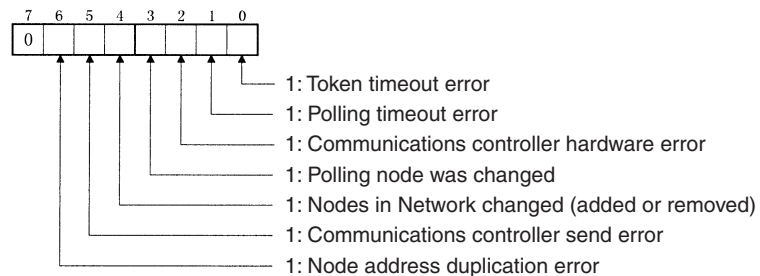
Error code	Contents	Detail code		Correction	Written to EEPROM	Applicable PLC
		1st byte	2nd byte			
0117 Hex	Internal buffer full	Command block Bits 0 to 7: Source node address Bits 8 to 14: Source Network address		Increase number of retries or reconfigure system to distribute load.	No	All
0118 Hex	Illegal packet discarded	Bit 15: OFF Response block Bits 0 to 7: Destination node address Bits 8 to 14: Destination Network address Bit 15: ON (1st byte: bits 8 to 15; 2nd byte, bits 0 to 7)		Check for nodes sending illegal packets.	Yes	All
0203 Hex	EEPROM error	01 Hex: Read error 02: Hex: Write error	01 Hex: Data link tables 02 Hex: Network parameters 03 Hex: Routing tables	For CVM1 and CV-series PLCs, check that the PLC is not protected. Remake and set the relevant data. If the error occurs again for the CVM1 and CV-series, replace the CPU Unit and for the C200HX/HG/HE PLCs, replace the Controller Link Unit.	Yes	C200HX/HG/HE, CV, CQM1H
0206 Hex	Number of participating nodes decreased (local node still participating)	Network parameters maximum node address	Number of non-participating nodes	Check network parameters, node participation, cables, and terminating resistance.	No	All
0207 Hex	Number of participating nodes decreased (local node not participating)				No	All
0208 Hex	Polling node changed	Address of previous polling node	Address of new polling node	Check previous polling node.	No	All
0209 Hex	Inconsistent network parameter	00 Hex	Address of polling node	Using the Controller Link Support Software, check network parameters.	Yes	All
020C Hex	Time out with token	00 Hex	Error status (See note.)	Check network parameters, node participation, cables, and terminating resistance.	No	All
0210 Hex	Communications controller send error	00 Hex	Error status (See note.)	Replace the Controller Link Unit.	Yes	All
0211 Hex	Duplicate address error	00 Hex	Local node address	Reset so that each node address is used only once within the same Network.	No	All
0214 Hex	Node address setting error	Not specified		Check the node address settings and correct them.	Yes	CS/CJ, CQM1H

Error code	Contents	Detail code		Correction	Written to EEPROM	Applicable PLC
		1st byte	2nd byte			
0216 Hex	Backup power supply error (Optical Units only)	00 Hex	Backup power supply error distinction: 01 Hex: OFF to ON 02 Hex: ON to OFF	Check the status of the backup power supply and power supply cables.	Yes	CS/CJ
021A Hex	Set table logic error	00 Hex	01 Hex: Network parameters 02 Hex: Data link tables 03 Hex: Routing tables	Remake and set the appropriate data.	Yes	All
021B Hex	Hardware error	00 Hex	Error status (See note.)	Replace the Controller Link Unit.	No	All
021C Hex	Data link error inactive	Not set		Restart the Controller Link Unit.	Yes	All
0220 Hex	Reduced number of participating nodes (separated nodes)	Separated nodes 1 to 16 correspond to bits 0 to 15 (1st byte: bits 8 to 15, 2nd byte: bits 0 to 7)		Check the node parameters, the separated nodes, cables, and terminating resistance settings.	Yes	CJ
0221 Hex		Separated nodes 17 to 32 correspond to bits 0 to 15 (1st byte: bits 8 to 15, 2nd byte: bits 0 to 7)				
0222 Hex		Separated nodes 33 to 48 correspond to bits 0 to 15 (1st byte: bits 8 to 15, 2nd byte: bits 0 to 7)				
0223 Hex		Separated nodes 49 to 62 correspond to bits 0 to 13 (1st byte: bits 8 to 15, 2nd byte: bits 0 to 7)				
0300 Hex	Packet discarded	Not set		Conduct an echo-back test and find the cause of the error.	No	All
0601 Hex	Unit error	Not set		Check the operating environment.	Yes	All

- Note**
1. Applicable PLCs: CV = CVM1 and CV-series PLCs, CS/CJ = CS-series and CJ-series PLCs, All = All models of PLC.
 2. Errors indicated by error codes 0101 to 0116 are recorded only when the frame was discarded because transmission was impossible.

Error Status

The status of each bit indicates that an error has occurred as given in the diagram below.



9-3-3 Reading and Clearing Error Logs

Error logs can be read or cleared using the Controller Link Support Software, the CX-Programmer, PLC Programming Devices, or the message service. The following examples are for the Controller Link Support Software and the message service. When using a PLC Programming Device, refer to the Programming Device's operation manual for details.

Controller Link Support Software

Read or clear the error log using the following procedure.

- 1,2,3...**
1. Display the Main Menu.
 2. Select "E: Error log."
 3. Designated the node. The error log for the designated node will be displayed.
 4. Press the F7 (Clear) Key. The designated node error log will be cleared.

Message Service

Reading an Error Log

Send the ERROR LOG READ FINS command (command code 2102) to the appropriate node. Refer to 6-5-11 *ERROR LOG READ*.

Clearing an Error Log

Send the ERROR LOG CLEAR FINS command (command code 2103) to the appropriate node. Refer to 6-5-12 *ERROR LOG CLEAR*.

9-4 Cleaning and Inspection

This section describes cleaning and inspection procedures that are to be performed as daily maintenance.

9-4-1 Cleaning

Conduct the following periodic cleaning to keep the Controller Link Unit in optimum condition.

- Wipe the Unit with a dry, soft cloth daily.
- For stains that cannot be removed with a dry cloth, dip the cloth in medium strength alcohol (2%), wring the cloth tightly, and then wipe down the Unit.
- If glue, vinyl, or tape is left on the Unit for long periods of time, it will stain. Remove these items during cleaning.

⚠ Caution Do not use volatile solvents such as benzene or paint thinner, or chemical cloths for cleaning. They will damage the quality of the coating on the Unit.