

HMI AND PLC ERROR CODE TABLES



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HMI AND PLC ERROR CODE TABLES



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Introduction

The **C-more** family of HMIs is capable of communicating with a wide variety of Programmable Logic Controllers. **C-more** can communicate over RS232, RS422 and RS485 serial networks as well as Ethernet networks. It communicates with all AutomationDirect PLCs utilizing various protocols. **C-more** also communicates with other brands of PLCs by using their different protocols. For a complete list of PLCs and protocols, see **Chapter 6 - PLC Communications**.

As with any network communications, errors will occur. To make it easier for the user to identify the cause of an error, we have provided an error code table for all of the possible errors that **C-more** can detect.

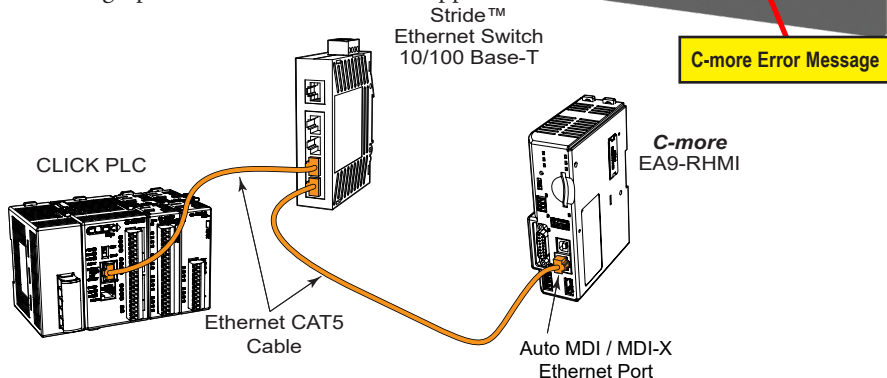
If a **C-more** communications error does occur, the error message will appear across the top of the screen. The **C-more** HMI also monitors for any errors that are generated by the various PLCs that are connected to it. If any of the PLC generated errors are detected, they are displayed across the top of the panel's display embedded as a hexadecimal value in error code P499's message. An explanation of how the specific PLC error is identified in the panel error code P499 is shown preceding each specific manufacturer's PLC error tables. How the hexadecimal error code value is interrupted is slightly different among different manufacturers, so it is important to check the explanation at the beginning of each manufacturer's tables.



NOTE: These PLC error codes are provided by the manufacturer of the related PLC and are subject to change by the PLC manufacturer. Please refer to the manufacturer's documentation for a more complete and up-to-date list of error codes.

All errors are also logged into the panel's **Error log** under the **Information** tab in the panel's **System Setup Screens** and are identified by the error code number. See **Chapter 5: System Setup Screens** for additional details.

If you have difficulty determining the cause of an error, please refer to **Chapter 8: Troubleshooting** for some troubleshooting tips or contact our technical support



C-more HMI Error Code Table

The following table includes all of the error codes and error messages that the panel will display if the listed cause is detected. All of these errors involve problems that could result with the panel communicating with the connected PLC. Be aware that not all of the panel errors are used with each type of PLC that can be connected to the panel.

C-more HMI Error Code Table		
Error Code	Error Message	Cause
PLC-001	PLC Communication Timeout (for single PLC) %Device% PLC Communication Timeout (for multiple PLCs, such as RS-422/485)	A timeout occurred after sending a request to the PLC %Device%. %Device% indicates the device name, such as DEV001. Example error message for multiple PLCs: DEV001 PLC Communication Timeout.
PLC-002	NAK received from PLC	A negative acknowledgement (NAK) control code has been generated during a read/write request.
PLC-003	EOT received from PLC	An End of Transmission (EOT) control code is sent by the PLC in response to a Read/Write/SetBit request.
PLC-004	STX is not found	A Start of Text (STX) control code was not found in the data packet received from the PLC.
PLC-005	ETX or ETB is not found	Neither an End of Text (ETX) nor an End of Transmission Block (ETB) control code was found in the data packet received from the PLC.
PLC-006	LRC does not match	There was an incorrect Longitudinal Redundancy Check (LRC) control code in the communications packet received from the PLC. This is an indication that the data in the packet is corrupted.
PLC-007	CRC does not match	There was an incorrect Cyclic Redundancy Check (CRC) control code in the communications packet received from the PLC. This is an indication that the data in the packet is corrupted.
PLC-008	Address does not match	The address value returned in the data packet from the PLC is incorrect.
PLC-009	Different function code received from PLC	The function code returned in the data packet from the PLC is incorrect.
PLC-010	Data size does not match	There is an incorrect number of bytes found in the data packet returned from the PLC.
PLC-011	Invalid value in function code	There is an invalid value in the function code.
PLC-012	Invalid command sent to PLC	There was an invalid command sent to the PLC that wasn't recognized by the PLC.
PLC-013	ENQ received from PLC	If the data packet does not include a negative acknowledgement (NAK - 0x15 value) in the defined packet field, then an enquiry (ENQ) control code error will be displayed.
PLC-014	Transaction ID does not match	This error will be displayed if after checking the Transaction ID Bytes in the data packet, there is no match to what was requested.
PLC-015	%Device% No device found	A PLC device designated as %Device% could not be found.
PLC-016	Data byte communication error	0 byte of data is received
PLC-017	Out of address range	The HMI requested a file number larger than 255.
PLC-018	Panel communication timeout	The server panel did not respond when using the Panel Pass Through.
PLC-019	Found in parity error by hardware	An error has been detected in the PLC memory.
PLC-020	Can't open serial port	Cannot open the Serial Port. If this error shows on the panel, it indicates a hardware problem.
PLC-021	PLC number does not match	The PLC number does not match the PLC number configured.
PLC-022	Can't reset DCB	Unable to reset the data communication bit.
PLC-023	Cable not connected properly	Communication cable incorrectly installed.

(C-more HMI Error Code Table continued on the next page)

C-more HMI Error Code Table (cont'd)

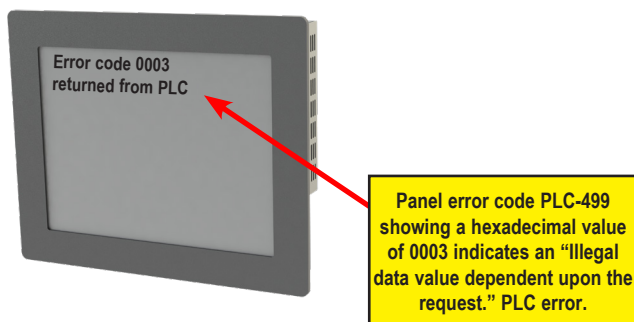
C-more HMI Error Code Table (cont'd)		
Error Code	Error Message	Cause
PLC-024	Cannot detect other devices on network	The panel is not communicating with other devices on the network.
PLC-025	Panel not in polling list	
PLC-026	PLC connection timeout	A timeout occurred after sending a request to the PLC.
PLC-027	Memory type incorrect	
PLC-028	PLC failed to respond	The PLC failed to respond after sending a request to the PLC.
PLC-029	MemVer ERR HMI x PLCy	When connected to a Do-more PLC the PLC memory version must match the C-more project PLC memory version. Make sure that the PLC project does not write into the memory version address.
PLC-495	Omron Ethernet Error	An error code specific to Omron Ethernet with a value of XXXX has been returned from the PLC. See the explanation for error code PLC-495 preceding the Omron CS/CJ FINS Ethernet error code tables.
PLC-496	Error code 0xaaaaaaaa returned from PLC	Allen-Bradley EtherNET/IP specific. Encapsulation Error. See the explanation for error code PLC-496 preceding the Allen-Bradley EtherNet/IP error code tables.
PLC-497	Error code 0xaaaaaaaa returned from PLC	Allen-Bradley EtherNET/IP specific. CIP Error. See the explanation for error code PLC-497 preceding the Allen-Bradley EtherNet/IP error code tables.
PLC-498	Error code 0xaaaaaaaa returned from PLC	Allen-Bradley EtherNET/IP specific. Service Packet Error. See the explanation for error code PLC-498 preceding the Allen-Bradley EtherNet/IP error code tables.
PLC-499	Error code XXXX returned from PLC	An error code with a value of XXXX has been returned from the PLC. See the explanation for error code PLC-499 below for Direct LOGIC and preceding each set of PLC error code tables that use this error code.
PLC-500	Cannot write to Serial Port	Data cannot write to the Serial port. Data was sent to the PLC via the Serial Port. If this error shows on the Panel, it indicates a hardware problem.
PLC-700	Not enough buffer memory	There was an error while allocating memory for the read buffer. When this error is displayed, a memory leak may have occurred.
PLC-701	Access to inaccessible PLC memory	Request to inaccessible memory from the HMI layer to the PLC protocol layer. This error is an indication that there is a problem in the HMI layer.
PLC-702	Cannot access by different function code	A Read/Write/SetBit request has been sent to an invalid memory area. This error is an indication that there is a problem in the HMI layer.
PLC-703	Write request to PLC Read Only Memory	A PLC Write request was made to the PLC's Read-Only memory area. This error is an indication that there is a problem in the HMI layer or the PLC protocol layer.
PLC-704	Bad device-access	No device (PLC) exists in the server panel or the device name does not match between the server and client when using the Panel Pass Through.
PLC-705	Protocol does not match	The protocol for the device does Not match between the server and client when using the panel pass through.

DirectLOGIC – Panel Error Code PLC-499 Explanation

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The PLC-499 error code is used to show any errors that are generated by the connected PLC. The PLC-499 error message includes a four digit hexadecimal value embedded in the message. This value can be looked up in the specific PLC's error tables to determine the cause of the error. The possible PLC generated error codes for the *Direct*LOGIC communication protocol are represented by a hexadecimal value as shown in the following message example.

Direct LOGIC Error Code PLC-499 Message Example:



DirectLOGIC K-Sequence Protocol – PLC Error Code Table

The following table lists the errors that can be generated by the *Direct*LOGIC PLC when using the K-Sequence protocol.

PLC Error Codes for <i>Direct</i> Logic – K-Sequence	
Panel Error Code PLC-499 Hex Value	Description
01F8	Error setting value.
020D	Error in key mode - Set switch on PLC CPU to "Term"
021C	Password protected.



NOTE: The following errors can be generated from the designated PLC, are monitored by the **C-more** HMI, and are displayed on the attached screen as a hexadecimal value in panel error code PLC-499 message, if active. Please refer to the PLC manufacturer's documentation for additional information.

DirectLOGIC DirectNET Protocol – PLC Error Codes

Only errors as listed in the HMI Error Code Table shown on page A-3 can occur when using the *Direct*LOGIC *Direct*NET protocol. There are no PLC generated errors.

*Direct*LOGIC error code tables continued on the next page.

Modbus Protocols Error Code P499 Explanation

The following table lists the errors that can be generated by the Modbus protocols:

AutomationDirect CLICK

AutomationDirect *Direct*LOGIC - Modbus (Koyo)

Modicon Modbus RTU

Entivity Modbus RTU



NOTE: The following errors can be generated from the designated PLC, are monitored by the **C-more** HMI, and are displayed on the attached screen as a hexadecimal value in panel error code PLC-499 message, if active. Please refer to the PLC manufacturer's documentation for additional information.

PLC Error Codes Modbus Protocols		
Panel Error Code P499 Hex Value	Name	Meaning
0x0001	ILLEGAL FUNCTION	The function code received in the query is not an allowable action for the server (or slave). This may be because the function code is only applicable to newer devices and was not implemented in the unit selected. It could also indicate that the server (or slave) is in the wrong state to process a request of this type, for example because it is unconfigured and is being asked to return registered values.
0x0002	ILLEGAL DATA ADDRESS	The data address received in the query is not an allowable address for the server (or slave). More specifically, the combination of reference number and transfer length is invalid. For a controller with 100 registers, the PDU addresses the first register as 0 and the last one as 99. If a request is submitted with a starting register address of 96 and a quantity of registers of 4, then the request will successfully operate (address-wise at least) on registers 96, 97, 98, 99. If a request is submitted with a starting register of 96 and a quantity of registers of 5, then the request will fail with Exception code 0x02 "Illegal Data Address" since it attempts to operate on registers 96, 97, 98, 99 and 100 and there is no register with address 100.
0x0003	ILLEGAL DATA VALUE	A value contained in the query data field is not an allowable value for server (or slave). This indicates a fault in the structure of the remainder of a complex request, such as that the implied length is incorrect. It specifically does NOT mean that a data item submitted for storage in a register has a value outside the expectation of the application program, since the Modbus protocol is unaware of the significance of any particular value of any particular register.
0x0004	SLAVE DEVICE FAILURE	An unrecoverable error occurred while the server (or slave) was attempting to perform the requested action.

DirectLOGIC ECOM Protocol – PLC Error Codes

Only errors as listed in the HMI Error Code Table shown previously in this Appendix can occur when using the **Direct**LOGIC ECOM protocol. There are no PLC generated errors.

Productivity Error Code P499



NOTE: The following errors can be generated from the designated PLC, are monitored by the **C-more** HMI, and are displayed on the attached screen as a hexadecimal value in panel error code PLC-499 message, if active. Please refer to the PLC manufacturer's documentation for additional information.

PLC Error Codes for Productivity	
Panel Error Code P499 Hex Value	Meaning
0x0001	The function code received in the query is not an allowable action for the server (or slave). This may be because the function code is only applicable to newer devices and was not implemented in the unit selected. It could also indicate that the server (or slave) is in the wrong state to process a request of this type, for example because it is unconfigured and is being asked to return registered values.
0x0002	Address out of range. Check to make sure that the C-more tag and System ID match the Productivity Programming Software Tag Name and System ID. The project file in the Productivity system and the imported CSV into C-more must be in sync with each other.
0x0003	A value contained in the query data field is not an allowable value for the server (or slave). This indicates a fault in the structure of the remainder of a complex request, such as that the implied length is incorrect. It specifically does NOT mean that a data item submitted for storage in a register has a value outside the expectation of the application program, since the Modbus protocol is unaware of the significance of any particular value of any particular register.
0x0004	An unrecoverable error occurred while the server (or slave) was attempting to perform the requested action.

AutomationDirect Do-More Error Codes

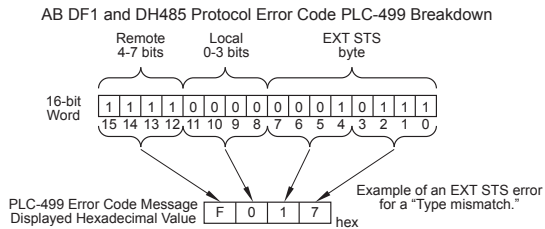
PLC Errors for Do-more		
Error Code	Description	Resolution
0x01	Unknown Command	Should only occur if message has been corrupted or protocol version is mismatched. Check versions and update appropriately. If versions are correct, check cabling, routing and switches for bad packets.
0x02	Out of Sessions	Too many devices connected to the CPU. Reduce number of devices connected.
0x03	Illegal Operation	Occurs when permission level is not sufficient for the operation performed by the panel. Increase the permission level to correct the problem.
0x04	Invalid Session	Session number does not match for sending device. Re-establish connection by power cycling or sending updated project.
0x05	Out of Range	Invalid address exists. Ensure that address range is expanded and load configuration to the CPU.
0x06	Invalid Argument	Occurs when message cannot be parsed correctly. Could occur from noise or faulty wiring.
0x07	Program Update Active	Wait until program update is complete.
0x08	No Token	Occurs when client attempts to update the project without first acquiring the program update token.
0x09	Program Update Inhibited	Occurs when client attempts to update the project while ST21 is true. This allows the customer to programmatically prevent the project from being updated.
0x0A	System Configuration Update Active	Wait until System Configuration update is complete to continue communications.
0x0B	Invalid Mode	Ensure that the switch on the CPU is in Term mode.
0x0C	Mode Change Active	Occurs when a PLC mode change is attempted while a mode change is in progress. In some cases it takes several scans for a mode change.
0x0D	Mode Locked	Occurs when mode change is attempted and keyswitch is not in Term.
0x0E	Invalid Password	Enter Do-more password in Password field of C-more Panel Manager for this device.
0x0F	Resource Locked	Occurs when trying to update a tag that is forced. Force must be removed in order to update the tag.
0x010	Doc Update Active	Occurs when someone attempts to access the documentation file while it is being written back to ROM.
0x011	Invalid Driver	Occurs when attempting to read driver data from a driver that doesn't exist.
0x012	Invalid Driver Data	Occurs when attempting to read a driver data type that isn't valid.
0x013	Shared RAM write failed	Occurs when attempting to read or write to a module's shared RAM and it fails. Usually occurs when the module has gone bad.

Allen-Bradley – Panel Error Code PLC-499

Explanation

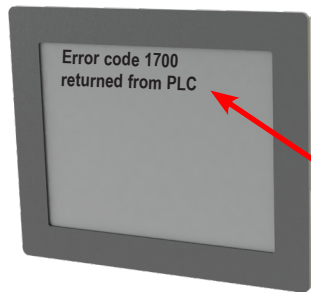
The PLC-499 error code is used to show any errors that are generated by the connected PLC. The PLC-499 error message includes a four digit hexadecimal value embedded in the message. This value can be looked up in the specific PLC's error tables to determine the cause of the error. The possible PLC generated error codes for the Allen-Bradley DF1 and DH485 communication protocols are represented by a hexadecimal value as shown in the following diagram. Please note that the error code is broken down into three sections. It is possible for more than one type of PLC error to be displayed in this value.

Allen-Bradley Error Code PLC-499 Message Example:



AB DF1 and DH485 Protocol – Multiple Error Code Examples

	Example 1	Example 2	Example 3
Remote 4-7 bits	F x x x	1 x x x	F x x x
Local 0-3 bits	x 0 x x	x 1 x x	x 1 x x
EXT STS byte	x x 0 9	x x 0 0	x x 0 9
Error PLC-499 Value Displayed	F 0 0 9	1 1 0 0	F 1 0 9



Panel error code PLC-499 showing a hexadecimal value of 1700 indicates "Illegal command or format," and "Station is offline." PLC errors.

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Allen-Bradley DF1 & DH485 Protocols – PLC Error Code Tables

The following PLC error code tables cover possible errors that are detected by the panel from Allen-Bradley PLCs using the DF1 and DH485 protocols. DF1 includes full and half duplex communications for the MicroLogix 1000, 1100, 1200, 1400, 1500, SLC 5/03, /04, /05, ControlLogix, CompactLogix and FlexLogix, and full duplex communications for the PLC5. DH485 includes all MicroLogix and SLC500 PLC's and any communication connection using an Allen-Bradley AIC device using the DH485 protocol.



NOTE: The following errors can be generated from the designated PLC, are monitored by the **C-more** HMI, and are displayed on the attached screen as a hexadecimal value in panel error code PLC-499 message, if active. Please refer to the PLC manufacturer's documentation for additional information.

PLC Errors for Allen-Bradley DF1 and DH485 Protocols, Local STS Errors (0-3 bits)

Panel Error Code PLC-499 Hex Value	Description
0x0	Success; no error.
0x1	DST node is out of buffer space.
0x2	Cannot guarantee delivery; link layer. (The remote node specified does not ACK command.)
0x3	Duplicate token holder detected.
0x4	Local port is disconnected.
0x5	Application layer timed out waiting for response.
0x6	Duplicate node detected.
0x7	Station is offline.
0x8	Hardware fault.

PLC Errors for Allen-Bradley DF1 and DH485 Protocols, Remote STS Errors (4-7 bits)

Panel Error Code PLC-499 Hex Value	Description
0x0	Success; no error.
0x10	Illegal command or format.
0x20	Host has a problem and will not communicate.
0x30	Remote node host is missing, disconnected, or shut down.
0x40	Host could not complete function due to hardware fault.
0x50	Addressing problem or memory protect rungs.
0x60	Function not allowed due to command protection selection.
0x70	Processor is in Program Mode.
0x80	Compatibility mode file missing or communication zone problem.
0x90	Remote node cannot buffer command.
0xA0	Wait ACK (1775 KA buffer full).
0xB0	Remote node problem due to download.
0xC0	Wait ACK (1775 KA buffer full).
0xD0	not used
0xE0	not used
0xF0	Error code in the EXT STS byte. See the error code table on the next page.

(PLC generated error codes for the Allen-Bradley DF1 protocol continued on the next page)

Allen-Bradley DF1 & DH485 Protocols – PLC Error Code Tables (cont'd)

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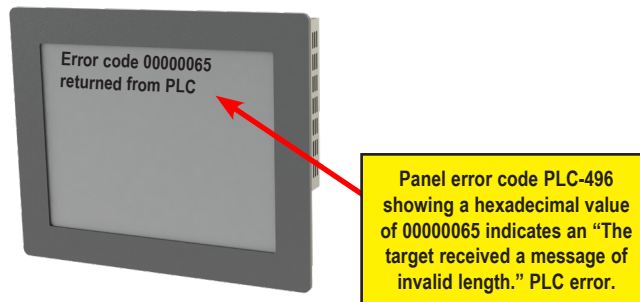
PLC Errors for Allen-Bradley DF1 and DH485 Protocols, EXT STS Command Code for F0 Command	
Panel Error Code PLC-499 Hex Value	Description
0x0	not used
0x1	A field has an illegal value.
0x2	Fewer levels specified in address than minimum for any address.
0x3	More levels specified in address than system supports.
0x4	Symbol not found.
0x5	Symbol is of improper format.
0x6	Address does not point to something usable.
0x7	File is wrong size.
0x8	Cannot complete request; situation has changed since start of the command.
0x9	Data or file size is too large.
0xA	Transaction size plus word address is too large.
0xB	Access denied; improper privilege.
0xC	Condition cannot be generated; resource is not available.
0xD	Condition already exists; resource is readily available.
0xE	Command cannot be executed.
0xF	Histogram overflow.
0x10	No access.
0x11	Illegal data type.
0x12	Invalid parameter or invalid data.
0x13	Address reference exists to deleted area.
0x14	Command execution failure for unknown reason; possible PLC 3 histogram overflow.
0x15	Data conversion error.
0x16	Scanner not able to communicate with 1771 rack adapter.
0x17	Type mismatch.
0x18	1771 module response was not valid.
0x19	Duplicated label.
0x22	Remote rack fault.
0x23	Timeout.
0x24	Unknown error.
0x1A	File is open; another node owns it.
0x1B	Another node is the program owner.
0x1C	Disk File is write protected or otherwise unavailable
0x1D	Disk File is being used by another application. Update not performed (offline only).
0x1E	Data table element protection violation.
0x1F	Temporary internal problem.

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Allen-Bradley EtherNet/IP Protocol – Panel Error Code PLC-496, 497 and 498 Explanation

The PLC-496, PLC-497, and PLC-498 error codes are used to show any errors that are generated by the connected PLC. These error messages include an eight digit hexadecimal value displayed embedded in the message. This value can be looked up in the specific PLC's error tables to determine the cause of the error. The possible PLC generated error codes for the Allen-Bradley EtherNet/IP communication protocol is represented by a hexadecimal value as shown in the following message example.

Allen-Bradley Error Code PLC-496, 497, 498 Message Example:



Allen-Bradley – EtherNet/IP Protocol – PLC Error Code Tables ControlLogix, CompactLogix, and FlexLogix

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The following PLC error code tables cover possible errors that are detected by the panel from Allen-Bradley PLCs using the EtherNet/IP protocol. This includes all ControlLogix, CompactLogix and FlexLogix PLCs.



NOTE: The following errors can be generated from the designated PLC, are monitored by the **C-more** HMI, and are displayed on the attached screen as a hexadecimal value in panel error code PLC-496 message, if active. Please refer to the PLC manufacturer's documentation for additional information.

PLC Errors for Allen-Bradley EtherNet/IP Protocol –Encapsulation Errors (Error code 0xaaaaaaaa returned from the PLC)	
Panel Error Code PLC-496 Hex Value	Description
0x00000001	The sender issued an invalid or unsupported encapsulation command.
0x00000002	Insufficient memory resources in the receiver to handle the command. You can get this error if the 1761-NET-ENI cannot connect to the PLC serially.
0x00000003	Poorly formed or incorrect data in the data portion of the encapsulation message.
0x00000004 - 0x00000063	Reserved for legacy (Rockwell Automation).
0x00000064	An originator used an invalid session handle when sending an encapsulation message to the target.
0x00000065	The target received a message of invalid length.
0x00000066 - 0x00000068	Reserved for legacy (Rockwell Automation).
0x00000069	Unsupported encapsulation protocol revision.
0x0000006a - 0x0000ffff	Reserved for future expansion.

PLC Errors for Allen-Bradley EtherNet/IP Protocol – CIP Errors (Error code 0xaaaaaaaa returned from the PLC)	
Panel Error Code PLC-497 Hex Value	Description
0x010100	Connection Manager: Connection in Use or Duplicate Forward Open.
0x010103	Connection Manager: Transport Class and Trigger combination not supported.
0x010106	Connection Manager: Ownership Conflict.
0x010107	Connection Manager: Connection not found at target application.
0x010108	Connection Manager: Invalid connection type (problem with type or priority).
0x010109	Connection Manager: Invalid connection size.
0x010110	Connection Manager: Device not configured.
0x010111	Connection Manager: RPI not supported. Could also be problem with inactivity timeout.
0x010113	Connection Manager: Connection Manager cannot support any more connections.
0x010114	Connection Manager: Either the vendor ID or the Product Code in the key segment did not match the device.
0x010115	Connection Manager: Product Type in the key segment did not match the device.
0x010116	Connection Manager: Major or minor revision information in the key segment did not match the device.

(PLC generated error codes for the Allen-Bradley EtherNet/IP protocol continued on the next page)

A Allen-Bradley – EtherNet/IP Protocol – PLC Error Code Tables ControlLogix, CompactLogix, & FlexLogix (cont'd)

PLC Errors for Allen-Bradley EtherNet/IP Protocol – CIP Errors (Error code 0xaaaaaaaa returned from the PLC)	
Panel Error Code PLC-497 Hex Value	Description
0x010117	Connection Manager: Invalid connection point.
0x010118	Connection Manager: Invalid configuration format.
0x010119	Connection Manager: Connection request fails since there is no controlling connection currently open.
0x01011a	Connection Manager: Target application cannot support any more connections.
0x01011b	Connection Manager: RPI is smaller than the Production Inhibit Time.
0x010203	Connection Manager: Connection cannot be closed since the connection has timed out.
0x010204	Connection Manager: Unconnected Send timed out waiting for a response.
0x010205	Connection Manager: Parameter error in Unconnected Send service.
0x010206	Connection Manager: Message too large for Unconnected message service.
0x010207	Connection Manager: Unconnected acknowledge without reply.
0x010301	Connection Manager: No buffer memory available.
0x010302	Connection Manager: Network Bandwidth not available for data.
0x010303	Connection Manager: No Tag filters available.
0x010304	Connection Manager: Not configured to send real-time data.
0x010311	Connection Manager: Port specified in Port segment not available.
0x010312	Connection Manager: Link address specified in port segment not available.
0x010315	Connection Manager: Invalid segment type or segment value in path.
0x010316	Connection Manager: Path and Connection not equal in close.
0x010317	Connection Manager: Ether Segment not present or Encoded Value in Network Segment is invalid.
0x010318	Connection Manager: Link address to self invalid.
0x010319	Connection Manager: Resources on Secondary unavailable.
0x01031a	Connection Manager: Connection already established.
0x01031b	Connection Manager: Direct connection already established.
0x01031c	Connection Manager: Miscellaneous.
0x01031d	Connection Manager: Redundant connection mismatch.
0x01031e	Connection Manager: No more consumer resources available in the producing module.
0x01031f	Connection Manager: No connection resources exist for target path.
0x010320 - 0x0107ff	Connection Manager: Vendor specific.
0x020000	Resource unavailable: Connection Manager resources are unavailable to handle service request.
0x030000	Invalid parameter value.
0x040000	Path segment error: The path segment identifier or the segment syntax was not understood by the processing node.
0x050000	Path destination unknown: The path is referencing an object class, instance or structure element that is not known or is not contained in the processing node.
0x060000	Partial transfer: Only part of the expected data was transferred.
0x070000	Connection lost: The messaging connection was lost.

(PLC generated error codes for the Allen-Bradley EtherNet/IP protocol continued on the next page)

Allen-Bradley – EtherNet/IP Protocol – PLC Error Code Tables ControlLogix, CompactLogix, & FlexLogix (cont'd)

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PLC Errors for Allen-Bradley EtherNet/IP Protocol – CIP Errors (Error code 0xaaaaaaaa returned from the PLC)	
Panel Error Code PLC-497 Hex Value	Description
0x080000	Service not supported: The requested service was not implemented or was not defined for this Object Class/ Instance.
0x090000	Invalid attribute value: Invalid attribute data detected.
0x0a0000	Attribute list error: An attribute in the Get_Attribute_List or Set_Attribute_List response has a non-zero status.
0x0b0000	Already in requested mode/state: The object is already in the mode/state being requested by the service.
0x0c0000	Object state conflict: The object cannot perform the requested service in its current mode/state.
0x0d0000	Object already exists: The requested instance of object to be created already exists.
0x0e0000	Attribute not settable: A request to modify non-modifiable attribute was received.
0x0f0000	Privilege violation: A permission/privilege check failed.
0x100000	Device state conflict: The device's current mode/state prohibits the execution of the requested service.
0x110000	Reply data too large: The data to be transmitted in the response buffer is larger than the allocated response buffer.
0x120000	Fragmentation of a primitive value: The service specified an operation that is going to fragment a primitive data value - for example, trying to send a 2 byte value to a REAL data type (4 byte).
0x130000	Not enough data: The service did not supply enough data to perform the specified operation.
0x140000	Attribute not supported: The attribute specified in the request is not supported.
0x150000	Too much data: The service supplied more data than was expected.
0x160000	Object does not exist: The object specified does not exist in the device.
0x170000	Service fragmentation sequence not in progress: The fragmentation sequence for this service is not currently active for this data.
0x180000	No stored attribute data: The attribute data of this object was no saved prior to the requested service.
0x190000	Store operation failure: The attribute data of this object was not saved due to a failure during the attempt.
0x1a0000	Routing failure, request packet too large: The service request packet was too large for transmission on a network in the path to the destination.
0x1b0000	Routing failure, response packet too large: The service response packet was too large for transmission on a network in the path from the destination.
0x1c0000	Missing attribute list entry data: The service did not supply an attribute in a list of attributes that was needed by the service to perform the requested behavior.
0x1d0000	Invalid attribute value list: The service is returning the list of attributes supplied with status information for those attributes that were invalid.
0x1e0000	Embedded service error: See Service Packet error list (PLC-498 Error codes) later in this appendix
0x1f0000	Vendor specific error: A vendor specific error has been encountered. This occurs when none of the specified errors relate to the error in the device.
0x200000	Invalid parameter: A parameter associated with the request was invalid. This code is used when a parameter does meet the requirements defined in an Application Object specification.
0x210000	Write-once value or medium already written: An attempt was made to write to a write-once-medium that has already been written or to modify a value that cannot be change once established.
0x220000	Invalid Reply Received: An invalid reply is received (example: service code sent doesn't match service code received).

(PLC generated error codes for the Allen-Bradley EtherNet/IP protocol continued on the next page)

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Allen-Bradley – EtherNet/IP Protocol – PLC Error Code Tables ControlLogix, CompactLogix, & FlexLogix (cont'd)

PLC Errors for Allen-Bradley EtherNet/IP Protocol – CIP Errors (Error code 0xaaaaaaaa returned from the PLC)

Panel Error Code PLC-497 Hex Value	Description
0x230000	Reserved by CIP for future extensions.
0x240000	Reserved by CIP for future extensions.
0x250000	Key failure in path: The key segment was included as the first segment in the path does not match the destination module. The object specific status shall indicate which part of the key check failed.
0x260000	Path Size Invalid: The size of the path which was sent with the Service Request is either not large enough to allow the Request to be routed to an object or too much routing data was included.
0x270000	Unexpected attribute in list: An attempt was made to set an attribute that is not able to be set at this time.
0x280000	Invalid Member ID: The Member ID specified in the request does not exist in the specified Class/Instance/Attribute.
0x290000	Member not settable: A request to modify a non-modifiable member was received.
0x2a0000	Group 2 only server general failure: This error code may only be reported by DeviceNet group 2 only servers with 4K or less code space and only in place of Service not supported, Attribute not supported and Attribute not settable.
0x2b0000 - 0xcf0000	Reserved by CIP for future extensions.
0xd00000 - 0xff0000	Reserved for Object Class and service errors: This range of error codes is to be used to indicate Object Class specific errors. Use of this range should only be used when errors in this table don't accurately reflect the error encountered.

PLC Errors for Allen-Bradley EtherNet/IP Protocol – Service Packet Errors (Error code 0xaaaaaaaa returned from the PLC)

Panel Error Code PLC-498 Hex Value	Description
0x040000	This general status codes that the tag name could not be deciphered. This could mean that the tag name was entered incorrectly or does not exist in the PLC.
0x050000	The particular item referenced (usually instance) could not be found.
0x060000	The amount of data requested would not fit into the response buffer. Partial data transfer has occurred.
0x0a0000	An error has occurred trying to process one of the attributes.
0x130000	Not enough command data/parameters were supplied in the command to execute the service requested.
0x1c0000	An insufficient number of attributes were provided compared to the attribute count.
0x260000	The tag name length specified did not match what was in the message.
0xff0521	You have tried to access beyond the end of the data object.
0xff0721	The abbreviated type does not match the data type of the data object.
0xff0421	The beginning offset was beyond the end of the template.

Allen-Bradley – Micro800 Serial and EtherNet/IP Tag Based PLC Error Code Tables

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The following PLC error code tables cover possible errors that are detected by the panel from Allen-Bradley Micro800 PLCs using the tag based serial or EtherNet/IP protocols.



NOTE: The following errors can be generated from the designated PLC, are monitored by the **C-more** HMI, and are displayed on the attached screen as a hexadecimal value in panel error code PLC-496 message, if active. Please refer to the PLC manufacturer's documentation for additional information.

PLC Errors for Allen-Bradley EtherNet/IP Protocol –Encapsulation Errors (Error code 0xaaaaaaaa returned from the PLC)	
Panel Error Code PLC-496 Hex Value	Description
0x00000001	The sender issued an invalid or unsupported encapsulation command.
0x00000002	Insufficient memory resources in the receiver to handle the command. You can get this error if the 1761-NET-ENI cannot connect to the PLC serially.
0x00000003	Poorly formed or incorrect data in the data portion of the encapsulation message.
0x00000004 - 0x00000063	Reserved for legacy (Rockwell Automation).
0x00000064	An originator used an invalid session handle when sending an encapsulation message to the target.
0x00000065	The target received a message of invalid length.
0x00000066 - 0x00000068	Reserved for legacy (Rockwell Automation).
0x00000069	Unsupported encapsulation protocol revision.
0x0000006a - 0x0000ffff	Reserved for future expansion.

PLC Errors for Allen-Bradley EtherNet/IP Protocol – CIP Errors (Error code 0xaaaaaaaa returned from the PLC)	
Panel Error Code PLC-497 Hex Value	Description
0x010100	Connection Manager: Connection in Use or Duplicate Forward Open.
0x010103	Connection Manager: Transport Class and Trigger combination not supported.
0x010106	Connection Manager: Ownership Conflict.
0x010107	Connection Manager: Connection not found at target application.
0x010108	Connection Manager: Invalid connection type (problem with type or priority).
0x010109	Connection Manager: Invalid connection size.
0x010110	Connection Manager: Device not configured.
0x010111	Connection Manager: RPI not supported. Could also be problem with inactivity timeout.
0x010113	Connection Manager: Connection Manager cannot support any more connections.
0x010114	Connection Manager: Either the vendor ID or the Product Code in the key segment did not match the device.
0x010115	Connection Manager: Product Type in the key segment did not match the device.
0x010116	Connection Manager: Major or minor revision information in the key segment did not match the device.

(PLC generated error codes for the Allen-Bradley Micro800 Serial and EtherNet/IP Tag Based PLC continued on the next page)

Allen-Bradley – Micro800 Serial and EtherNet/IP Tag Based PLC Error Code Tables (cont'd)

PLC Errors for Allen-Bradley EtherNet/IP Protocol – CIP Errors (Error code 0xaaaaaaaa returned from the PLC)	
Panel Error Code PLC-497 Hex Value	Description
0x010117	Connection Manager: Invalid connection point.
0x010118	Connection Manager: Invalid configuration format.
0x010119	Connection Manager: Connection request fails since there is no controlling connection currently open.
0x01011a	Connection Manager: Target application cannot support any more connections.
0x01011b	Connection Manager: RPI is smaller than the Production Inhibit Time.
0x010203	Connection Manager: Connection cannot be closed since the connection has timed out.
0x010204	Connection Manager: Unconnected Send timed out waiting for a response.
0x010205	Connection Manager: Parameter error in Unconnected Send service.
0x010206	Connection Manager: Message too large for Unconnected message service.
0x010207	Connection Manager: Unconnected acknowledge without reply.
0x010301	Connection Manager: No buffer memory available.
0x010302	Connection Manager: Network Bandwidth not available for data.
0x010303	Connection Manager: No Tag filters available.
0x010304	Connection Manager: Not configured to send real-time data.
0x010311	Connection Manager: Port specified in Port segment not available.
0x010312	Connection Manager: Link address specified in port segment not available.
0x010315	Connection Manager: Invalid segment type or segment value in path.
0x010316	Connection Manager: Path and Connection not equal in close.
0x010317	Connection Manager: Ether Segment not present or Encoded Value in Network Segment is invalid.
0x010318	Connection Manager: Link address to self invalid.
0x010319	Connection Manager: Resources on Secondary unavailable.
0x01031a	Connection Manager: Connection already established.
0x01031b	Connection Manager: Direct connection already established.
0x01031c	Connection Manager: Miscellaneous.
0x01031d	Connection Manager: Redundant connection mismatch.
0x01031e	Connection Manager: No more consumer resources available in the producing module.
0x01031f	Connection Manager: No connection resources exist for target path.
0x010320 - 0x0107ff	Connection Manager: Vendor specific.
0x020000	Resource unavailable: Connection Manager resources are unavailable to handle service request.
0x030000	Invalid parameter value.
0x040000	Path segment error: The path segment identifier or the segment syntax was not understood by the processing node.
0x050000	Path destination unknown: The path is referencing an object class, instance or structure element that is not known or is not contained in the processing node.
0x060000	Partial transfer: Only part of the expected data was transferred.
0x070000	Connection lost: The messaging connection was lost.

(PLC generated error codes for the Allen-Bradley Micro800 Serial and EtherNet/IP Tag Based PLC continued on the next page)

Allen-Bradley – Micro800 Serial and EtherNet/IP Tag Based PLC Error Code Tables (cont'd)

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PLC Errors for Allen-Bradley EtherNet/IP Protocol – CIP Errors (Error code 0xaaaaaaaa returned from the PLC)	
Panel Error Code PLC-497 Hex Value	Description
0x080000	Service not supported: The requested service was not implemented or was not defined for this Object Class/Instance.
0x090000	Invalid attribute value: Invalid attribute data detected.
0x0a0000	Attribute list error: An attribute in the Get_Attribute_List or Set_Attribute_List response has a non-zero status.
0x0b0000	Already in requested mode/state: The object is already in the mode/state being requested by the service.
0x0c0000	Object state conflict: The object cannot perform the requested service in its current mode/state.
0x0d0000	Object already exists: The requested instance of object to be created already exists.
0x0e0000	Attribute not settable: A request to modify non-modifiable attribute was received.
0x0f0000	Privilege violation: A permission/privilege check failed.
0x100000	Device state conflict: The device's current mode/state prohibits the execution of the requested service.
0x110000	Reply data too large: The data to be transmitted in the response buffer is larger than the allocated response buffer.
0x120000	Fragmentation of a primitive value: The service specified an operation that is going to fragment a primitive data value - for example, trying to send a 2 byte value to a REAL data type (4 byte).
0x130000	Not enough data: The service did not supply enough data to perform the specified operation.
0x140000	Attribute not supported: The attribute specified in the request is not supported.
0x150000	Too much data: The service supplied more data than was expected.
0x160000	Object does not exist: The object specified does not exist in the device.
0x170000	Service fragmentation sequence not in progress: The fragmentation sequence for this service is not currently active for this data.
0x180000	No stored attribute data: The attribute data of this object was not saved prior to the requested service.
0x190000	Store operation failure: The attribute data of this object was not saved due to a failure during the attempt.
0x1a0000	Routing failure, request packet too large: The service request packet was too large for transmission on a network in the path to the destination.
0x1b0000	Routing failure, response packet too large: The service response packet was too large for transmission on a network in the path from the destination.
0x1c0000	Missing attribute list entry data: The service did not supply an attribute in a list of attributes that was needed by the service to perform the requested behavior.
0x1d0000	Invalid attribute value list: The service is returning the list of attributes supplied with status information for those attributes that were invalid.
0x1e0000	Embedded service error: See Service Packet error list (PLC-498 Error codes) later in this appendix
0x1f0000	Vendor specific error: A vendor specific error has been encountered. This occurs when none of the specified errors relate to the error in the device.
0x200000	Invalid parameter: A parameter associated with the request was invalid. This code is used when a parameter does not meet the requirements defined in an Application Object specification.
0x210000	Write-once value or medium already written: An attempt was made to write to a write-once-medium that has already been written or to modify a value that cannot be changed once established.
0x220000	Invalid Reply Received: An invalid reply is received (example: service code sent doesn't match service code received).

(PLC generated error codes for the Allen-Bradley Micro800 Serial and EtherNet/IP Tag Based PLC continued on the next page)

Allen-Bradley – Micro800 Serial and EtherNet/IP Tag Based PLC Error Code Tables (cont'd)

PLC Errors for Allen-Bradley EtherNet/IP Protocol – CIP Errors (Error code 0xaaaaaaaa returned from the PLC)

Panel Error Code PLC-497 Hex Value	Description
0x230000	Reserved by CIP for future extensions.
0x240000	Reserved by CIP for future extensions.
0x250000	Key failure in path: The key segment was included as the first segment in the path does not match the destination module. The object specific status shall indicate which part of the key check failed.
0x260000	Path Size Invalid: The size of the path which was sent with the Service Request is either not large enough to allow the Request to be routed to an object or too much routing data was included.
0x270000	Unexpected attribute in list: An attempt was made to set an attribute that is not able to be set at this time.
0x280000	Invalid Member ID: The Member ID specified in the request does not exist in the specified Class/Instance/Attribute.
0x290000	Member not settable: A request to modify a non-modifiable member was received.
0x2a0000	Group 2 only server general failure: This error code may only be reported by DeviceNet group 2 only servers with 4K or less code space and only in place of Service not supported, Attribute not supported and Attribute not settable.
0x2b0000 - 0xcf0000	Reserved by CIP for future extensions.
0xd00000 - 0xff0000	Reserved for Object Class and service errors: This range of error codes is to be used to indicate Object Class specific errors. Use of this range should only be used when errors in this table don't accurately reflect the error encountered.

PLC Errors for Allen-Bradley EtherNet/IP Protocol – Service Packet Errors (Error code 0xaaaaaaaa returned from the PLC)

Panel Error Code PLC-498 Hex Value	Description
0x040000	This general status codes that the tag name could not be deciphered. This could mean that the tag name was entered incorrectly or does not exist in the PLC.
0x050000	The particular item referenced (usually instance) could not be found.
0x060000	The amount of data requested would not fit into the response buffer. Partial data transfer has occurred.
0x0a0000	An error has occurred trying to process one of the attributes.
0x130000	Not enough command data/parameters were supplied in the command to execute the service requested.
0x1c0000	An insufficient number of attributes were provided compared to the attribute count.
0x260000	The tag name length specified did not match what was in the message.
0xff0521	You have tried to access beyond the end of the data object.
0xff0721	The abbreviated type does not match the data type of the data object.
0xff0421	The beginning offset was beyond the end of the template.

Allen-Bradley – EtherNet/IP Protocol – PLC Error Code Tables SLC, MicroLogix and ENI

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The following PLC error code tables cover possible errors that are detected by the panel from Allen-Bradley PLCs using the EtherNet/IP protocol. This includes MicroLogix 1100, 1400 & SLC 5/05, both using their native Ethernet port, and MicroLogix 1000, 1100, 1200, 1400, 1500, SLC 5/03, 5/04 and 5/05 using an Allen-Bradley ENI Adapter.



NOTE: The following errors can be generated from the designated PLC, are monitored by the **C-more** HMI, and are displayed on the attached screen as a hexadecimal value in panel error code PLC-496 message, if active. Please refer to the PLC manufacturer's documentation for additional information.

PLC Errors for Allen-Bradley EtherNet/IP Protocol –Encapsulation Errors (Error code 0xaaaaaaaa returned from the PLC)	
Panel Error Code PLC-496 Hex Value	Description
0x00000001	The sender issued an invalid or unsupported encapsulation command.
0x00000002	Insufficient memory resources in the receiver to handle the command. You can get this error if the 1761-NET-ENI cannot connect to the PLC serially.
0x00000003	Poorly formed or incorrect data in the data portion of the encapsulation message.
0x00000004 - 0x00000063	Reserved for legacy (Rockwell Automation).
0x00000064	An originator used an invalid session handle when sending an encapsulation message to the target.
0x00000065	The target received a message of invalid length.
0x00000066 - 0x00000068	Reserved for legacy (Rockwell Automation).
0x00000069	Unsupported encapsulation protocol revision.
0x0000006a - 0x0000ffff	Reserved for future expansion.

PLC Errors for Allen-Bradley EtherNet/IP Protocol – CIP Errors (Error code 0xaabbbb returned from the PLC)	
Panel Error Code PLC-497 Hex Value	Description
0x010100	Connection Manager: Connection in Use or Duplicate Forward Open.
0x010103	Connection Manager: Transport Class and Trigger combination not supported.
0x010106	Connection Manager: Ownership Conflict.
0x010107	Connection Manager: Connection not found at target application.
0x010108	Connection Manager: Invalid connection type (problem with type or priority).
0x010109	Connection Manager: Invalid connection size.
0x010110	Connection Manager: Device not configured.
0x010111	Connection Manager: RPI not supported. Could also be problem with inactivity timeout.

(PLC generated error codes for the Allen-Bradley EtherNet/IP protocol continued on the next page)

Allen-Bradley – EtherNet/IP Protocol – PLC Error Code Tables SLC, MicroLogix and ENI (cont'd)

PLC Errors for Allen-Bradley EtherNet/IP Protocol – CIP Errors (Error code 0xaabbbb returned from the PLC)	
Panel Error Code PLC-497 Hex Value	Description
0x010113	Connection Manager: Connection Manager cannot support any more connections.
0x010114	Connection Manager: Either the vendor ID or the Product Code in the key segment did not match the device.
0x010115	Connection Manager: Product Type in the key segment did not match the device.
0x010116	Connection Manager: Major or minor revision information in the key segment did not match the device.
0x010117	Connection Manager: Invalid connection point.
0x010118	Connection Manager: Invalid configuration format.
0x010119	Connection Manager: Connection request fails since there is no controlling connection currently open.
0x01011a	Connection Manager: Target application cannot support any more connections.
0x01011b	Connection Manager: RPI is smaller than the Production Inhibit Time.
0x010203	Connection Manager: Connection cannot be closed since the connection has timed out.
0x010204	Connection Manager: Unconnected Send timed out waiting for a response.
0x010205	Connection Manager: Parameter error in Unconnected Send service.
0x010206	Connection Manager: Message too large for Unconnected message service.
0x010207	Connection Manager: Unconnected acknowledge without reply.
0x010301	Connection Manager: No buffer memory available.
0x010302	Connection Manager: Network Bandwidth not available for data.
0x010303	Connection Manager: No Tag filters available.
0x010304	Connection Manager: Not configured to send real-time data.
0x010311	Connection Manager: Port specified in Port segment not available.
0x010312	Connection Manager: Link address specified in port segment not available.
0x010315	Connection Manager: invalid segment type or segment value in path.
0x010316	Connection Manager: Path and Connection not equal in close.
0x010317	Connection Manager: Ether Segment not present or Encoded Value in Network Segment is invalid.
0x010318	Connection Manager: Link address to self invalid.
0x010319	Connection Manager: Resources on Secondary unavailable.
0x01031a	Connection Manager: Connection already established.
0x01031b	Connection Manager: Direct connection already established.
0x01031c	Connection Manager: Miscellaneous.
0x01031d	Connection Manager: Redundant connection mismatch.
0x01031e	Connection Manager: No more consumer resources available in the producing module.
0x01031f	Connection Manager: No connection resources exist for target path.
0x010320 - 0x0107ff	Connection Manager: Vendor specific.

(PLC generated error codes for the Allen-Bradley EtherNet/IP protocol continued on the next page)

Allen-Bradley – EtherNet/IP Protocol – PLC Error Code Tables SLC, MicroLogix and ENI (cont'd)

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PLC Errors for Allen-Bradley EtherNet/IP Protocol – CIP Errors (Error code 0xaabbbb returned from the PLC)	
Panel Error Code PLC-497 Hex Value	Description
0x020000	Resource unavailable: Connection Manager resources are unavailable to handle service request.
0x030000	Invalid parameter value.
0x040000	Path segment error: The path segment identifier or the segment syntax was not understood by the processing node.
0x050000	Path destination unknown: The path is referencing an object class, instance or structure element that is not known or is not contained in the processing node.
0x060000	Partial transfer: Only part of the expected data was transferred.
0x070000	Connection lost: The messaging connection was lost.
0x080000	Service not supported: The requested service was not implemented or was not defined for this Object Class/Instance.
0x090000	Invalid attribute value: Invalid attribute data detected.
0x0a0000	Attribute list error: An attribute in the Get_Attribute_List or Set_Attribute_List response has a non-zero status.
0x0b0000	Already in requested mode/state: The object is already in the mode/state being requested by the service.
0x0c0000	Object state conflict: The object cannot perform the requested service in its current mode/state.
0x0d0000	Object already exists: The requested instance of object to be created already exists.
0x0e0000	Attribute not settable: A request to modify non-modifiable attribute was received.
0x0f0000	Privilege violation: A permission/privilege check failed.
0x100000	Device state conflict: The device's current mode/state prohibits the execution of the requested service.
0x110000	Reply data too large: The data to be transmitted in the response buffer is larger than the allocated response buffer.
0x120000	Fragmentation of a primitive value: The service specified an operation that is going to fragment a primitive data value - for example, trying to send a 2 byte value to a REAL data type (4 byte).
0x130000	Not enough data: The service did not supply enough data to perform the specified operation.
0x140000	Attribute not supported: The attribute specified in the request is not supported.
0x150000	Too much data: The service supplied more data than was expected.
0x160000	Object does not exist: The object specified does not exist in the device.
0x170000	Service fragmentation sequence not in progress: The fragmentation sequence for this service is not currently active for this data.
0x180000	No stored attribute data: The attribute data of this object was no saved prior to the requested service.
0x190000	Store operation failure: The attribute data of this object was not saved due to a failure during the attempt.
0x1a0000	Routing failure, request packet too large: The service request packet was too large for transmission on a network in the path to the destination.
0x1b0000	Routing failure, response packet too large: The service response packet was too large for transmission on a network in the path from the destination.
0x1c0000	Missing attribute list entry data: The service did not supply an attribute in a list of attributes that was needed by the service to perform the requested behavior.

(PLC generated error codes for the Allen-Bradley EtherNet/IP protocol continued on the next page)

Allen-Bradley – EtherNet/IP Protocol – PLC Error Code Tables SLC, MicroLogix and ENI (cont'd)

PLC Errors for Allen-Bradley EtherNet/IP Protocol – CIP Errors (Error code 0xaabbbb returned from the PLC)	
Panel Error Code PLC-497 Hex Value	Description
0x1d0000	Invalid attribute value list: The service is returning the list of attributes supplied with status information for those attributes that were invalid.
0x1e0000	Embedded service error: See Service Packet error list (PLC-498 Error codes) later in this appendix
0x1f0000	Vendor specific error: A vendor specific error has been encountered. This occurs when none of the specified errors relate to the error in the device.
0x200000	Invalid parameter: A parameter associated with the request was invalid. This code is used when a parameter does not meet the requirements defined in an Application Object specification.
0x210000	Write-once value or medium already written: An attempt was made to write to a write-once-medium that has already been written or to modify a value that cannot be change once established.
0x220000	Invalid Reply Received: An invalid reply is received (example: service code sent doesn't match service code received.).
0x230000	Reserved by CIP for future extensions.
0x240000	Reserved by CIP for future extensions.
0x250000	Key failure in path: The key segment which was included as the first segment in the path does not match the destination module. The object specific status shall indicate which part of the key check failed.
0x260000	Path Size Invalid: The size of the path which was sent with the Service Request is either not large enough to allow the Request to be routed to an object or too much routing data was included.
0x270000	Unexpected attribute in list: An attempt was made to set an attribute that is not able to be set at this time.
0x280000	Invalid Member ID: The Member ID specified in the request does not exist in the specified Class/Instance/Attribute.
0x290000	Member not settable: A request to modify a non-modifiable member was received.
0x2a0000	Group 2 only server general failure: This error code may only be reported by DeviceNet group 2 only servers with 4K or less code space and only in place of Service not supported, Attribute not supported and Attribute not settable.
0x2b0000 - 0xcff000	Reserved by CIP for future extensions.
0xd00000 - 0xffff00	Reserved for Object Class and service errors: This range of error codes is to be used to indicate Object Class specific errors. Use of this range should only be used when errors in this table don't accurately reflect the error encountered.

(PLC generated error codes for the Allen-Bradley EtherNet/IP protocol continued on the next page)

Allen-Bradley – EtherNet/IP Protocol – PLC Error Code Tables SLC, MicroLogix and ENI (cont'd)

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PLC Errors for Allen-Bradley EtherNet/IP Protocol – Service Packet Errors (Error code 0xaabbbb returned from the PLC)	
Panel Error Code PLC-498 Hex Value	Description
0x010000	DST Node is out of buffer space.
0x020000	Cannot guarantee delivery; link layer (the remote node specified does not ACK command).
0x030000	Duplicate token holder detected.
0x040000	Local port is disconnected.
0x050000	Application layer timed out waiting for response.
0x060000	Duplicate node detected.
0x070000	Station is offline.
0x080000	Hardware fault.
0x100000	Illegal command or format. Typical error received from PLC when address requested to the PLC does not exist. Usually occurs if memory map has not been expanded in PLC to the range requested from panel.
0x200000	Host has a problem and will not communicate.
0x300000	Remote node host is missing, disconnected, or shut down.
0x400000	Host could not complete function due to hardware fault.
0x500000	Addressing problem or memory protected rungs.
0x600000	Function not allowed due to command protection selection.
0x700000	Processor is in Program Mode.
0x800000	Compatibility mode file missing or communication zone problem.
0x900000	Remote node cannot buffer command.
0xA00000	Wait ACK (1775 KA buffer full).
0xB00000	not used
0xC00000	not used
0xD00000	Error code in the EXT STS byte. See the error code table below.
0xE00000	Fewer levels specified in address than minimum for any address.
0xF00300	More levels specified in address than system supports.
0xF00400	Symbol not found.
0xF00500	Symbol is of improper format.
0xF00600	Address does not point to something usable.
0xF00700	File is wrong size.
0xF00800	Cannot complete request, situation has changed since start of the command.
0xF00900	Data or file size is too large.
0xF00900	Transaction size plus word address is too large.
0xF00B00	Access denied; improper privilege. This will occur if data file is set to constant or protected.
0xF00C00	Condition cannot be generated; resource is not available.
0xF00D00	Condition already exists; resource is readily available.

(PLC generated error codes for the Allen-Bradley EtherNet/IP protocol continued on the next page)

Allen-Bradley – EtherNet/IP Protocol – PLC Error Code Tables SLC, MicroLogix and ENI (cont'd)

PLC Errors for Allen-Bradley EtherNet/IP Protocol – Service Packet Errors (Error code 0xaabbbb returned from the PLC)	
Panel Error Code PLC-498 Hex Value	Description
0xF00E00	Command cannot be executed.
0xF00F00	Histogram overflow.
0xF01000	No access.
0xF01100	Illegal data type.
0xF01200	Invalid parameter or invalid data.
0xF01300	Address reference exists to deleted area.
0xF01400	Command execution failure for unknown reason; possible histogram overflow.
0xF01500	Data conversion error.
0xF01600	Scanner not able to communicate with 1771 rack adapter.
0xF01700	Type mismatch.
0xF01800	1771 module response was not valid.
0xF01900	Duplicated label.
0xF02200	Remote rack fault.
0xF02300	Timeout.
0xF02400	Unknown error.
0xF01A00	File is open; another node owns it.
0xF01B00	Another node is the program owner.
0xF01C00	Reserved.
0xF01D00	Reserved.
0xF01E00	Data table element protection violation.
0xF01F00	Temporary internal problem.

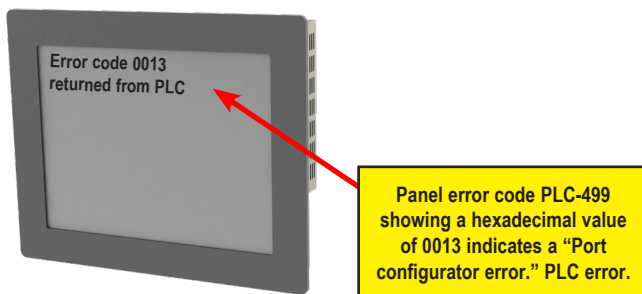
Generic EtherNet IP Protocol – PLC Error Codes

Only errors as listed in the HMI Error Code Table shown previously in this Appendix can occur when using the Generic Ethernet IP protocol. There are no PLC generated errors.

GE 90-30 – Panel Error Code PLC-499 Explanation

The PLC-499 error code is used to show any errors that are generated by the connected PLC. The PLC-499 error message includes a four digit hexadecimal value embedded in the message. This value can be looked up in the specific PLC's error tables to determine the cause of the error. The possible PLC generated error codes for the GE 90-30 communication protocol are represented by a hexadecimal value as shown in the following message example.

GE 90-30 Error Code PLC-499 Message Example:



GE 90-30 SNPX Protocol – PLC Error Code Tables

The following table lists the errors that can be generated by the GE 90-30 PLC when using the SNPX protocol.



NOTE: The following errors can be generated from the designated PLC, are monitored by the **C-more** HMI, and are displayed on the attached screen as a hexadecimal value in panel error code PLC-499 message, if active. Please refer to the PLC manufacturer's documentation for additional information.

PLC Errors for GE 90-30 SNPX Protocol (Major)	
Panel Error Code PLC-499 Hex Value	Description
No error	Successful completion. (This is the expected completion value in the COMMREQ Status Word.)
0x0002	Insufficient Privilege. For Series 90-70 PLC, the minor error code contains the privilege level required for the service request.
0x0004	Protocol Sequence Error. The CPU has received a message that is out of order.
0x0005	Service Request Error, the minor error code contains the specific error code.
0x0006	Illegal Mailbox Type. Service request mailbox type is either undefined or unexpected.
0x0007	The PLC CPU's Service Request Queue is full. The master should retry later. It is recommended that the master wait a minimum of 10 msec before sending another service request.
0x000A	SNP DOS Driver Error. The minor error code contains the specific error code.
0x000B	Illegal Service Request. The requested service is either not defined or not supported. (This value is returned in lieu of the actual 01h value passed in the SNP error message, to avoid confusion with the normal successful COMMREQ completion.)
0x000C	Local SNP/SNP-X Error. An error occurred within the SNP task in the CMM module in this PLC. This error may occur in either an SNP master or an SNP slave. The minor error code contains the specific error code.
0x000D	Remote SNP Error. An error occurred within the SNP slave task in the CMM module in the remote PLC. The minor error code contains the specific error code.
0x000E	Autodial Error. An error occurred while attempting to send a command string to an attached external modem. The minor error code contains the specific error code.
0x000F	SNP-X slave error. An error occurred within the SNPX task in the remote slave device. The minor error code contains the specific error code.
0x0013	Port configurator error.
0x0050	Problem with sending mail to the slave Service Request task. (Series 90-70 PLC CPUs only)
0x0051	Problem with getting mail from the slave Service Request task. (Series 90-70 PLC CPUs only)
0x0055	Slave SNP task timed out before receiving an SRP response. (Series 90-70 PLC CPUs only)
0x0056	Slave SNP task could not find the requested datagram connection. (Series 90-70 PLC CPUs only)
0x0057	Slave SNP task encountered an error in trying to write the datagram. (Series 90-70 PLC CPUs only)
0x0058	Slave SNP task encountered an error in trying to update the datagram. (Series 90-70 PLC CPUs only)

(PLC generated error codes for the GE 90-30 SNPX protocol continued on the next page)

GE 90-30 SNPX Protocol – PLC Error Code Tables (cont'd)

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PLC Errors for GE 90-30 SNPX Protocol (Minor-Major) (cont'd)	
Panel Error Code PLC-499 Hex Value	Description
PLC Error 0x010C	WAIT-type COMMREQ is not permitted; must use NOW AIT-type.
PLC Error 0x010E	not used
PLC Error 0x010F	The service request code in an X-Request message is unsupported or invalid at this time. This error may occur if an SNP-X communication session has not been successfully established at the slave device.
PLC Error 0x020C	COMMREQ command is not supported.
PLC Error 0x020E	The modem command string length exceeds 250 characters.
PLC Error 0x020F	Insufficient privilege level in the slave PLC CPU for the requested SNP-X service. Password protection at PLC CPU may be preventing the requested service.
PLC Error 0x0213	Unsupported COMMREQ. These errors are only generated when there is no protocol currently being run on a port, and the port receives a COMMREQ. (The port may be disabled or an error has occurred in processing a new configuration).
PLC Error 0x030C	SNP communication is not active. Must initiate a new SNP communication by sending an Attach or Long Attach COMMREQ.
PLC Error 0x030E	COMMREQ Data Block Length is too small. Output command string data is missing or incomplete.
PLC Error 0x030F	Invalid slave memory type in X-Request message.
PLC Error 0x0313	Invalid COMMREQ length.
PLC Error 0x040C	SNP slave did not respond to Attach message from master.
PLC Error 0x040E	Serial output timeout. The CMM module was unable to transmit the modem autodial output from the serial port. (May be due to missing CTS signal when the CMM is configured to use hardware flow control.)
PLC Error 0x040F	Invalid slave memory address or range in X-Request message.
PLC Error 0x0413	Invalid COMMREQ status word location.
PLC Error 0x050C	Unable to write SNP Status Word to local PLC memory. May be due to invalid Status Word memory type or address.
PLC Error 0x050E	Response was not received from modem. Check modem and cable.
PLC Error 0x050F	Invalid data length in X-Request message. Data length must be non-zero, and may not exceed decimal 1000 bytes.
PLC Error 0x0513	Invalid COMMREQ data.
PLC Error 0x060C	Master device memory type is not valid in this PLC.
PLC Error 0x060E	Modem responded with BUSY. Modem is unable to complete the requested connection. The remote modem is already in use; retry the connection request at a later time.
PLC Error 0x060F	X-Buffer data length does not match the service request in X-Request message. The X-Buffer message length is obtained from the Next Message Length field in the X-Request message; the length of the data within the buffer message is always the message length.
PLC Error 0x070C	Master device memory address or length is zero.
PLC Error 0x070E	Modem responded with NO CARRIER. Modem is unable to complete the requested connection. Check the local and remote modems and the telephone line.
PLC Error 0x070F	Queue Full indication from Service Request Processor in slave PLC CPU. The slave is temporarily unable to complete the service request. The master should try again later. It is recommended that the master wait at least 10 msec before repeating the X-Request.

(PLC generated error codes for the GE 90-30 SNPX protocol continued on the next page)

GE 90-30 SNPX Protocol – PLC Error Code Tables (cont'd)

PLC Errors for GE 90-30 SNPX Protocol (Minor-Major) (cont'd)	
Panel Error Code PLC-499 Hex Value	Description
0x080C	Unable to read or write master device memory locations specified in COMMREQ. Usually caused by invalid memory address for this PLC. SNP message exchange may have taken place.
0x080E	Modem responded with NO DIALTONE. Modem is unable to complete the requested connection. Check the modem connections and the telephone line.
0x080F	Service Request Processor response exceeds 1000 bytes; the SNP-X slave device cannot return the data in an X-Response message. (This error applies to CMM module only.)
0x090C	Master device memory data length exceeds maximum data size of CMM module (2048 bytes). Must use a smaller data length. Use multiple COMMREQs if total data length exceeds this maximum value.
0x090E	Modem responded with ERROR. Modem is unable to complete the requested command. Check the modem command string and modem.
0x0A0C	Slave device memory type is missing or not valid.
0x0A0E	Modem responded with RING, indicating that the modem is being called by another modem. Modem is unable to complete the requested command. Retry the modem command at a later time.
0x0B0C	Slave device memory address is missing or zero.
0x0B0E	An unknown response was received from the modem. Modem is unable to complete the requested command. Check the modem command string and modem. The modem response is expected to be either CONNECT or OK.
0x0C0C	COMMREQ Data Block Length is too small. (When expected COMMREQ length is 6 words or less. An improper length may cause other minor error codes 6-11.)
0x0D0C	Invalid Diagnostic Status Word (DSW) starting word or length.
0x0E0C	Invalid maximum SNP message data size. Must be an even value from 42 to 2048.
0x0F0C	Invalid Privilege Level. Must be 0 through 4 or -1.
0x100C	Invalid Fault Table selector. Must be 1 for I/O Fault Table, or 2 for PLC Fault Table.
0x100F	Unexpected Service Request Processor error. (This error applies to CMM module only; the unexpected SRP error code is saved in the Diagnostic Status Words in the CMM module.)
0x110C	Invalid Fault Table starting index. Must be 1-32 for I/O Fault Table, or 1-16 for PLC.
0x120C	Invalid fault count. Must be 1-32 for I/O Fault Table, or 1-16 for PLC Fault Table.
0x130C	Invalid Set PLC Date/Time mode. Must be 1-4.
0x140C	Invalid Set PLC Date/Time date, time, or day-of-week value.
0x150C	Unable to retrieve master device PLC time/date from PLC CPU.
0x150F	Requested service is not permitted in a Broadcast request. The master must direct the X-Request message to a specific SNP-X slave device.
0x160C	Invalid slave PLC type. Must be 0 for Series 90-70, or 1 for Series 90-30 or Series 90-20.
0x170C	Invalid datagram type. Must be 01h for normal datagram, or 81h (129) for permanent datagram.
0x180C	Missing or too many datagram point formats. Must be 1-32.
0x190C	Invalid datagram point format data.

(PLC generated error codes for the GE 90-30 SNPX protocol continued on the next page)

GE 90-30 SNPX Protocol – PLC Error Code Tables (cont'd)

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PLC Errors for GE 90-30 SNPX Protocol (Minor-Major) (cont'd)	
Panel Error Code PLC-499 Hex Value	Description
0x1A0C	Datagram area size is too small to include data for all specified point formats.
0x1B0C	Invalid number of Control Program Names. Must be 1-8.
0x1C0C	SNP-X Request exceeds maximum data size (1000 bytes). Must use a smaller data length. Use multiple COMMREQs if necessary.
0x1D0C	Invalid SNP-X communication session type. Must be 0 for a single slave device, or 1 for multiple slave devices.
0x1E0C	Illegal destination SNP ID specified for SNP-X slave. Must be 0-7 ASCII characters, plus a terminating null character (00h). The Null SNP ID (eight bytes of 00h) may be used to specify any single device. The Broadcast SNP ID (eight bytes of FFh) may be used to specify all slave devices on the serial link.
0x1F0C	Destination SNP ID does not match SNP-X session type. The Broadcast SNP ID is not permitted in a single-slave SNP-X session. The Null SNP ID is not permitted in a multiple-slave SNP-X session.
0x200C	Inactivity timeout (T3'). The SNP slave has not received any new SNP messages within the configured T3' time interval.
0x200F	Invalid Message Type field in a received X-Request message. The message type of an X-Request message must be 58h = "X."
0x210C	A Parity error has occurred on an Attach, Attach Response, or Update Real-time Datagram message. Communications have not been established.
0x210F	Invalid Next Message Type or Next Message Length field in a received X Request message. If this request does not use a buffer (0-2 bytes of data), the Next Message Type must be zero. If this request will be followed with a buffer message (more than 2 byte.), the Next Message Type must be 54h = "T," and the Next Message Length must specify the length of the X-Buffer message. Valid X-Buffer message lengths are 9-1008 bytes (data length plus 8 bytes).
0x220C	A BCC (Block Check Code) error has occurred on an Attach, Attach Response, or Update Realtime Datagram message. Communications have not been established.
0x220F	Invalid Message Type field in a received X-Buffer message. The message type of an X-Buffer message must be 54h = "T."
0x230C	A Framing or Overrun serial error has occurred on an Attach, Attach Response, or Update Realtime Datagram message. Communications have not been established.
0x230F	Invalid Next Message Type field in a received X-Buffer message. Since an X-Buffer message is never followed by another message, the Next Message Type must always be zero.
0x240C	An invalid SNP message type was received when an Attach, Attach Response, or Update Realtime Datagram message was required. Communications have not been established.
0x250C	An invalid next message length value was specified in an Attach, Attach Response, or Update Realtime Datagram message. Communications have not been established.
0x260C	An unexpected SNP message type was received when an Attach, Attach Response, or Update Realtime Datagram message was required. Communications have not been established.
0x270C	Another Break was received while SNP slave was waiting for an Attach or Update Realtime Datagram message.
0x280C	An SNP message has been sent and retried the maximum number of times. A maximum of two retries are permitted. A retry is caused by a NAK from the remote SNP device.
0x290C	A received SNP message has been NAK-ed the maximum number of two times. The NAK-ed message may be retransmitted a maximum of two times.

(PLC generated error codes for the GE 90-30 SNPX protocol continued on the next page)

GE 90-30 SNPX Protocol – PLC Error Code Tables (cont'd)

PLC Errors for GE 90-30 SNPX Protocol (Minor-Major) (cont'd)	
Panel Error Code PLC-499 Hex Value	Description
0x2A0C	An unknown message was received when an acknowledge (ACK or NAK) was required.
0x2B0C	Sequence Error. An unexpected SNP message type was received.
0x2C0C	Received SNP message contains bad next message length value.
0x2D0C	Acknowledge timeout. An acknowledge (ACK or NAK) was not received within the configured T2 time interval. A slave device may generate this error if the master device has aborted after maximum response NAKs and does not NAK the next response retry.
0x2E0C	Response timeout. The SNP Master did not receive an SNP Response message within the configured T5" time interval.
0x2F0C	Buffer message timeout. An expected Text Buffer or Connection Data message was not received within the configured T5" time interval.
0x300C	Serial output timeout. The CMM module was unable to transmit a Break, an SNP message, or SNP acknowledge (ACK or NAK) from the serial port. (May be due to missing CTS signal when the CMM module is configured to use hardware flow control.)
0x310C	SNP slave did not receive a response from the Service Request Processor in the PLC CPU.
0x320C	COMMREQ timeout. The COMMREQ did not complete within the configured time interval.
0x330C	An SNP Request or Response was aborted prior to completion due to reception of a Break.
0x340C	PLC backplane communications error.
0x350C	Invalid Piggyback Status data memory type or address. Communications have not been established.
0x360C	Invalid SNP Slave SNP ID. Must be a 0-7 ASCII characters, plus a terminating null character (00h). The Null SNP ID (eight bytes of 00h) may be used to specify any single slave device.
0x370C	The SNP master has received a response message containing an unexpected data length. Usually indicates a problem with the remote SNP slave device. May occur when Series 90-70 commands (Task Memory or Program Block Memory Read/Write) are issued to a Series 90-30 slave device.
0x380C	Response code in received SNP-X response message does not match expected value. (Response code must equal the request code +80h.)
0x390C	SNP-X Response message exceeds maximum data size (decimal 1000 bytes). Data in the Response is ignored.
0x400C	A parity error has occurred on an X-Attach Response message when establishing a new SNP-X communication session. Communications have not been established.
0x400D	The requested service is not supported by the SNP slave.
0x400F	Serial output timeout. The slave was unable to transmit an SNP-X message from the serial port. (May be due to missing CTS signal when the CMM module is configured to use hardware flow control.)

(PLC generated error codes for the GE 90-30 SNPX protocol continued on the next page)

GE 90-30 SNPX Protocol – PLC Error Code Tables (cont'd)

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PLC Errors for GE 90-30 SNPX Protocol (Minor-Major) (cont'd)	
Panel Error Code PLC-499 Hex Value	Description
0x410C	A framing or overrun error has occurred on an X-Attach Response message when establishing a new SNP-X communication session. Communications have not been established.
0x410D	SNP slave on CMM module requires PLC CPU privilege level 2 to operate. The SNP slave has rejected a request to change to a higher or lower privilege level.
0x410F	An SNP-X request was aborted prior to completion due to reception of a Break.
0x420C	A BCC (Block Check Code) error has occurred on an X-Attach Response message when establishing a new SNP-X communication session. Communications have not been established.
0x420D	SNP Request or Response message exceeds maximum data length of the CMM module. (Total data length for Mailbox and all following Buffer messages is 2048 bytes.) The master must use a smaller data length. Use multiple requests if total data length exceeds the maximum value.
0x420F	An X-Buffer message was received containing greater than 1000 bytes of data. The data is ignored.
0x430C	An invalid message type was received when an X-Attach Response was required when establishing a new SNP-X communication session. Communications have not been established.
0x430D	Improper Write Datagram message format. Series 90-70 slave devices use a different format for this message than Series 90-30 or Series 90-20 slave devices. The master must use the proper message format for this SNP slave device. (The SNP master in the CMM module sends this message as part of the Establish Datagram COMMREQ command. The datagram has been partially established, but is not usable; the datagram should be cancelled by using the Datagram ID returned by the COMMREQ.)
0x430F	The SNP-X slave did not receive a response from the Service Request Processor in the PLC CPU.
0x440C	An invalid next message type value was detected in an X-Attach Response message when establishing a new SNP-X communication session. Communications have not been established.
0x440D	A datagram error occurred in a Series 90-70 slave device (dual-port error).
0x440F	PLC backplane communications error.
0x450C	An invalid response code was detected in an X-Attach Response message when establishing a new SNP-X communication session. Communications have not been established.
0x460C	An expected X-Attach Response message was not received within the response timeout interval when establishing a new SNP-X communication session. The master has retried the X-Attach message twice without receiving a response. Communications have not been established.
0x500C	A parity error has occurred on an X-Attach Response message when re-establishing an existing SNP-X communication session. Communications have not been established.
0x500F	A parity error has occurred in a received X-Attach message.
0x510C	A framing or overrun error has occurred on an X-Attach Response message when re-establishing an existing SNP-X communication session. Communications have not been established.
0x510F	A framing or overrun error has occurred in a received X-Attach message.
0x520C	A BCC (Block Check Code) error has occurred on an X-Attach Response message when re-establishing an existing SNP-X communication session. Communications have not been established.
0x520F	A BCC (Block Check Code) error has occurred in a received X-Attach message.

(PLC generated error codes for the GE 90-30 SNPX protocol continued on the next page)

GE 90-30 SNPX Protocol – PLC Error Code Tables (cont'd)

PLC Errors for GE 90-30 SNPX Protocol (Minor-Major) (cont'd)	
Panel Error Code PLC-499 Hex Value	Description
0x530C	An invalid message type was received when an X-Attach Response was required when re-establishing an existing SNP-X communication session. Communications have not been established.
0x530F	An invalid Message Type was received when an X-Attach message was required. (For an X-Attach message, the message type must be 58h = "T".)
0x540C	An invalid Next Message Type value was detected in an X-Attach Response message when re-establishing an existing SNP-X communication session. Communications have not been established.
0x540F	An invalid Next Message Type value was detected in a received X-Attach message. (For an X-Attach message, the Next Message Length must be zero.)
0x550C	An invalid response code was detected in an X-Attach Response message when re-establishing an existing SNP-X communication session. Communications have not been established.
0x550F	An invalid request code was detected in a received X-Attach message.
0x560C	An expected X-Attach Response message was not received within the response timeout interval when re-establishing an existing SNP-X communication session. The master has retried the X-Attach message twice without receiving a response. Communications have not been established.
0x600C	A parity error has occurred on an X-Response message.
0x600F	A parity error has occurred in a received X-Request message.
0x610C	A framing or overrun error has occurred on an X-Response message.
0x610F	A framing or overrun error has occurred in a received X-Request message.
0x620C	A BCC (Block Check Code) error has occurred on an X-Response message.
0x620F	A BCC (Block Check Code) error has occurred in a received X-Request message.
0x630C	An invalid message type was received when an X-Response message was required.
0x640C	An invalid next message type value was detected in an X-Response message.
0x650C	An invalid response code was detected in an X-Response message.
0x660C	An expected X-Response message was not received within the response time.
0x700C	A parity error has occurred on an Intermediate Response message.
0x700F	A parity error has occurred in a received X-Buffer message.
0x710C	A framing or overrun error has occurred on an Intermediate Response message.
0x710F	A framing or overrun error has occurred in a received X-Buffer message.
0x720C	A BCC (Block Check Code) error has occurred on an Intermediate Response message.
0x720F	A BCC(Block Check Code) error has occurred in a received X-Buffer message.
0x730C	An invalid message type was received when an Intermediate Response message was required.
0x730F	An expected X-Buffer message was not received.
0x740C	An invalid next message type value was detected in an Intermediate Response message.
0x750C	An invalid response code was detected in an Intermediate Response message.
0x760C	An expected Intermediate Response message was not received within the response timeout interval.

(PLC generated error codes for the GE 90-30 SNPX protocol continued on the next page)

GE 90-30 SNPX Protocol – PLC Error Code Tables (cont'd)

PLC Errors for GE 90-30 SNPX Protocol (Minor-Major) (cont'd)	
Panel Error Code PLC-499 Hex Value	Description
0x8D0A	Bad DOS Version. Must have DOS 2.0, or later, to support the SNP DOS Driver.
0x8E0A	PC Serial port configured for SNP Master driver is not open; no communication can take place.
0x8F0A	Out-of-Sequence SNP message. SNP message type received was not the type expected.
0x900A	Bad SNP BCC encountered. Transmission was aborted after maximum retries due to a bad Block Check Code.
0x910A	Bad SNP communication. Transmission was aborted after maximum retries due to serial errors (that is, parity, overrun, or framing errors).
0x920A	No SNP communication. Either communication has been lost or a communication session has not been established.
0xC105	Invalid block state transition.
0xC205	The OEM key is NULL (inactive).
0xC305	Text length does not match traffic type.
0xC405	Verify with FA Card or EEPROM failed.
0xC505	No task-level Rack/Slot configuration to read or delete.
0xC605	Control Program (CP) tasks exist but requestor not logged into main CP.
0xC705	Passwords are set to inactive and cannot be enabled or disabled.
0xC805	Password(s) already enabled and can not be forced inactive.
0xC905	Login using non-zero buffer size required for block commands.
0xCA05	Device is write-protected.
0xCB05	A comm or write verify error occurred during save or restore.
0xCC05	Data stored on device has been corrupted and is no longer reliable.
0xCD05	Attempt was made to read a device but no data has been stored on it.
0xCE05	Specified device has insufficient memory to handle request.
0xCF05	Specified device is not available in the system (not present).
0xD005	One or more PLC modules configured have unsupported revision.
0xD105	Packet size or total program size does not match input.
0xD205	Invalid write mode parameter.
0xD305	User Program Module (UPM) read or write exceeded block end.
0xD405	Mismatch of configuration checksum.
0xD505	Invalid block name specified in datagram.
0xD605	Total datagram connection memory exceeded.
0xD705	Invalid datagram type specified.
0xD805	Point length not allowed.
0xD905	Transfer type invalid for this Memory Type selector.
0xDA05	Null pointer to data in Memory Type selector.
0xDB05	Invalid Memory Type selector in datagram.
0xDC05	Unable to find connection address.
0xDD05	Unable to locate given datagram connection ID.
0xDE05	Size of datagram connection invalid.
0xDF05	Invalid datagram connection address.

(PLC generated error codes for the GE 90-30 SNPX protocol continued on the next page)

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GE 90-30 SNPX Protocol – PLC Error Code Tables (cont'd)

PLC Errors for GE 90-30 SNPX Protocol (Minor-Major) (cont'd)	
Panel Error Code PLC-499 Hex Value	Description
0xE005	Service in process cannot login.
0xE105	No I/O configuration to read or delete.
0xE205	IOS could not delete configuration, or bad type.
0xE305	CPU revision number does not match.
0xE405	Memory Type for this selector does not exist.
0xE505	DOS file area not formatted.
0xE605	CPU model number does not match.
0xE705	Configuration is not valid.
0xE805	No user memory is available to allocate.
0xE905	Memory Type selector not valid in context.
0xEA05	Not logged in to process service request.
0xEB05	Task unable to be deleted.
0xEC05	Task unable to be created.
0xED05	VME bus error encountered.
0xEE05	Could not return block sizes.
0xEF05	Programmer is already attached.
0xF005	Request only valid in stop mode.
0xF105	Request only valid from programmer.
0xF205	Invalid program cannot log in.
0xF305	I/O configuration mismatch.
0xF405	Invalid input parameter in request.
0xF505	Invalid password.
0xF605	Invalid sweep state to set.
0xF705	Required to log in to a task for service.
0xF805	Invalid Task Name referenced.
0xF905	Task address out of range.
0xFA05	Cannot replace I/O module.
0xFB05	Cannot clear I/O configuration.
0xFC05	I/O configuration is invalid.
0xFD05	Unable to perform auto configuration.
0xFE05	No privilege for attempted operation.
0xFF05	Service Request Error has been aborted.

Mitsubishi FX Protocol – PLC Error Codes

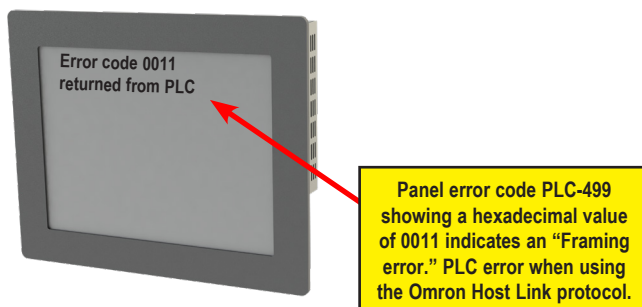
Only errors as listed in the HMI Error Code Table shown previously in this Appendix can occur when using the Mitsubishi FX protocol. There are no PLC generated errors.

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Omron – Panel Error Code PLC-499 Explanation

The PLC-499 error code is used to show any errors that are generated by the connected PLC. The PLC-499 error message includes a four digit hexadecimal value embedded in the message. This value can be looked up in the specific PLC's error tables to determine the cause of the error. The possible PLC generated error codes for the Omron Host Link and FINS communication protocol are represented by a hexadecimal value as shown in the following message example.

Omron Error Code PLC-499 Message Example:



Omron Host Link Protocol – PLC Error Code Table

The following table lists the errors that can be generated by the Omron PLC when using the Host Link protocol.



NOTE: The following errors can be generated from the designated PLC, are monitored by the **C-more** HMI, and are displayed on the attached screen as a hexadecimal value in panel error code PLC-499 message, if active. Please refer to the PLC manufacturer's documentation for additional information.

PLC Error Codes for Omron Host Link	
Panel Error Code PLC-499 Hex Value	Description
0x0000	Normal Completion.
0x0001	Not executable in RUN mode.
0x0002	Not executable in MONITOR mode.
0x0003	Not executable with PROM mounted.
0x0004	Address over (data overflow).
0x000B	Not executable in PROGRAM mode.
0x000C	Not executable in DEBUG mode.
0x000D	Not executable in LOCAL mode.
0x0010	Parity error.
0x0011	Framing error.
0x0012	Overrun.
0x0013	FCS error.
0x0014	Format error (parameter length error).
0x0015	Entry number data error (parameter error, data code error, data length error).
0x0016	Instruction not found.
0x0018	Frame length error.
0x0019	Not executable (due to Un-executable error clear, non-registration of I/O table, etc.).
0x0020	I/O table generation impossible (unrecognized remote I/O unit, channel over, duplication of optical transmitting I/O unit).
0x00A0	Abort due to parity error in transmit data under process.
0x00A1	Abort due to framing error in transmit data under process.
0x00A2	Abort due to overrun in transmit data under process.
0x00A3	Abort due to FCS error in transmit data under process.
0x00A4	Abort due to format error in transmit data under process.
0x00A5	Abort due to frame length error in transmit data under process.
0x00A8	Abort due to entry number data error in transmit data under process.
0x00B0	Un-executable due to program area capacity other than 16k bytes.

Omron FINS Protocol – PLC Error Code Table

The following table lists the errors that can be generated by the Omron PLC when using the FINS protocol.



NOTE: The following errors can be generated from the designated PLC, are monitored by the **C-more** HMI, and are displayed on the attached screen as a hexadecimal value in panel error code PLC-499 message, if active. Please refer to the PLC manufacturer's documentation for additional information.

PLC Error Codes for Omron FINS	
Panel Error Code PLC-499 Hex Value	Description
0x0000	Normal Completion.
0x0001	Service Canceled.
0x0101	Local Error: Local node not in network.
0x0102	Local Error: Token Timeout.
0x0103	Local Error: Retries Failed.
0x0104	Local Error: Too many send frames.
0x0105	Local Error: Node address range error.
0x0106	Local Error: Node Address Duplication.
0x0201	Destination Node Error: Destination Node not in network.
0x0202	Destination Node Error: Unit Missing.
0x0203	Destination Node Error: Third Node missing.
0x0204	Destination Node Error: Destination Node busy.
0x0205	Destination Node Error: Response Timeout.
0x0301	Controller Error: Communications Controller Error.
0x0302	Controller Error: CPU Unit Error.
0x0303	Controller Error: Controller Error.
0x0304	Controller Error: Unit number Error.
0x0401	Service Unsupported: Undefined Command.
0x0402	Service Unsupported: Not supported by Model/Version.
0x0501	Routing Table Error: Destination address setting error.
0x0502	Routing Table Error: No routing tables.
0x0503	Routing Table Error: Routing table error.
0x0504	Routing Table Error: Too many delays.
0x1001	Command Format Error: Command too long.
0x1002	Command Format Error: Command too short.
0x1003	Command Format Error: Elements/Data don't match.
0x1004	Command Format Error: Command format error.
0x1005	Command Format Error: Header Error.
0x1101	Parameter Error: Area classification missing.
0x1102	Parameter Error: Access Size Error.
0x1103	Parameter Error: Address range error.

(PLC generated error codes for the Omron FINS protocol continued on the next page)

Omron FINS Protocol – PLC Error Code Table (cont'd)

PLC Error Codes for Omron FINS	
Panel Error Code PLC-499 Hex Value	Description
0x1104	Parameter Error: Address range exceeded.
0x1106	Parameter Error: Program Missing.
0x1109	Parameter Error: Relational Error.
0x110A	Parameter Error: Duplicate Data Access.
0x110B	Parameter Error: Response too long.
0x110C	Parameter Error: Parameter Error.
0x2002	Read Not Possible: Protected.
0x2003	Read Not Possible: Table missing.
0x2004	Read Not Possible: Data missing.
0x2005	Read Not Possible: Program missing.
0x2006	Read Not Possible: File missing.
0x2007	Read Not Possible: Data mismatch.
0x2101	Write Not Possible: Read Only.
0x2102	Write Not Possible: Protected – cannot write data link table.
0x2103	Write Not Possible: Cannot register.
0x2105	Write Not Possible: Program missing.
0x2106	Write Not Possible: File missing.
0x2107	Write Not Possible: File name already exists.
0x2108	Write Not Possible: Cannot change.
0x2201	Not executable in current mode: Not possible during execution.
0x2202	Not executable in current mode: Not possible while running.
0x2203	Not executable in current mode: Wrong PLC mode (Program).
0x2204	Not executable in current mode: Wrong PLC mode (Debug).
0x2205	Not executable in current mode: Wrong PLC mode (Monitor).
0x2206	Not executable in current mode: Wrong PLC mode (Run).
0x2207	Not executable in current mode: Specified node not polling node.
0x2208	Not executable in current mode: Step cannot be executed.
0x2301	No such device: File device missing.
0x2302	No such device: Missing memory.
0x2303	No such device: Clock missing.
0x2401	Cannot Start/Stop: Table missing.
0x2502	Unit Error: Memory Error.
0x2503	Unit Error: I/O setting Error.
0x2504	Unit Error: Too many I/O points.
0x2505	Unit Error: CPU bus error.
0x2506	Unit Error: I/O Duplication.

(PLC generated error codes for the Omron FINS protocol continued on the next page)

Omron FINS Protocol – PLC Error Code Table (cont'd)

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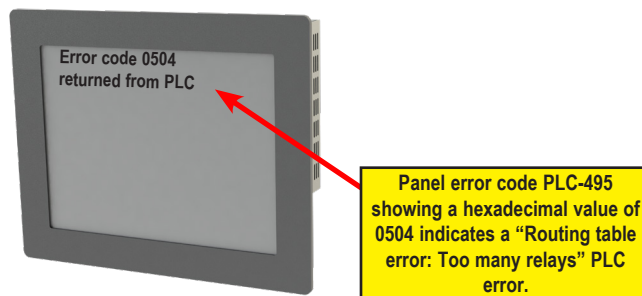
PLC Error Codes for Omron FINS	
Panel Error Code PLC-499 Hex Value	Description
0x2507	Unit Error: I/O bus error.
0x2509	Unit Error: SYSMAC BUS/2 error.
0x250A	Unit Error: CPU Bus Unit Error.
0x250D	Unit Error: SYSMAC BUS No. duplication.
0x250F	Unit Error: Memory Error.
0x2510	Unit Error: SYSMAC BUS terminator missing.
0x2601	Command Error: No protection.
0x2602	Command Error: Incorrect password.
0x2604	Command Error: Protected.
0x2605	Command Error: Service already executing.
0x2606	Command Error: Service stopped.
0x2607	Command Error: No execution right.
0x2608	Command Error: Settings not complete.
0x2609	Command Error: Necessary items not set.
0x260A	Command Error: Number already defined.
0x260B	Command Error: Error will not clear.
0x3001	Access Right Error: No access right.
0x4001	Abort: Service aborted.

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Omron – Panel Error Code P495 Explanation

The PLC-495 error code is used to show any errors that are generated by the connected PLC. The PLC-495 error message includes a four digit hexadecimal value embedded in the message. This value can be looked up in the specific PLC's error tables to determine the cause of the error. The possible PLC generated error codes for the Omron CS/CJ FINS Ethernet communication protocol are represented by a hexadecimal value as shown in the following message example.

Omron Error Code PLC-495 Message Example:



Omron CS/CJ FINS Ethernet Protocol – PLC Error Code Table

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The following table lists the errors that can be generated by the Omron PLC when using the CS/CJ FINS Ethernet protocol.



NOTE: The following errors can be generated from the designated PLC, are monitored by the **C-more** HMI, and are displayed on the attached screen as a hexadecimal value in panel error code PLC-499 message, if active. Please refer to the PLC manufacturer's documentation for additional information.

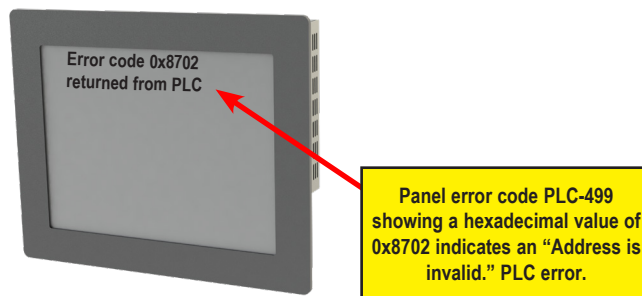
PLC Error Codes for Omron CS/CJ FINS Ethernet	
Panel Error Code PLC-495 Hex Value	Description
0103	Local Error: Send Error from lack of buffer space. Try reducing Ethernet load to the module.
0201	Destination Node Error: IP address of remote node not set correctly.
0202	Destination Node Error: No node with the specified unit address found.
0205	Destination Node Error: Packet corrupted or Response timeout. Try increasing timeout.
0301	Controller Error: Communications controller error.
0302	Controller Error: CPU Unit error. Check error LEDs on PLC. Refer to documentation for that CPU.
0304	Controller Error: Unit number error. Make sure Unit number is not used twice.
0401	Service unsupported: Undefined command.
0501	Routing table error: Destination address setting error. Routing table incorrect.
0502	Routing table error: No routing tables.
0503	Routing table error: Routing table error.
0504	Routing table error: Too many relays.
1001	Command format error: Command too long. Bad packet: check for electrical noise and grounding.
1002	Command format error: Command too short. Bad packet: check for electrical noise and grounding.
1003	Command format error: Elements/data don't match. Bad packet: check for electrical noise and grounding.
1005	Command format error: Header error. This is the error received when station # set in the command does not match the station # of the Ethernet module.
1100	Parameter error: UDP socket number bad.
1101	Parameter error: Address requested does not exist in PLC.
1103	Parameter error: Address area requested in not accessible.
220F	Status error: Duplicate Socket error.
2210	Status error: Specified socket not open.
2305	Environment Error: IP address conversion failed. Only encountered when using routing tables.
2307	Environment Error: IP address conversion set for automatic.
2503	Unit error: I/O setting error.
2505	Unit error: CPU bus error.
250A	Unit error: CPU Bus Unit error.

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Siemens – Panel Error Code P499 Explanation

The PLC-499 error code is used to show any errors that are generated by the connected PLC. The PLC-499 error message includes a four digit hexadecimal value displayed at the end of the message. This value can be looked up in the specific PLC's error tables to determine the cause of the error. The possible PLC generated error codes for the Siemens PPI communication protocols breakdown into a four digit hexadecimal value as shown in the following message example.

Siemens Error Code PLC-499 Message Example:



Siemens PPI Protocol – PLC Error Code Table

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PLC PDU Header Errors for S7-200 PPI	
Panel Error Code PLC-499 Hex Value	Description
0x0001	Hardware Fault.
0x0003	Object access not allowed: Occurs when access to Timer and Counter data type is set to Signed Integer and not BCD.
0x0004	Context not supported.
0x0005	Address out of range: Occurs when requesting an address within a Data Block that does not exist or is out of range.
0x0006	Address out of range.
0x0007	Write Data size mismatch.
0x000A	Object does not exist: Occurs when trying to request a Data Block that does not exist.
0x8000	Function being used.
0x8001	Action is not allowed in current mode.
0x8101	Hardware fault.
0x8103	Access not allowed.
0x8104	Function not supported.
0x8105	Address invalid.
0x8106	Data Type not supported.
0x8107	Data Type is not consistent with size.
0x810A	Object does not exist.
0x8500	PDU Size is incorrect.
0x8702	Address is invalid.
0xD201	Block name syntax error.
0xD202	Error with function parameter.
0xD203	Error with block type.
0xD204	No linked block.
0xD205	Object already exists.
0xD206	Object already exists.
0xD207	Block already used in EPROM.
0xD209	Block does not exist.
0xD20E	No Block does not exist.
0xD210	Block number incorrect.

Siemens ISO over TCP Protocol – PLC Error Code Table

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PLC PDU Header Errors for S7-300 CPU, S7-200 Ethernet	
Panel Error Code PLC-499 Hex Value	Description
0x0001	Hardware Fault.
0x0003	Object access not allowed: Occurs when access to Timer and Counter data type is set to Signed Integer and not BCD.
0x0004	Context not supported.
0x0005	Address out of range: Occurs when requesting an address within a Data Block that does not exist or is out of range.
0x0006	Address out of range.
0x0007	Write Data size mismatch.
0x000A	Object does not exist: Occurs when trying to request a Data Block that does not exist.
0x8000	Function being used.
0x8001	Action is not allowed in current mode.
0x8101	Hardware fault.
0x8103	Access not allowed.
0x8104	Function not supported.
0x8105	Address invalid.
0x8106	Data Type not supported.
0x8107	Data Type is not consistent with size.
0x810A	Object does not exist.
0x8500	PDU Size is incorrect.
0x8702	Address is invalid.
0xD201	Block name syntax error.
0xD202	Error with function parameter.
0xD203	Error with block type.
0xD204	No linked block.
0xD205	Object already exists.
0xD206	Object already exists.
0xD207	Block already used in EPROM.
0xD209	Block does not exist.
0xD20E	No Block does not exist.
0xD210	Block number incorrect.