

Bit		Switch	Status	Manipulated by	Unit operation
13	5	Close Request Switch	ON	User	Close processing executed when switch is turned ON. (The protocol (TCP/UDP) is determined when the socket is opened.)
			OFF	Unit	Unit turns OFF switch when close processing has been completed.

As shown in the above table, the Request Switches are turned OFF by the Ethernet Unit when the requested processes has been completed.

**Note** There is also a Socket Force-close Switch in bit 2 of the first word allocated to the Ethernet Unit in the CPU Bus Unit Area in the CIO Area. When the Socket Force-close Switch is turned ON, all sockets that are open will be force-closed. Refer to *Section 4 Ethernet Unit Memory Allocations* in the *Operation Manual, Construction of Networks* for details.

When using socket services with the Socket Service Request Switches, the ladder diagram should be programmed to check the response codes when Socket Service Request Switches are turned OFF.

## 6-7-6 Response Codes

When processing of a request has been completed for socket services executed using Socket Service Request Switches, a response code will be stored in the Response Code word in the Socket Service Parameter Area. The following response codes will be stored depending on the service that was requested.

### UDP Socket Open Request

Response code	Meaning
0000	Normal end
0105	Local IP address setting error.
0302	CPU Unit error; cannot execute.
1100	UDP socket number is not 1 to 8 or local UDP port number is 0.
110C	Request Switch turned ON during other processing.
220F	Specified socket is already open.
2211	Unit is busy; cannot execute.
2606	Specified socket is already open as TCP socket; cannot open UDP socket.
2607	Specified Socket Service Parameter Area is already being used for another socket.
003E	Internal buffer cannot be obtained due to high reception traffic (ENOBUFS).
0049	The same UDP port number has been specified more than once (EADDRINUSE).
0081	The specified socket was closed during open processing.

### UDP Socket Receive Request

Response code	Meaning
0000	Normal end
0302	CPU Unit error; cannot execute.
1100	Number of bytes to receive is not in allowable range.
1101	The area designation of the Send/Receive Data Address is not in allowable range.

Response code	Meaning
1103	The bit number in the Send/Receive Data Address is not 00.
110C	Request Switch turned ON during other processing.
220F	Specified socket is already processing a receive request.
2210	The specified socket is not open.
2211	Unit is busy; cannot execute service.
2607	Specified Socket Service Parameter Area is already being used for another socket.
003E	Internal buffer cannot be obtained due to high reception traffic (ENOBUFS).
0066	Internal memory cannot be obtained; cannot execute service.
0080	Receive request timed out.
0081	The specified socket was closed during reception processing.

**UDP Socket Send Request**

Response code	Meaning
0000	Normal end
0302	CPU Unit error; cannot execute.
1100	Number of bytes to send is not in allowable range or the remote IP address is 0.
1101	The area designation of the Send/Receive Data Address is not in allowable range.
1103	The bit number in the Send/Receive Data Address is not 00.
110C	Request Switch turned ON during other processing.
220F	Specified socket is already processing a send request.
2210	The specified socket is not open.
2211	Unit is busy; cannot execute.
2607	Specified Socket Service Parameter Area is already being used for another socket.
003E	Internal buffer cannot be obtained due to high reception traffic (ENOBUFS).
0042	The remote IP address is a broadcast address and the number of bytes to send is greater than 1,472 bytes (EMSGSIZE).
004C	The network ID is incorrect or the remote IP address is incorrect (EADDRNOTAVAIL)
004E	The network ID is not in the IP router table, router settings are incorrect, or the remote IP address is incorrect (ENETUNREACH).
0051	The router settings are incorrect or the remote IP address is incorrect (EHOSTUNREACH).
0081	The specified socket was closed during send processing.

**UDP Socket Close Request**

Response code	Meaning
0000	Normal end
0302	CPU Unit error; cannot execute.
2210	The specified socket is not open.
2211	Unit is busy; cannot execute.
2607	Specified Socket Service Parameter Area is already being used for another socket.

**TCP Socket Passive Open Request**

Response code	Meaning
0000	Normal end
0105	Local IP address setting error.
0302	CPU Unit error; cannot execute.
1100	TCP socket number is not 1 to 8 or local TCP port number is 0.
110C	Request Switch turned ON during other processing.
220F	Specified socket is already open or already processing an open request.
2211	Unit is busy; cannot execute.
2606	Specified socket is already open as UDP socket; cannot open TCP socket.
2607	Specified Socket Service Parameter Area is already being used for another socket.
003E	Internal buffer cannot be obtained due to high reception traffic (ENOBUFS).
0042 (See note.)	An error occurred. (EMSGSIZE).
0045	Error in communications with remote node (ECONNABORTED).
0049	The same TCP port number has been specified more than once (EADDRINUSE).
004A (See note.)	Error (ECONNREFUSED).
004B (See note.)	Error in communications with remote node (ECONNRESET).
004E (See note.)	Remote IP address parameter error (ENETUNREACH).
0051 (See note.)	Remote IP address parameter error (EHOSTUNREACH).
0053	Error in communications with remote node (ETIMEDOUT) or remote node does not exist.
0066	Internal memory cannot be obtained; cannot execute.
0080	Open request timed out.
0081	The specified socket was closed during open processing.
0082	Connection could not be established with specified remote node.

**Note** These response codes will be returned only on large, multilevel networks.

**TCP Socket Active Open Request**

Response code	Meaning
0000	Normal end
0105	Local IP address setting error.
0302	CPU Unit error; cannot execute.
1100	TCP socket number is not 1 to 8 or local TCP port number is 0.
110C	Request Switch turned ON during other processing.
220F	Specified socket is already open or already processing an open request.
2211	Unit is busy; cannot execute.
2606	Specified socket is already open as UDP socket; cannot open TCP socket.
2607	Specified Socket Service Parameter Area is already being used for another socket.

Response code	Meaning
000D	Remote IP address parameter error (EACCES).
003E	Internal buffer cannot be obtained due to high reception traffic (ENOBUFS).
0042 (See note.)	Error (EMSGSIZE).
0044	ICMP data received (ENOPROTOOPT).
0045	Error in communications with remote node (ECONNABORTED).
0049	The same port number has been specified more than once (EADDRINUSE).
004A	Error (ECONNREFUSED) or the remote node has not been opened as passive socket.
004B (See note.)	Error in communications with remote node (ECONNRESET).
004C	Remote IP address parameter error (EADDRNOTAVAIL). Wrong parameter designation. An attempt was made to set the local TCP port of the local node to Active Open.
004E	Remote IP address parameter error (ENETUNREACH). The network ID is not in the IP router table or router settings are incorrect.
0051	Remote IP address parameter error (EHOSTUNREACH). The router settings are incorrect.
0053	Communications error with remote node (ETIMEDOUT). No remote node.
0081	The specified socket was closed during open processing.

**Note** These response codes will be returned only on large, multilevel networks.

### TCP Socket Receive Request

Response code	Meaning
0000	Normal end
0302	CPU Unit error; cannot execute.
1100	Number of receive bytes not in allowable range.
1101	The area designation of the Send/Receive Data Address is not in allowable range.
1103	The bit number in the Send/Receive Data Address is not 00.
110C	Request Switch turned ON during other processing.
220F	Specified socket is already processing a receive request.
2210	Specified socket has not been connected.
2211	Unit is busy; cannot execute.
2607	Specified Socket Service Parameter Area is already being used for another socket.
003E	Internal buffer cannot be obtained due to high reception traffic (ENOBUFS).
0042 (See note.)	ICMP data received (EMSGSIZE).
0044 (See note.)	ICMP data received (ENOPROTOOPT).
0045 (See note.)	Error in communications with remote node (ECONNABORTED).
004B	Error in communications with remote node (ECONNRESET).
004E (See note.)	ICMP data received (ENETUNREACH).

Response code	Meaning
004F (See note.)	ICMP data received (EHOSTDOWN).
0051 (See note.)	ICMP data received (EHOSTUNREACH).
0053	Error in communications with remote host (ETIMEDOUT).
0066	Internal memory cannot be obtained; cannot execute.
0080	Receive request timed out.
0081	The specified socket was closed during receive processing.

**Note** These response codes will be returned only on large, multilevel networks.

### TCP Socket Send Request

Response code	Meaning
0000	Normal end
0302	CPU Unit error; cannot execute.
1100	Number of bytes to send not in allowable range.
1101	The area designation of the Send/Receive Data Address is not in allowable range.
1103	The bit number in the Send/Receive Data Address is not 00.
110C	Request Switch turned ON during other processing.
220F	Specified socket is already processing a send request.
2210	The specified socket is not been connected.
2211	Unit is busy; cannot execute.
2607	Specified Socket Service Parameter Area is already being used for another socket.
0020	Connection with remote socket broken during send (EPIPE).
003E	Internal buffer cannot be obtained due to high reception traffic (ENOBUFS).
0042 (See note.)	The remote IP address is a broadcast address and the number of bytes to send is greater than 1,472 bytes (EMSGSIZE).
0044 (See note.)	ICMP data received (ENOPROTOOPT).
0045 (See note.)	Error in communications with remote node (ECONNABORTED).
004A	Error in communications with remote node (ECONNREFUSED).
004B (See note.)	Error in communications with remote node (ECONNRESET).
004E (See note.)	Remote IP address parameter error (ENETUNREACH).
004F (See note.)	ICMP data received (EHOSTDOWN).
0051 (See note.)	Remote IP address parameter error (EHOSTUNREACH).
0053 (See note.)	Error in communications with remote node (ETIMEDOUT).
0081	The specified socket was closed during send processing.

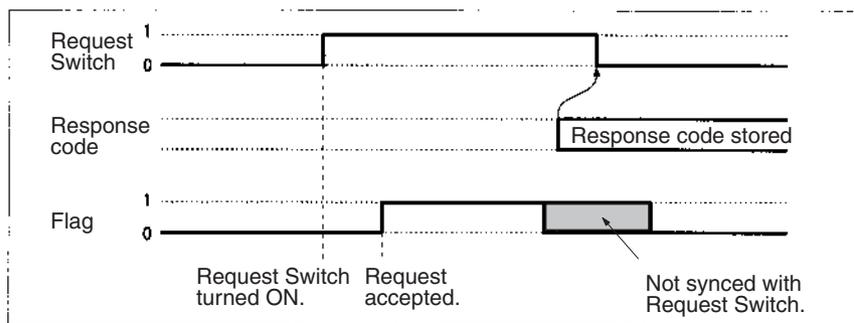
**Note** These response codes will be returned only on large, multilevel networks.

TCP Socket Close Request

Response code	Meaning
0000	Normal end
0302	CPU Unit error; cannot execute.
2210	The specified socket is not been connected.
2211	Unit is busy; cannot execute.
2607	Specified Socket Service Parameter Area is already being used for another socket.

6-7-7 Timing Charts

The timing of flags for socket services (Opening, Receiving, Sending, or Closing Flag) when the Request Switches are used and the changes in the response code are shown in the following chart.



Closing during Other Processes

The Close Request Switch or Force-close Switch can be used to close a socket even when open, receive, or send processing is being executed. Closing is the only other process that is possible during other processes.