

5.2.17 EIP_OBJECT_OPEN_CL3_REQ/CNF – Open Class 3 Connection

This service is used for opening a connection for sending connected messages according to the EtherNet/IP transport class 3. With the confirmation packet you receive a connection handle that is required for establishing a connection with the packet “EIP_OBJECT_CONNECT_MESSAGE_REQ/CNF – Send a Class 3 Message Request”.

The IP address of the destination must be specified in `ulIPAddr`. The timeout multiplier `ulTimeoutMult` contains the value of the connection timeout multiplier that is needed for the determination of the connection timeout value. The connection timeout value is calculated by multiplying the RPI value (requested packet interval) with the connection timeout multiplier. Transmission on a connection is stopped when a timeout occurs after the connection timeout value calculated by this rule. The multiplier is specified as a code according to the subsequent table:

| Code | Corresponding Multiplier |
|---------|--------------------------|
| 0 | x4 |
| 1 | x8 |
| 2 | x16 |
| 3 | x32 |
| 4 | x64 |
| 5 | x128 |
| 6 | x256 |
| 7 | x512 |
| 8 - 255 | Reserved |

Table 107: Coding of Multiplier Values

For more details see “*The CIP Networks Library, Volume 1*”, section 3-5.5.1.4.

Packet Structure Reference

```
typedef struct EIP_OBJECT_OPEN_CL3_REQ_Ttag
{
    TLR_UINT32 ulIPAddr;           /*!< Destination IP address */
    TLR_UINT32 ulTime;             /*!< Expected Message Time */
    TLR_UINT32 ulTimeoutMult;     /*!< Timeout Multiplier */
}EIP_OBJECT_OPEN_CL3_REQ_T;

typedef struct EIP_OBJECT_PACKET_OPEN_CL3_REQ_Ttag
{
    TLR_PACKET_HEADER_T          tHead;
    EIP_OBJECT_OPEN_CL3_REQ_T    tData;
}EIP_OBJECT_PACKET_OPEN_CL3_REQ_T;
```