Note on re-establishing a TCP connection with the ACCES I/O eNET

The nature of TCP socket connections means that a TCP socket established with a host will hold that TCP socket "open" even when active communication has been broken. This situation might occur, for example, when an ACCES I/O eNET serial port is connected in Raw Server mode with a host PC that is rebooted without the TCP connection to the ACCES I/O eNET being properly closed. While the TCP connection continues to be held open, further TCP connections cannot be established. This "lockout" is normal TCP behaviour designed to allow communications to be smoothly re-established between a TCP client and server.

In the circumstance where connection to an ACCES I/O eNET is broken, it may be desireable to allow another client to access the ACCES I/O eNET port. To prevent a "lock-out" from persisting, the ACCES I/O eNET monitors the TCP port for an active and valid connection every time that a TCP connection request is attempted.

If the connection between the ACCES I/O eNET and a client has been "broken," then the next client attempting to connect to the serial port will need to make ***two*** attempts to connect. The first attempt will cause the ACCES I/O eNET firmware to check for the validity of the previously-established TCP connection. If the connection is determined to be "broken," then the ACCES I/O eNET will "properly" close the TCP socket. At that point a second connection attempt can be accepted and set up as a new TCP socket. The time interval between connection attempts should be in the order of about 10 seconds.

Note for application programmers: When writing connection code, make the attempt to connect several times, in the event that the previous TCP connection with the ACCES I/O eNET serial port was not closed properly under TCP rules.