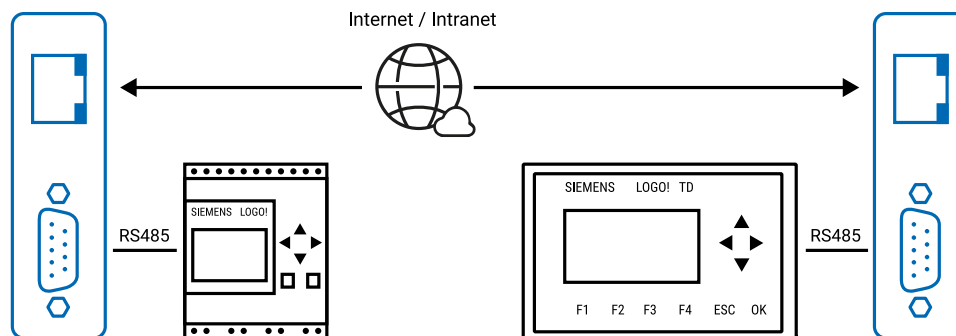


Application for the serial Com-Server:

Connect Siemens Logo!® and Display Logo!® TD over the network



The cable length of just a few meters allowed for connecting a Logo!® controller to a Display Logo!® TD often makes interesting applications impossible. With the help of two Com-Servers you can get around this problem and tunnel the serial connection through the Intra-/Internet - with virtually no spatial limitations. The following application example takes you step by step through the necessary settings and adjustments using two [Com-Servers ++](#), Art. No. 58665.

Step 1: IP assignment using easy start!

With just a few clicks in the WuTility inventorying and management tool, both Com-Servers are integrated into the respective network with IP address, subnet mask and gateway.

Step 2: Hardware connection and settings

In physical terms, communication takes place over an RS485 2-wire connection with echo suppression. The corresponding setting of the interface module in the Com-Server is as follows:

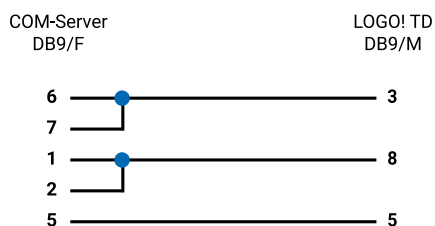
1	2	3	4	5	6	7	8
ON	ON	OFF	OFF	ON	ON	ON	OFF

Switches 6 and 7 control the integrated resistor network for the termination. In addition to the line termination for the data bus, this ensures a defined level during the high-ohmic phases of the bus.

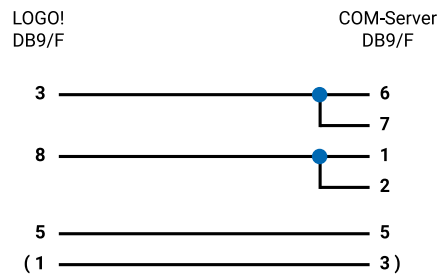
Since the pin assignments of the Siemens components and the Com-Servers are different, special adapters must be used between both Logo!® and the Com-Server and on the opposite side between the display and the Com-Server. The Logo!® needs a 3.3V enable level on Pin 1 of the interface. When using model 58665 of the Com-Server ++, this signal can be tapped from the Handshake-Out signal on Pin 3 which is not used in RS485 mode.

To prevent damage to the Logo!®, this voltage must always be verified by measurement BEFORE starting up!

Adapter Logo!® <> Com-Server 58665



Adapter Logo!® TD <> Com-Server 58665



Step 3: Configuring the Com-Server

Serial parameters

The transmission parameters are factory preconfigured in the Logo!® and in the display as follows and must be set correspondingly on both Com-Servers via telnet or Web Management:

Setup Port 0 -> UART Setup -> ...

... Baud	=	19200
... Data Bits	=	8
... Parity	=	Even
... Stopbits	=	1
... Handshake	=	No

To ensure that datagrams for the serial protocol are sent discretely within a data packet in the network, the Network-Delay option in the Com-Server should be configured for 20-30ms.

Setup Port 0 -> TCP/IP Mode -> System Options -> ...

... Network Delay	=	2 (= 2 Ticks a 10ms)
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TCP Client mode

The data transparency of the Com-Servers means detailed knowledge of the serial protocol used between Logo!® and display is not necessary. The only thing to note when choosing the Com-Server operating mode is that the display represents the initiating side of the connection, making it logical to operate the Com-Server used here as a TCP client. In this mode, when there are incoming serial data the Com-Server automatically connects to the TCP server port of the partner Com-Server on the Logo!® during setup.

In addition to the network-side basic parameters IP address, subnet mask and gateway, as well as the mentioned serial settings, the following configurations must be made for TCP client mode:

Setup Port 0 -> TCP/IP Mode -> TCP Client -> ...

... Server Port	=	Local port of the TCP server (factory default = 8000 = port A)
... Server-IP/URL	=	IP address or URL of the Com-Server on the Logo

These settings for TCP client mode are made ONLY on the display-side Com-Server!

If the destination Com-Server (=TCP server) on the Logo!® in the Internet is located behind a DSL terminal with dynamic IP address, instead of the IP address a DynDNS-hosted URL for example must be used. In this case a DNS server must be set on the client Com-Server on the display side. The following settings may need to be made in the router responsible for the network on the Logo!® side:

- Using NAT, the TCP port used here for the incoming connection must be rerouted to the IP address of the Com-Server on the Logo!®.
- If a dynamic IP address is used on the WAN side, the router must have a client for a dynamic DNS service such as DynDNS and be correspondingly configured.

Reconnect after connection dropouts and interruptions

To prevent hanging TCP connection, such as after forced interruption of the DSL connection or an infrastructure failure, the keep-alive function should be activated on both Com-Servers with a cycle of approx. 10s:

Setup SYSTEM -> Setup TCP/IP ...

... Keep Alive	=	10
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