



1 Start-up

1.1 Necessary Tools and Software


To control the Elsys PLC with TranAX, the following tools and software version are required

Software	Version	Description
TranAX	4.1.0.1900	Elsys Data Analysis Software
MathFunc_PLC.dll	4.1.0.1929	Copy into the TranAX directory
Firmware Elsys PLC	180308a	Installed on PLC hardware

1.2 USB connection


The Elsys PLC can be used with a USB connection, the cable length should not exceed more than 2m. The device will be recognized and listed as a Serial port (Com port).

 Arduino Mega 2560 (COM12)

 Elsys PLC can be used as a simple Comport device, according to the parameter specification, any other application can be used to control the device

1.3 Ethernet connection

A connection per Ethernet extends the cable length. As long as it is in the same IP range as the TranAX computer, the length of the cables doesn't matter, according to **given standard limitation of network equipment**. For Ethernet connections, CAT5 or better cables will work. Connection speed is limited to 100Mbps

 Standard IP Address will be set to **192.168.0.35 before shipment**. This address can be changed, per serial terminal. This address will be set back to default (192.168.0.35) after a factory reset.

1.4 Factory Reset

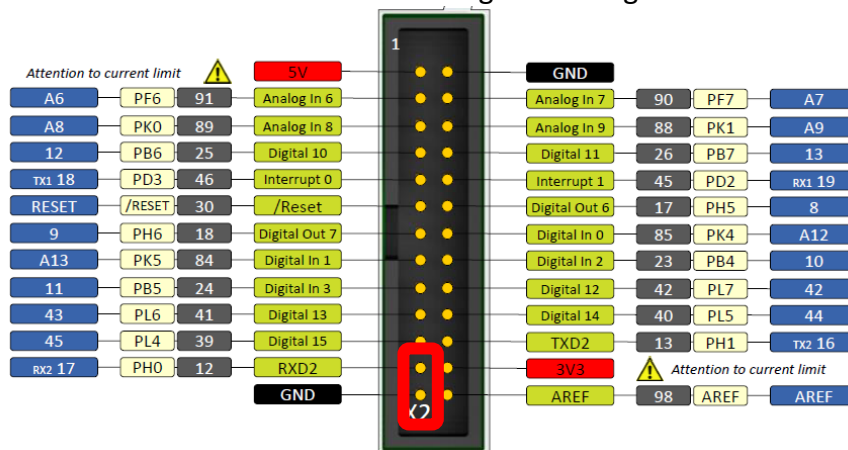
A Factory Reset can be done per hardware manipulation or per USB connection.

Software Reset:

Open a Terminal application (like HTerm), enter **FRESET**; and press enter. This will reset the IP settings back to 192.168.0.35, DHCP disabled.

Hardware Reset:

Power off ELSYS PLC, make a connection between **Pin 23 and 25 on the connector X2** and power up the device, wait a second and remove the connection. This will reset the Network settings and restart the PLC. This connection is equal to connecting Pin PH0 (Pin 17 on the Arduino Mega, or Pin12 from the microcontroller ATmega 2560 to ground.



1.5 Serial configuration

The following commands can be used to setup a ethernet connection via serial port:

Command	Description
DHCP:1; and DHCP:0;	Enable or disable DHCP
IP:[Address]	Set an IP-Address, please check and configure DHCP settings!
FRESET;	Factory Reset, DHCP off, IP 192.168.0.35

1.6 Additional commands

The following commands can be used to test the Elsys PLC via serial port:

Command	Description
GETINFO;	Returns the Elsys PLC settings and configuration
REBOOT;	Restart the PLC, like power off and on again
FRESET;	Factory Reset, DHCP off, static IP 192.168.0.35