Assign IP addresses

In order to control devices via the LAN interface, each device requires its own IP address in the same IP address range. This IP address can be assigned either automatically via a DHCP server, e.g., by means of a router, or manually. KNAUER devices normally will be set to receive automatically and IP address. If you do not use a router in your system, but a simple network switch for the network connections, a fixed IP address must be assigned manually to each device. For most KNAUER devices, the Firmware Wizard can be used for this purpose. The Autosampler AS 6.1L cannot be set with the Firmware Wizard; it must be done using an installed internet browser.
Make sure your HPLC devices are switched on and connected via LAN cable with the network switch.

1. **Setting up a fixed IP address for the Autosampler AS 6.1L**

   1.1 As other devices, the autosampler's LAN setting is to receive an IP address automatically. To change this, the internal setup must be accessed via an internet browser, e.g., Microsoft Edge. For accessing, the current IP address of the autosampler must be known. Same as a Windows computer, the autosampler supports APIPA. If the computer is set to obtain an IP address automatically and computer and autosampler are connected via LAN, both devices will have an APIPA address. After starting up, wait for about two minutes to allow the autosampler setting up an APIPA address. Start your CDS, enter the configuration section and browse for an Autosampler AS 6.1L. For the found device an IP address is shown, e.g., 169.254.123.201.

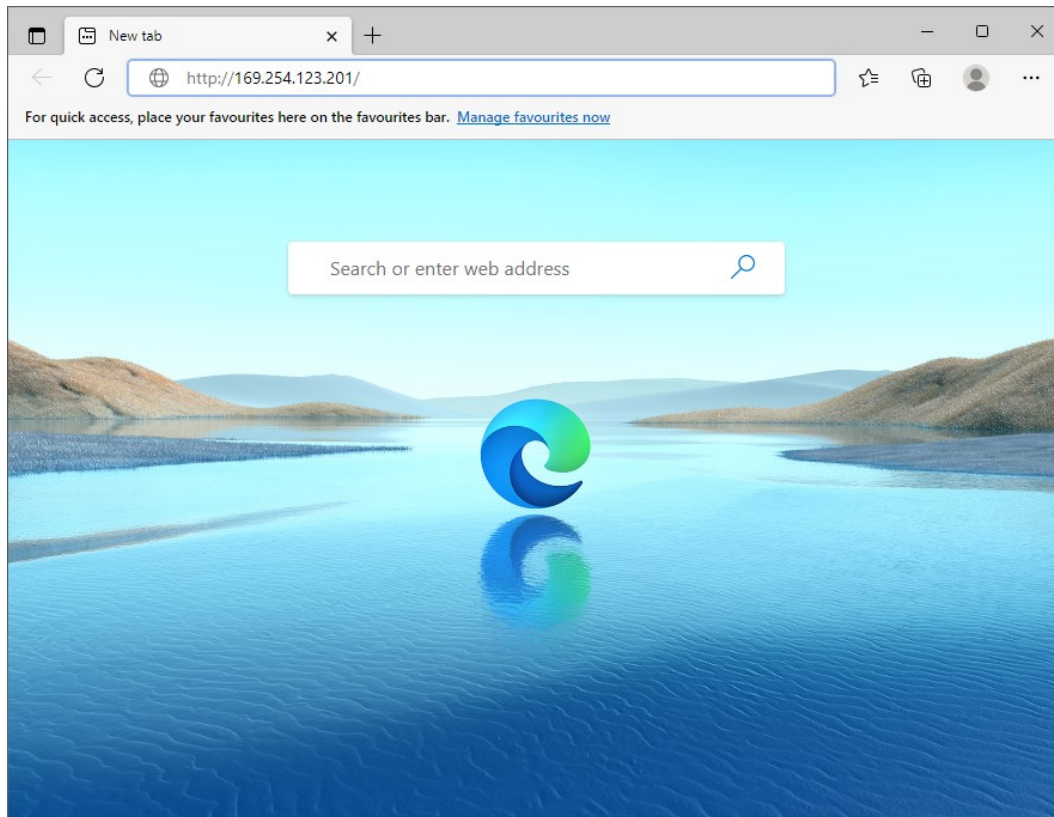   1.2 Start your internet browser and enter the found IP address for the autosampler in the address bar.

Fig. 1   Browser start window, IP address of the autosampler

1.3 If the IP address is confirmed, the Login page of the autosamplers internal setup is shown. If an information is shown that the connection might not be safe, please click to connect anyway.

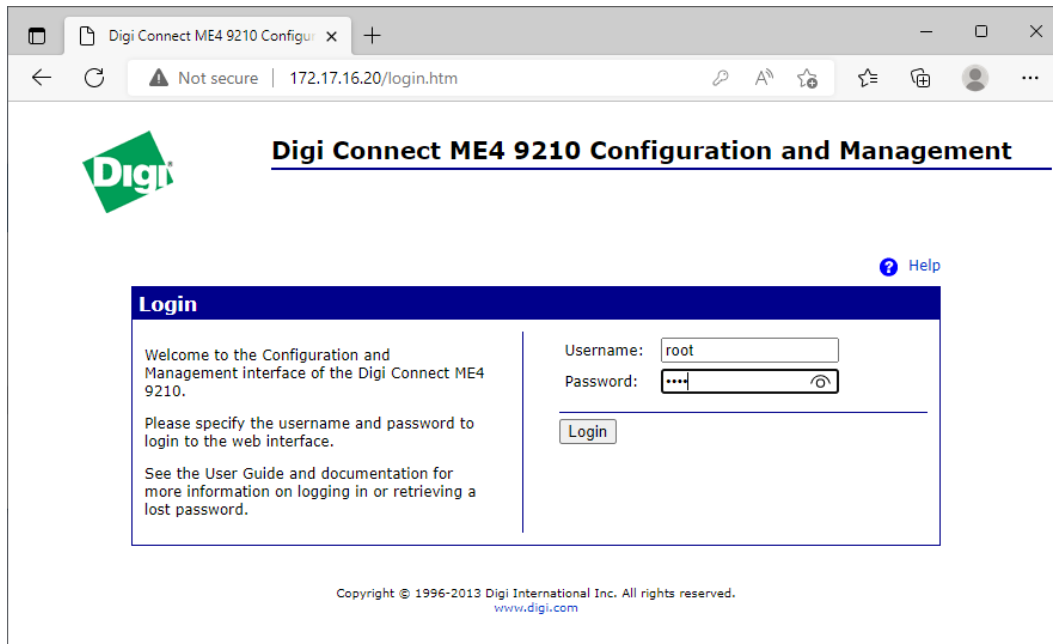1.4 On the Login page, enter as Username "root" and as a password "dbps".

Fig. 2   Autosampler Login page

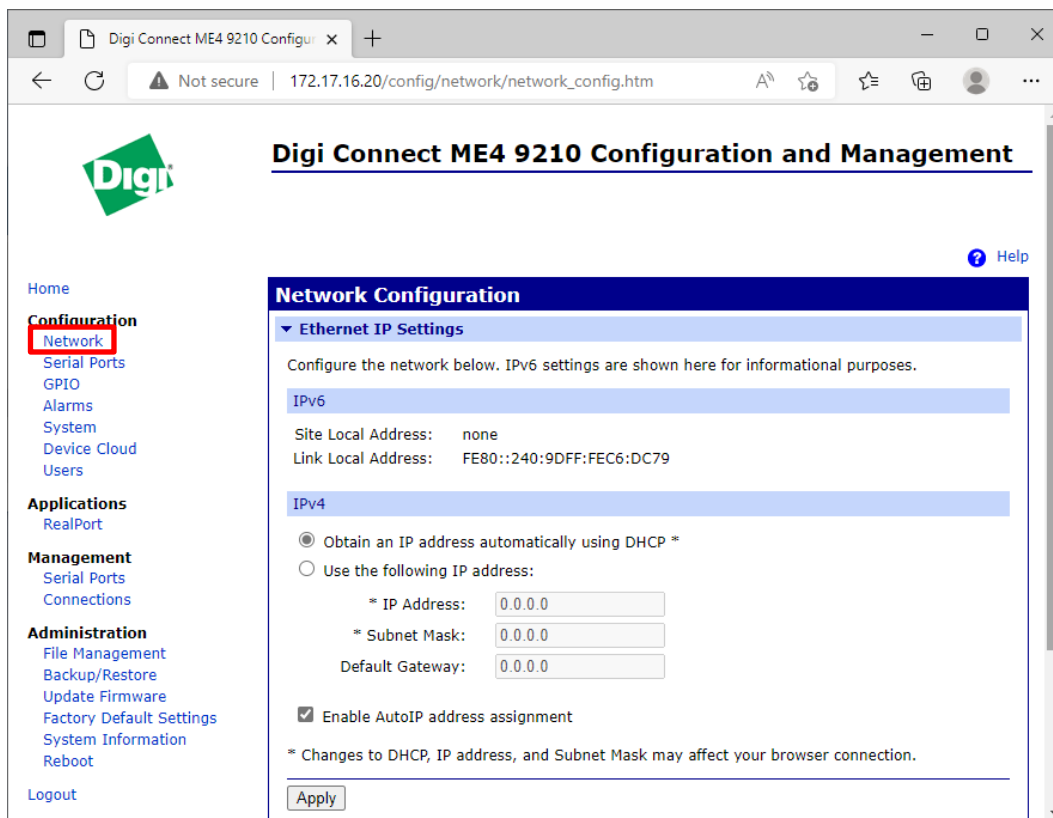1.5 If you logged in, select "Network" on the left-handed side of the page in the Configuration section

Fig. 3   Configuration – Network setup

1.6 In section "IPv4" select "Use the following IP address:" and enter IP address and Subnet mask.
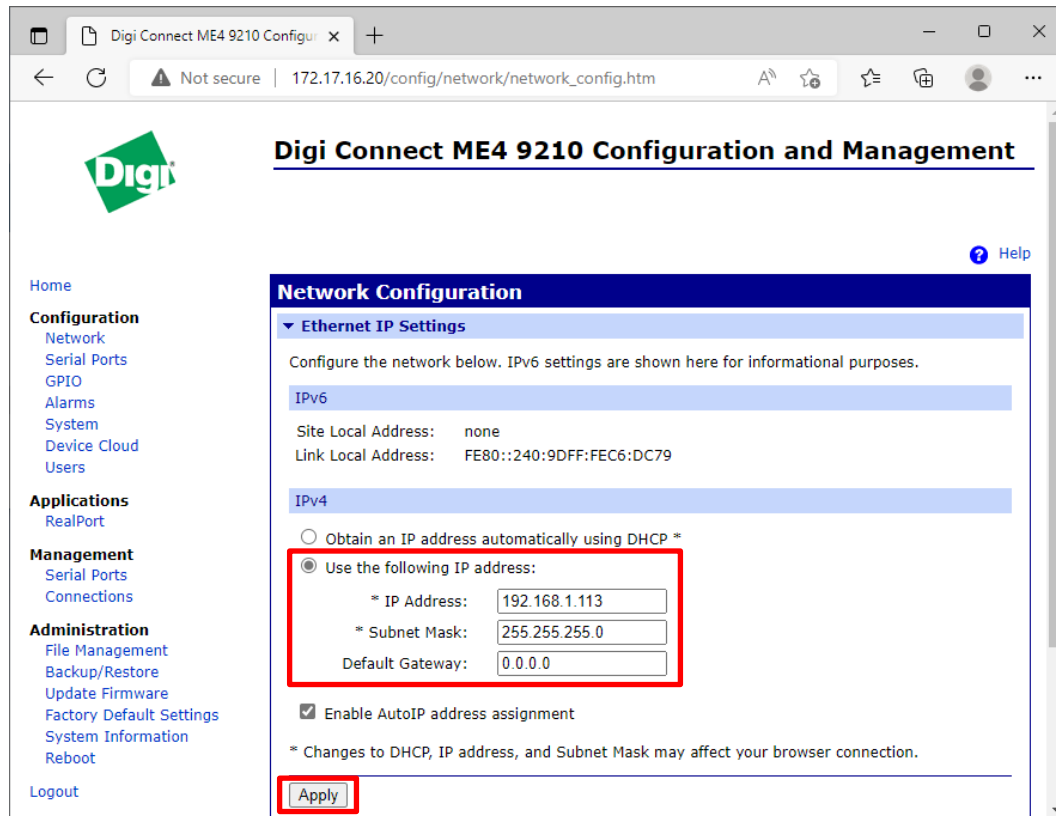The press the <Apply> button!

Fig. 4   Configuration – Network setup with fixed IP address

1.7 A separate window will be shown to confirm your change by pressing <Apply> button also here.
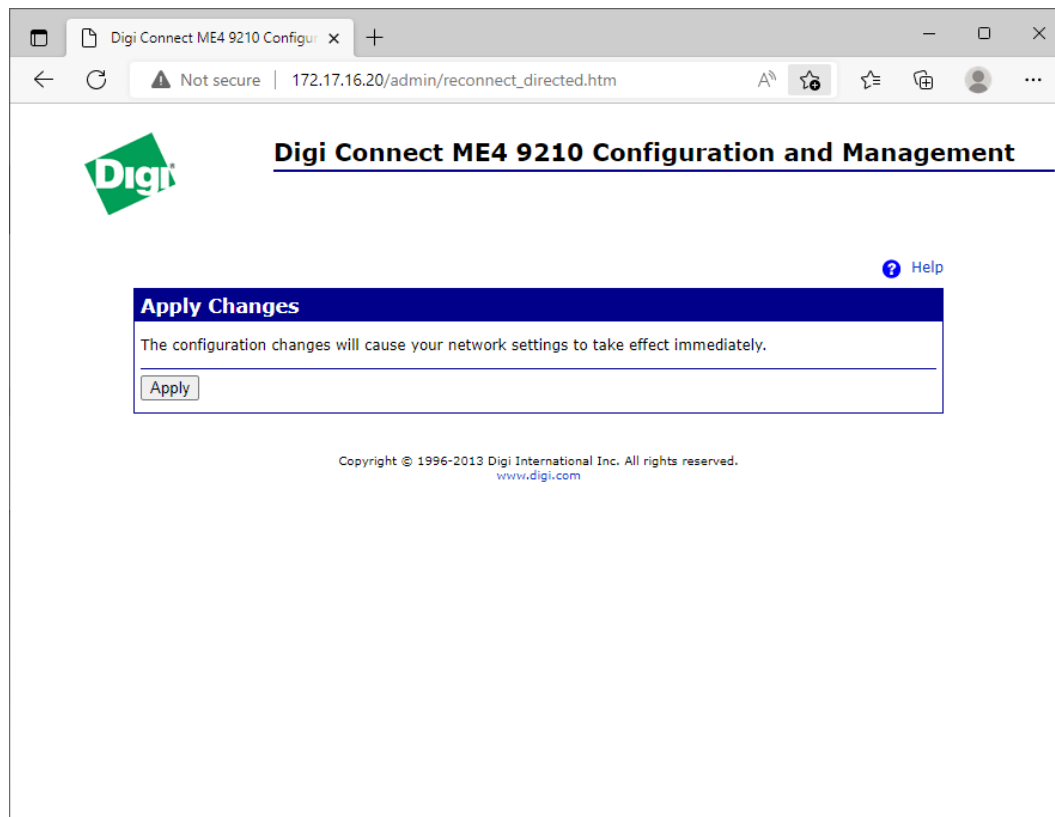
Fig. 5   Configuration – Network setup with fixed IP address

1.8 Let the autosampler reboot for about two minutes. It is recommended, after that to switch the autosampler off and on again.

2.   Setting up the IP address with the KNAUER Firmware Wizard

The KNAUER Firmware Wizard allows for changing the LAN settings of many KNAUER devices. Before you start the procedure with the Firmware Wizard, the HPLC devices should be connected (power and LAN cables) and switched on.

2.1 Install the downloaded KNAUER Firmware Wizard. We recommend not to change the suggested installation folder.
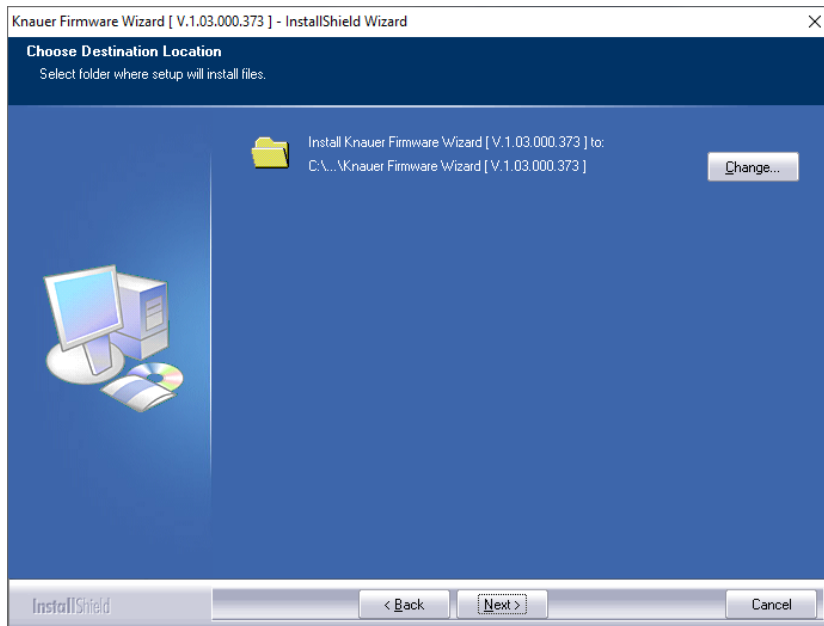
Fig. 6   Firmware Wizard Installation

2.2 If installed, start the Software, either using the Firmware Wizard desktop icon or click Start > Firmware Wizard. Make sure you HPLC device is already connected and switched on!
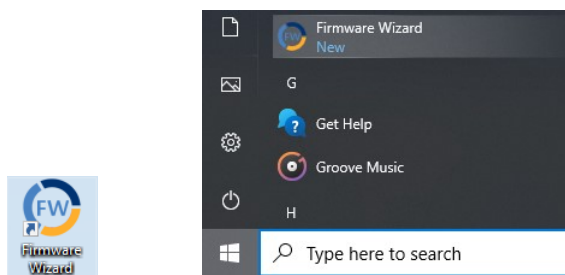

Fig. 7   Firmware Wizard Desktop Icon / Start Menu Entry

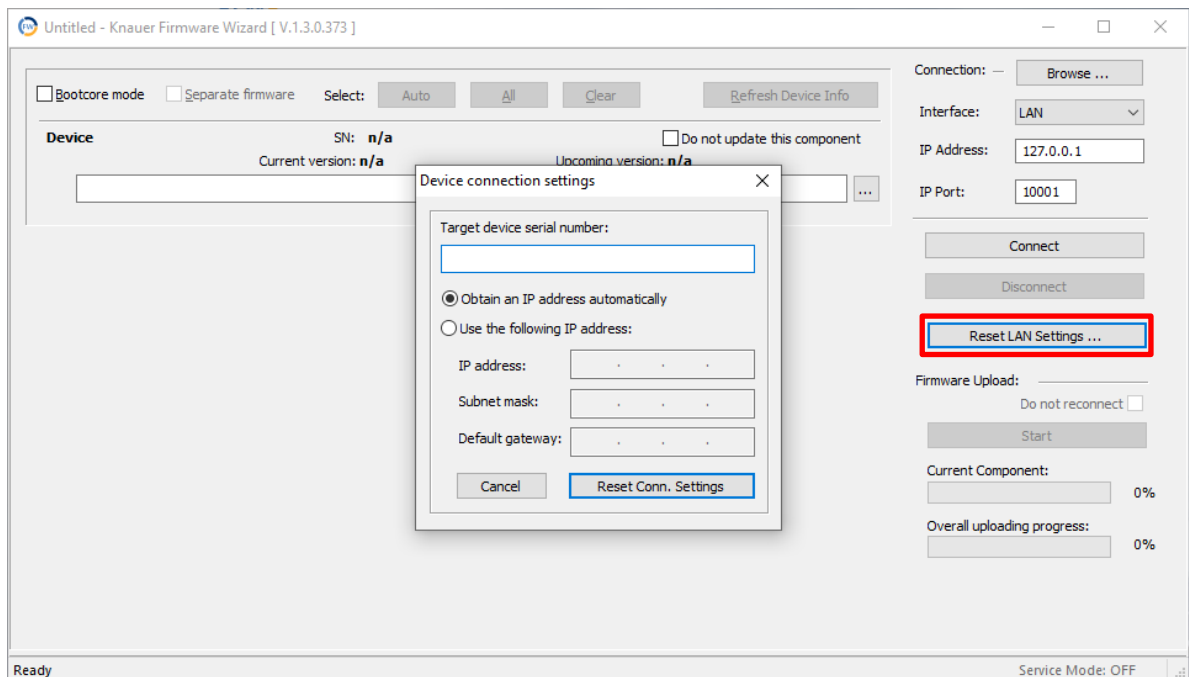2.3 Click <Reset LAN Settings…>. A separate window will open.

Fig. 8   Firmware Wizard – Device Control Settings

2.4 Enter in field "Target device serial number" either the device serial number or MAC address of the mentioned device. The serial number and MAC address can be found on the rear label of the device. Normally the serial number should work; in some rare situations the serial number doesn't works and the MAC address must be used. For the Column Thermostat CT 2.1 and the Conductivity Monitor CM 2.1S always use the MAC address.

2.5 A list of recommended IP addresses can be found in the list above. If your computer is connected to another network, e.g., with a separate network adapter, first check the IP address range of this network. The IP address ranges of both networks must not overlap; otherwise, serious network problems will occur! Please ask your network administrator for help.
Enter the desired IP address, Subnet mask (255.255.255.0 is recommended) and Default gateway address (recommended is the first address of the selected IP address range). Some devices do not accept a fix IP address without a Default gateway address. Each device must receive an own IP address.
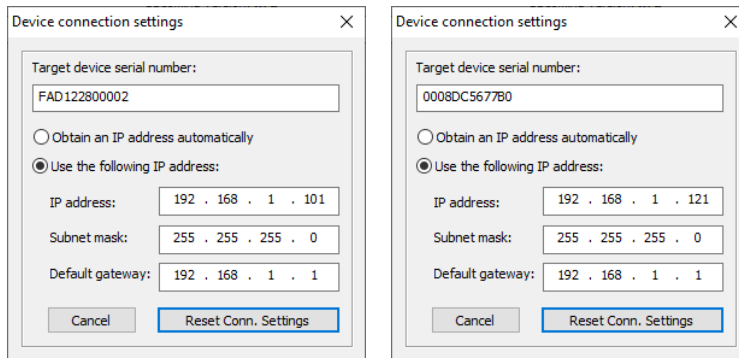
Fig. 9   Device Control Settings for P 2.1L with Serial Number / CT2.1 with MAC address

2.6 Click <Reset Conn. Settings>. After some seconds, the separate Device Control Settings window will close. There is no confirmation message, e.g. if the action was successful or not.

2.7 It is strongly recommended to switch the device off and on again to make sure, that it uses the new fixed IP address.

2.8 In case the computer has already a fixed IP address, you can check whether the device has accepted the new IP address. Click on <Browse…> and the Firmware Wizard will check for attached devices (Connection: <LAN> button must be active); it will only find devices with IP addresses from the same IP address range as the computer's network adapter has.
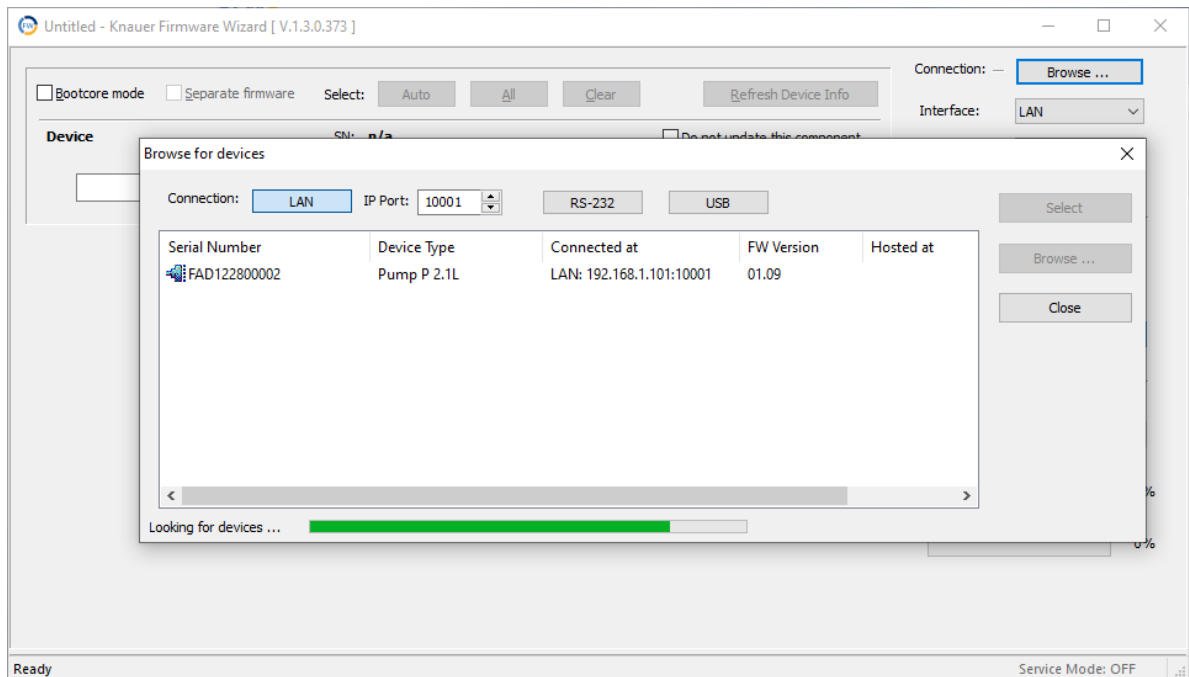

Fig. 10   Browse for connected devices

3. **Setup a fixed IP address for the computer's LAN adapter**

    Also the computer's network adapter must be set to a fixed IP address.

3.1 To setup a fixed IP address for the computer's network adapter, run the Windows Control Panel > Network and Sharing Centre, open the properties of the mentioned network adapter and open "Internet protocol Version 4 (TCP/IPv4) Properties"
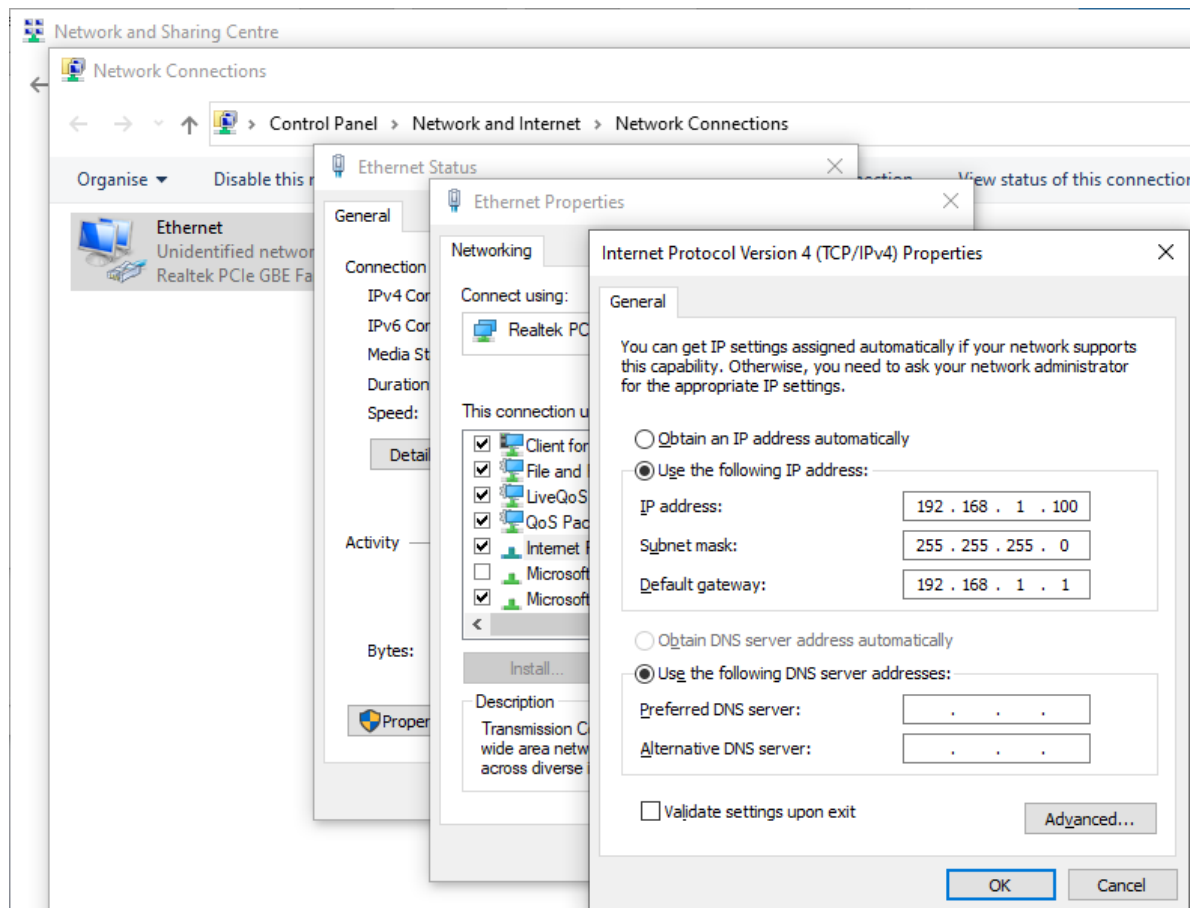

Fig. 11   Setting up IP address in Windows Control Panel

3.2 Enable the option "Use the following IP address" and enter the IP address, Subnet mask and, if no other network adapter is used for automatically obtain an IP address, the Default gateway. If several network adapters are used, only for one adapter a Gateway address must exist.

3.3 Click <OK> to set the desired IP address.

4. Recommended IP addresses

Device	IP address
Computer	192.168.1.100
Solvent Pump/HPG 1	192.168.1.101
HPG Pump 2	192.168.1.102
HPG Pump 3	192.168.1.103
HPG Pump 4	192.168.1.104
Assistant 1	192.168.1.105
Assistant 2	192.168.1.106
UV Detector /DAD	192.168.1.110
RID 2.1L / CM 2.1S	192.168.1.111
Fraction Collector	192.168.1.112
Autosampler	192.168.1.113
Pump P 4.1S/2.1S (if not solvent pump)	192.168.1.114
Valve 1	192.168.1.115
CT 2.1	192.168.1.121