



Note: Read the corresponding technical documentation for handling and safety reasons.

Product information: Pressure Control



Note: If you are using an external pressure sensor with a serial number smaller than 138555, please refer to the document V6712 version 2.0 or older.

The Pressure Control contains two biocompatible pressure sensors and enables you to determine the pressure difference via the interface box IFU 2.1 LAN. Thus you can protect the column and media from overpressure.

One pressure sensor measures the pressure before the column and the other sensor measures the pressure after the column. The pressure values are viewed as traces on the chromatogram.

The software PurityChrom® calculates automatically the pressure difference over the media bed. If the pressure differential value (DP) exceeds the preset limit during the run, either the run pauses or another action is applied.

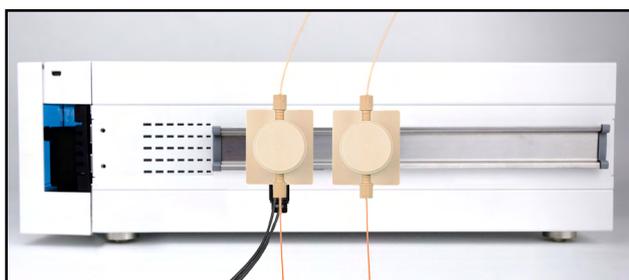


Fig. 1 Pressure Control

Installation

For use of the Pressure Control you will need an interface box. The Pressure Control and the interface box can be attached to the side panel of your AZURA® L device with the accessory AZURA® Click.



Note: An AZURA® Click is not included in the scope of delivery.

Process

1. Plug in the cinch connector ① of the Pressure Control to the interface box (pressure before the column in channel 1 and pressure after the column in channel 2).
2. Connect the capillaries to the Pressure Control in ② and ③.

3. Plug in the barrel connector ④ to the power supply.
4. Connect the LAN cable of the interface box to the switch.
5. Set the IFU 2.1 LAN to a fixed IP address.

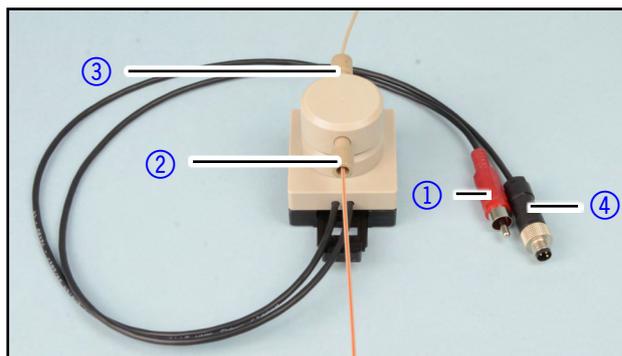


Fig. 2 Connecting the Pressure Control

Integrating the interface box IFU 2.1 LAN in PurityChrom®

To integrate the interface box IFU 2.1 LAN in PurityChrom® you have to enter the IP address and the data rate [Hz] in the PurityChrom. ini-file.

Prerequisites

- The interface box IFU 2.1 is connected to LAN and to power supply.
- The Software PurityChrom® is installed.

Process

1. Start Windows.
2. Go to the Directory C:\Windows.
3. Choose the PurityChrom.ini-file.
4. Go to the entry [KNAUER IFU21].
5. Set enabled to 1.
6. Enter the IP-Address.
7. Enter the IP-Port.
8. Enter the DataRate and the number of channels.



Note: Choose a data rate 1-10 Hz for 4 channels, up to 50 Hz for channel 1 exclusively.

9. Save the file.



Fig.3 Configuration example for IFU 2.1 LAN

Defining the channels

To define the channels for the Pressure Control in PurityChrom® open the chromatogram window . The channels are occupied in this order: First the channels of the UV detector, next the channels of the conductivity monitor and finally the channels of the interface box IFU 2.1 LAN.



Fig.4 Channels

Channel setup

Choose the channel in the chromatogram window and go to the channel setup

Here you can change the name of your channel, the dimension and the conversion in "Factor". The conversion is 0.05 bar for 1 mV.

Set the offset in the channel setup to -25 bar. If there is a small diversion at pressure zero, adjust this further via the offset.

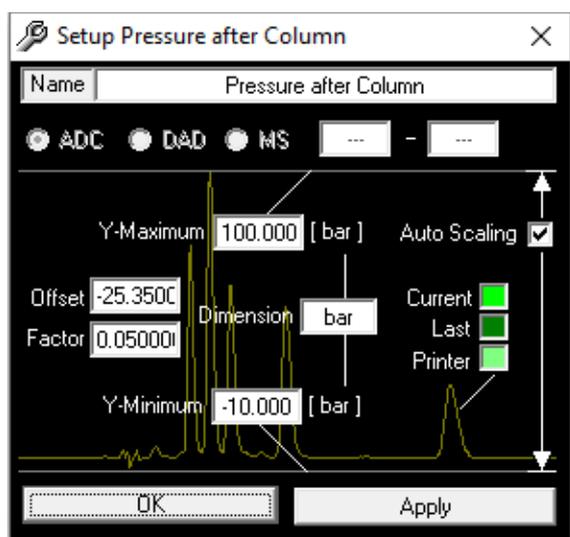


Fig.5 Setup Pressure after the column

Editing the user defined channel

To calculate the pressure difference you have to define an user defined channel. Open the setup in the PurityChrom® window and navigate to the tab "User Defined Channel".

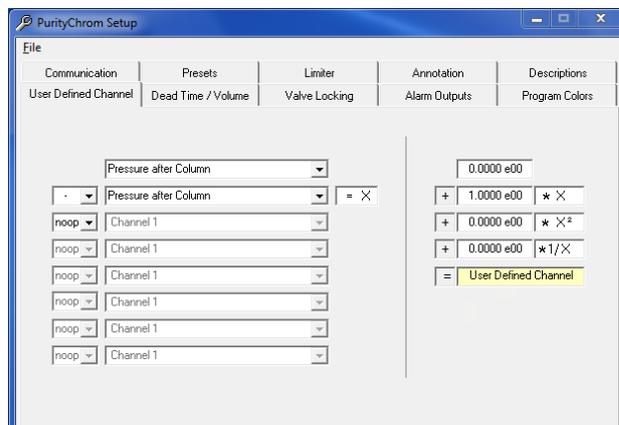


Fig.6 Setup Pressure

Here you have the possibility to subtract the channels that measures the pressure before the column from the channel that measures the pressure after the column. In the chromatogram view the user defined channel is symbolized by the capital letter .

How to use the user defined channel during the run

To control the pressure differences over the column during the run, you can program a threshold in your time control file. This feature enables to program an action if the pressure of the user defined channel exceeds a set value.



Note: You find detailed information to program thresholds in the software instructions of PurityChrom®.

Technical data

Parameter	Value
Pressure range	0-100 bar
Flow rate	0.001-250 ml/min
Tubing	1/16" and 1/8"

Repeat orders

Device	Order number
Pressure Control	AZG10
Interface Box IFU 2.1 LAN	AZB00XA
AZURA® Click	A70089
Additional pressure sensor	AZG10-1