Labwatch HOWTO Lab I

IP address: http://131.152.105.207 Link to web interface: http://131.152.105.207/webui/lweb/project To open the web-based interface click onto the blue globe

1. Alarm level settings

By right clicking you can access the main menu.

Under "Set Soll" you can set your alarm levels. In order to make changes, a password is required. The password is composed of the last three digits of the IP with a leading 0. Click onto the line with the four zeros, enter the password into the box and press enter.

You are now in the modification mode. The ticks next to the sensor entries indicate whether an alarm is active or not. It is possible to set the alarm for each sensor individually. The tick in the middle activates the alarm channel for the whole experiment, taking into account the settings of the leftmost ticks.

The set point hysteresis in per cent specifies by how much the actual pressure value has to be above the set point value in order to trigger an alarm. You will receive an alarm cancellation if the pressure falls below the alarm value by the percentage given in the hysteresis box. The light bulb goes on if an alarm has been triggered

Here is an example:

Assume you want to change the alarm level for UI1 on the Zeeman decelerator from $8 \cdot 10^{-6}$ mbar to $9 \cdot 10^{-6}$ mbar. First you deactivate the green tick in the left column to prevent false alarms. Then you click onto the value displayed under set points. A numeric keyboard is displayed on which you type in 0.000009. It is not possible to use exponential notation. Reactivate the tick on the leftmost column and the new alarm level becomes active. With a hysteresis of 1 % the alarm will be triggered at $8.8 \cdot 10^{-6}$ mbar and a clearance will be sent at $7.2 \cdot 10^{-6}$ mbar.



If a sensor field turns red, this means that the sensor is off or displays a nonsensical value.

The alarm is linked to your e-mail address and your mobile number. All persons involved in an experiment will get an alarm.

I suggest you try out which settings work best for you. Keep in mind, that there can be a pressure increase during experiments and also when the Ti-sublimation pump is running.

To allow for more flexibility, an alarm delay has been implemented for each experiment. This allows you to specify the amount of time the pressure needs to be higher than the alarm threshold, before you get a notification. This feature is ideal for preventing false alarms from Ti-sublimation pumps. To set the alarm delay time, click onto the grey "set delay alarm time" field in the menu. A numerical keypad appears on which you can enter the desired value.

As the alarm delay feature could prevent you from being alarmed in time, it is possible to activate the alarm delay function based on a calendar. To set the

calendar rules for your experiment, click onto the grey "set scheduler for alarm delay"-field. You should now see the calendar window.



By using the fast forward arrows you can browse through by months or by weeks when using the single headed arrows. By clicking the pen, you can set the scheduler pattern. The default is to set the alarm delay on/off on a weekly basis.

Sheduler for alarm delay time on/off

00:00 - 24:00 Alarm delay time off (Startwert) 08:00 - 18:00 Alarm delay time on 08:00 - 18:00 Alarm delay time on	Startwert Briorität 6	Startwert 📝
08:00 - 18:00 Alarm delay time on 08:00 - 18:00 Alarm delay time on	Priorität 6	
06:00 - 16:00 Alarm delay time on	Filonial	Mo, jede Woche (Mo) 📝
· · · · · · · · · · · · · · · · · · ·	Priorität 6	Di, jede Woche (Di) 🛛 📝
08:00 - 18:00 Alarm delay time on	Priorität 6	Mi, jede Woche (Mi) 📝
08:00 - 18:00 Alarm delay time on	Priorität 6	Do, jede Woche (Do) 📝
08:00 - 18:00 Alarm delay time on	Priorität 6	Fr, jede Woche (Fr) 🛛 📝
		Back

To add a new entry, click onto the cross. In order to change the alarm delay schedule, click onto the pen. This results in the following window:

Startwert Startw	vert 🕜							
8	Edit event							
Name	Мо							
Wert Alarm delay time on 💿 💉								
Priorität 6								
Start 08:00 End 18:00								
Event Details								
Event Typ	Wöchentlich 📀							
jede Woche	Monday							
	Delete OK Cancel							

You can specify the day, time and the event type, as well as the repetition pattern.

- Wert = logical value whether the alarm is on or off
- Priorität = priority, nothing to be changed here
- Event Typ = event type, wöchentlich = weekly
- jede Woche = weekly

2. Alarm

A typical Alarm Mail notification looks like this:

Vacuum is bad!!! Pressure higher than setpoint.

source chamber vacuum: ok decelerator chamber vacuum: ok detection chamber vacuum: ok yourvacuum chamber: bad

Pressure: 2.32e-8

The pressure of the chamber whose value lies above the threshold is given below.

4. Data visualisation

To monitor the pressure over time, perform a right click to access the main menu. Choose the tab "Sensor graph". This will result in a list with all sensors. Choose the sensor you want to monitor. If you would like to monitor your pressure over a wider range, please contact me.



It is also possible to download the pressure vs. time data over a longer period of time. This cannot be done from within the user interface. You need to access the device homepage under: http://131.152.105.192/webui/device_info/device_info/

1. Click onto Data on the blue left margin

2. Click the trend subentry

3. You will now see a list of all sensors. Downloading the data is possible under the download section. The data format is .csv and can be opened with Excel.

LIOB-580 Logged in as	_	Update									
2015-07-30 13:22:54	9	Trend	Active	Start time	End time	Count	Type	State	Downloa	d (all)	Clear (all)
Device Info	f	/Trend/Zeeman source chamber Trend UI1	\checkmark	2015-07-19 04:27:39	2015-07-30 13:20:02	32767	local	normal	ì		
	Ö	/Trend/Zeeman decel chamber Trend UI2	\checkmark	2015-05-26 17:26:25	2015-07-30 13:20:00	18757	local	normal	ĥ		
	Ľ	/Trend/Zemann detection chamber Trend UI3	\checkmark	2015-07-20 13:53:54	2015-07-30 13:20:00	2905	local	normal	ĥ		
	qe	/Trend/Zeeman not in use Trend UI4	\checkmark	2015-07-20 13:53:54	2015-07-30 13:20:00	2905	local	normal	ĥ		
Trend	LL L	/Trend/Stark source chamber Trend UI5	\checkmark	2015-07-20 13:53:54	2015-07-30 13:20:00	2903	local	normal	ĥ		
 Scheduler Calendar 	S	Trend/Stark decel chamber Trend UI6	\checkmark	2015-07-20 13:53:53	2015-07-30 13:20:00	2906	local	normal	ĥ		
Alarm	ž	/Trend/Stark trap chamber trend UI7	\checkmark	2015-07-20 13:53:53	2015-07-30 13:20:00	2904	local	normal	ĥ		
Contia	0										

4. The pressures in the .csv file have to be multiplied with a factor of 10^{20} for the values to be right. If the Date/Time column is filled with ####, the data does not fit into the field and you have to enlarge it a bit.

5. Holidays

If someone is abroad or is on holidays, please find a replacement who takes care of the Labwatch alarms for your project. Please let me know in advance, such that I can disable the SMS function for your mobile number.