Alarms “Simple” - EN

Activating alarm limits on the LTX Log is quite simple.

Alarms are generated **in 2 stages**:

Step 1 - This step takes place directly on the device:

- In the first step, individual channels can be checked for alarm limits after each measurement. This check takes place directly on the device. (Step 1a)

- If activated on the device, alarms are transmitted to the server more frequently (and optionally with a higher priority) than normal measurements. (Step 1b)

Step 2 - This step takes place on the server:

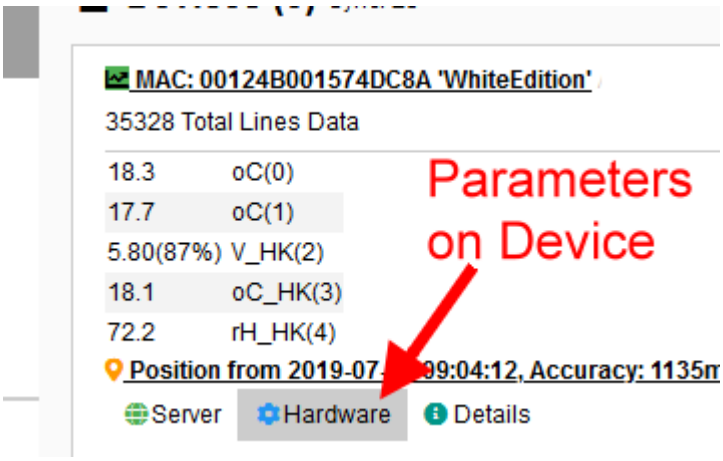
- If a measurements contain alarms, the server can use a rule to decide whether and how often alarms are forwarded to the user. This decision is made on the server.

The purpose of this division is, on the one hand, that the user does not receive more or more frequent alarms than necessary or desired, and, on the other hand, that the server can optionally send alarms - depending on priority or type - to different users or via different channels (email, messenger, SMS, control systems, etc.).

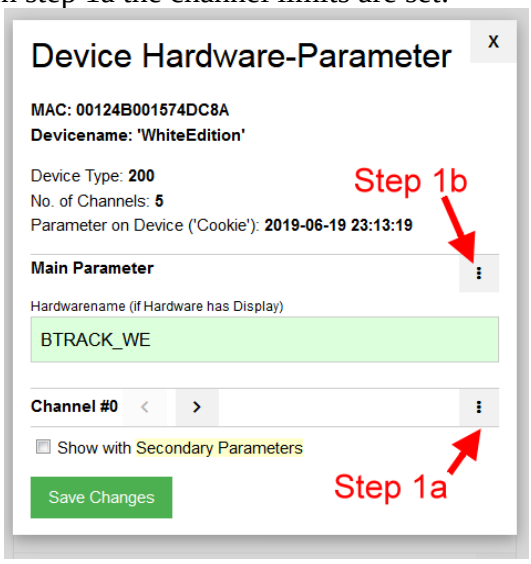
Settings for step 1 (evaluated on the device):

Every device has a set of parameters that is stored directly on the device. A copy of this is always on the server. This can be changed by the user and
is then automatically transferred to the device the next time it is transferred (and only then does it take effect).

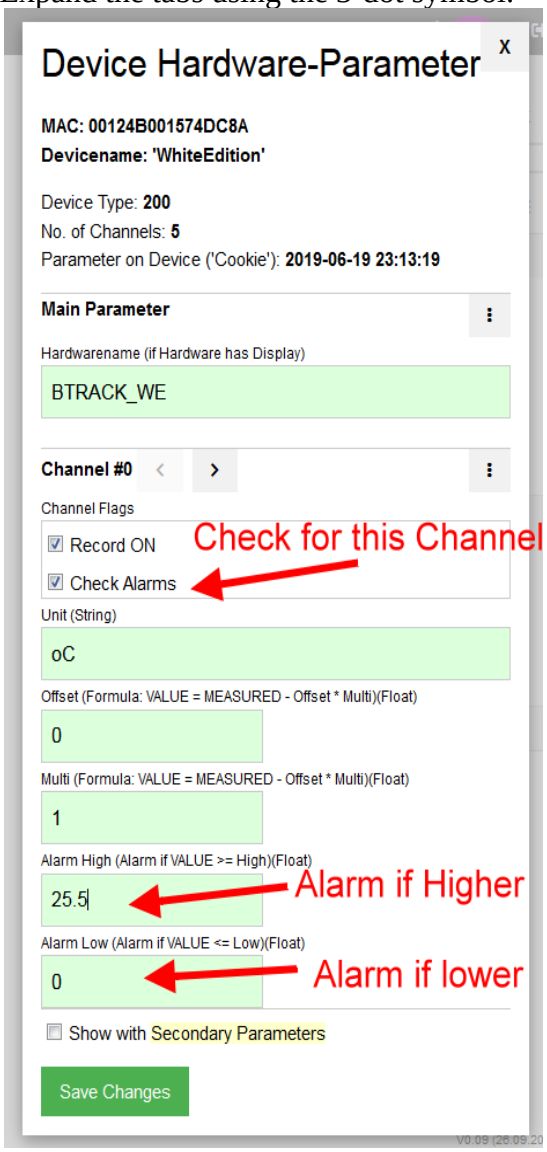
These settings are made via the “Hardware” item:



In step 1a the channel limits are set:



Expand the tabs using the 3-dot symbol:



In step 1b, the alarm period is also set (upper tab 'Main Parameters'): If a value greater than 0 is entered here, alarms are transmitted immediately, but not more frequently than this value (since every transmission uses energy). Otherwise, a transmission takes place after every measurement for which the alarm condition is met.

Note: even if "0" is entered here, alarms are transmitted, but only as part of the "normal" transmission and without any particular priority: If a "normal" transmission fails, it is not repeated by default. In the case of alarms, however, this is attempted 3 times by default. It therefore makes sense to enter a value here in every case, even if it is exactly the same as for "normal" transmissions.

Settings for step 2 (evaluated on the server)

These settings are made via the “Server” item (here only the relevant parameters)

Warning / error timeout: Sometimes connections to the Internet/mobile network/server fail. This is normal and no data is lost (it is repeated on the next connection). But after a certain time a warning or error can be generated. The granularity of this scan depends on the internal setup of the LTX1 and is usually between 1 and 24h.

HK alarms: If the (less frequently measured) HK values ("House Keeping") detect a problem, an alarm can also be generated. The battery voltage can also be converted into a percentage value (but this is not very accurate and only a 'hint').

Contact #0: This is the email address to which notifications (warnings, errors, alarms) are sent. SMS and data push services are also available optionally.

- Condition (for contact #0): There are three types of notifications:
- Warnings: nothing to react to quickly, e.g.
  "Battery below a limit, but still OK for at least x days"
- Errors: e.g. if the device cannot read a sensor or other hardware problems
- Alarms: are generated when a value is above/below a limit of the device
  (the limits can be activated in the next block "Hardware")

INFO: 3 different colors are used:

YELLOW	*for Warnings*
RED	*for Errors*
PINK	*für Alarms*

A notification is sent to a contact when a "term" in the condition is true. A condition can consist of one or more terms, each separated by a space. A term can contain the following "variables":

`An`	New Alarms
`At`	Alarme (total number)
`Wn`	New Warnings
`Wt`	Warnings (total number)
`En`	New Errors
`Et`	Errors (total number)

`M` Time since the last notification was sent to this contact in seconds

A term consists of several variables, an optional "+" and a value, separated by a "*" sign. The term is "true" if everything in the term is true. The "+" stands for "greater than or equal to". A small example:

`An+1*M+3600` means: "true" if there are 1 or more new alarms AND the last notification was sent more than or equal to 3600 s.

The simplest condition for sending a notification after each contact is e.g.:

`M` is always "true": means "true" if the last notification is older than 0 s (same as `M0`)

`An+3 Wt+10*M+43200` means: send notification if there are three or more new alarms in a transmission OR there are 10 or more warnings (in total) and the last notification is older than 12h (= 43200 s).

INFO: If you have any questions/problems/suggestions regarding notifications, please let us know!

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