USER GUIDE

TRID30-7F

LogTag

Distributed by AKRIBIS

TRID30-7

Temperature Recorder with Display and 30 Day Statistics Memory

Product User Guide

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Revision History

Version	Date	Author	Details
1.0	9/12/09	Carl Willis	Initial release.
1.1	3/5/10	Mike Jenkinson	Changed screen shots regarding the Day display while reviewing stats. -Added new wake up feature to Hibernation mode. -Update Time/date starting feature. -Added optional display of days collected while recording.
1.2	16/06/2016	Stefan Lenz	Trial with new display layout
1.3	1/9/2016	Stefan Lenz	General Update

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Safety Information

TRID30-7 temperature recorders contain a Lithium Battery. If the model number of the recorder is TRID30-7R, it has a user replaceable battery. When the battery indicates “LOW”, you can replace it according to the instructions in Appendix 1 - Battery Replacement on page 16.

If the model number of the recorder is TRID30-7F, the battery cannot be replaced.

The empty batteries and depleted recorders should be recycled or disposed of according to your local regulations.

Do not expose the recorder to extreme temperatures as it may lead to the destruction of the battery and may cause injuries.

Keep out of the reach of children.

Liability

LogTag® Recorders ’ standard warranty terms apply. A copy can be requested by emailing support@logtagrecorders.com. In addition LogTag® Recorders shall not be held liable:

- If the device was used beyond LogTag® Recorders ’ stated limitations.
- For any claims due to the improper storage and use of the device.
- For any problems with refrigeration units.
- For the bad quality of the monitored goods, if any.
- For incorrect readings if the device was used with a low battery.
- For consequential loss.

Useful Life

The operational life of the TRID30-7 is approx. 12 months after configuration, provided ...

... the device was not stored for over 12 months prior to activation,
... the device is not downloaded excessively (more than once a week),
... data is reviewed on the display no more than once daily for 30 seconds
... The recording interval is not shorter than 5 minutes,
... the device is stored and operated according to LogTag® Recorders ’ recommendations.

Disclaimer

The TRID30-7 monitors temperature exposure and not the quality of the goods it accompanies. Its purpose is to signal if product quality evaluation/testing is required.

Typographical Conventions

Text **in this font** refers to buttons on the TRID30-7.

Text in this font refers to option settings, dialogue boxes or actions to be taken in LogTag® Analyzer.

Text in this font describes features of the product.

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Introduction

The LogTag® TRED30-16R temperature recorder features a data logging memory storing up to 7,770 temperature readings and a separate statistical memory, storing maximum and minimum reading as well as alarm duration for each of the last 30 days.

During recording the display shows the current temperature (of the most recent reading), the status (within or outside the acceptance range), an alarm trigger summary of up to the last 30 days (today and 29 days previous) of recording, the current time and battery status.

Alarm events can be triggered when a number of readings are outside pre-set Alarm thresholds and a "day alarm indicator" appears on the display.

Logged temperature data can be downloaded via a standard LogTag® Interface to the free companion software LogTag® Analyzer, where you can display data in chart, list or summary formats. The software also allows electronic archiving and exporting or transmitting data in support of sophisticated data management systems.

Features

The TRID30-7 temperature recorder features the familiar LogTag case layout.

Figure 1: *TRID30-7 features*

Case

- Mounting lug for secure fastening of recorder to fixtures
- Gold-plated, high-quality temperature sensor socket
- Robust polycarbonate case, IP64

Buttons

- **START/CLEAR/STOP** button; can be used to start and stop the unit or to clear an alarm. It is also used to exit the statistics review.
- **REVIEW/MARK** button; can be used to enter the statistics review and to scroll through the statistical data directly on the display. It is also used to place an inspection mark in the data listing.

Display

The display shows 'at a glance' if alarm events have occurred for both the current day and up to 29 days in the past. Details of any alarm event can be checked directly on the unit by inspecting the statistics history on the recorder's display or in more detail by downloading the logged data.

Checklist - Required Equipment

- LogTag® TRID30-7 temperature recorder.
- A computer running Windows XP SP3 or later.
- A LogTag® interface cradle for configuring and downloading the TRID30-7.
- LogTag® Analyzer installed and ready to go.

Configuring the TRID30-7

Before a TRID30-7 recorder can be used, it must be configured with the parameters required for starting and recording temperature values. This is done using LogTag® Analyzer software, which is also used for downloading and analyzing data.

- Start the LogTag® Analyzer software.
- Plug a LogTag® interface cradle into a USB port and wait for the drivers to be installed. You can use more than one cradle to configure multiple devices at the same time, however it is practical to limit the number of units to about 6, using a powered USB hub.
- Insert the TRID30-7 into the interface with the three contacts towards the back until it clicks in place.
- Select **LogTag - Configure**; LogTag® Analyzer will scan all USB ports and display the configuration options for connected TRID30-7's.

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Standard Configuration Options

The standard configuration options are very similar to those of other LogTag® recorder products and include settings such as **User ID**, **start method**, **pre-start recording**, **logging interval** and **duration**, **start delay**, **temperature alarm parameters** and **password**.

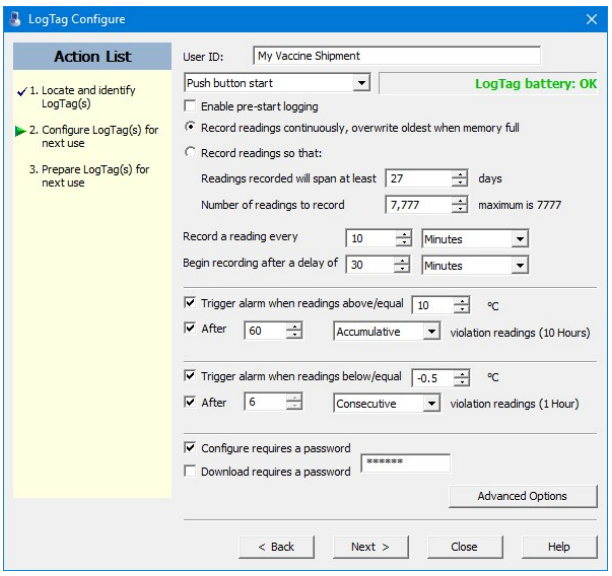


Figure 2: *TRID30-7 Standard Configuration Options*

For detailed information about each parameter please read the section about **Configuring a LogTag® for logging** in LogTag® Analyzer's User Guide or press F1 for help.

TRID30-7 Start Options

During configuration with LogTag® Analyzer you can decide when the TRID30-7 starts taking temperature readings.

- ... via **Push button start**: The recorder will start taking temperature readings after you have gone through a specific start sequence of pressing and releasing the **START/CLEAR/STOP** button (see Starting the Recorder on page 1).
- ... via **Date/Time start** : The recorder will start taking temperature readings at the date and time you specify (local time).

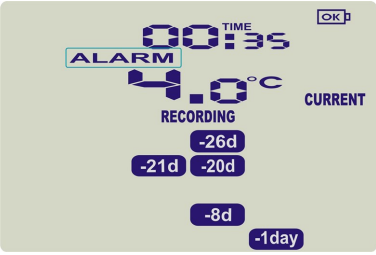
When you choose the push button start option, you can select to record **pre-start readings** or **Begin recording after a delay**.

- If you configure the TRID30-7 to start after a delay period, the recorder will not immediately record temperature readings after you have pressed **START/CLEAR/STOP**, but start a countdown timer instead, and record readings only after the timer has ended. It will, however, continue to take pre-start readings, if enabled.

You cannot combine a date/time start with pre-start readings or the start delay function.

Alarm Configuration Options

The TRID30-7 can display an alarm if either of the configured alarm trigger conditions have been met. This is indicated on the display by showing the Alarm Indicator (**ALARM**) and the Day Alarm Marker for today (today).



Each alarm trigger condition consists of a threshold temperature value, an activation type (which can be instant, consecutive or accumulative[1]) and a delay time, if it is not an instant alarm.
If an alarm trigger condition requires readings to exceed an upper threshold temperature it is called an ***upper alarm***. If an alarm trigger condition requires readings to go below a lower threshold it is called a ***lower alarm***.
The alarm triggering structure in the recorder supports many different alarm trigger configurations.
For example, a possible alarm trigger configuration could be:

- Upper alarm is triggered when the temperature is 10°C or above for an accumulative time of 10 hours.
- Lower alarm is triggered when the temperature is -0.5°C or below continuously for 1 hour.

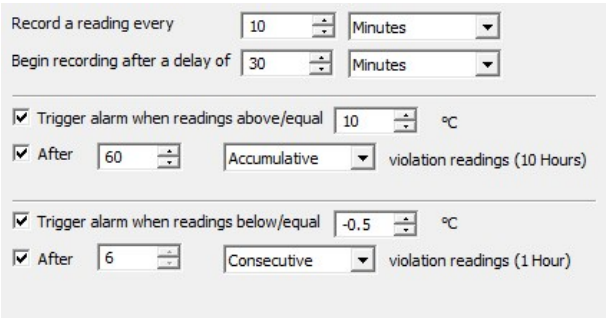


Figure 3: *Sample Alarm Configuration Settings*

All alarm trigger conditions are configured using LogTag® Analyzer, please see the Standard Configuration Options above.

Once an alarm has triggered, the alarm indicator (**ALARM**) remains shown until the alarm is cleared (see Clearing an Alarm on page 10). The day alarm marker today remains shown until midnight, then it turns off and the marker for the previous day is shown -1day to indicate the alarm was registered against what is now the previous day. When mignight passes next, this marker will move to -2day and so on.
Once an alarm event occurred, all alarm counters are reset, and the alarm processing starts again. Accumulative or consecutive alarms will re-trigger, if the alarm conditions are met again, and the Alarm Indicator (**ALARM**) and the Day Alarm Marker (today) will be shown once again.

[1]
- Instant = one temperature reading is above (below) the threshold
- Consecutive = temperature readings are above (below) the threshold for the time defined in the activation delay without interruption
- Accumulative = temperature readings are above (below) the threshold for the total time defined in the activation delay time, but may not necessarily be sequential.

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Advanced Configuration Options

Select **Advanced Options** for additional configuration settings. These settings decide how some of the elements are displayed on the screen and set certain options specific to the TRID30-7.

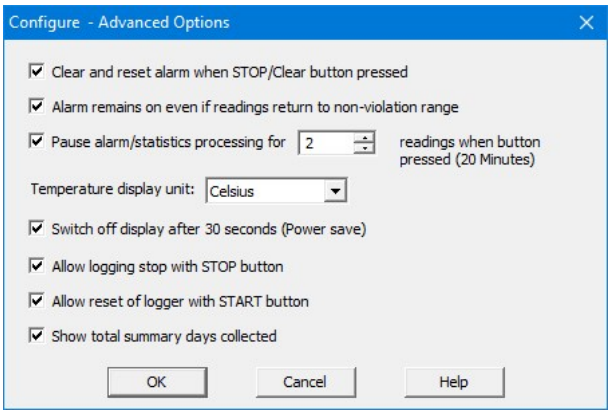

Figure 4: *TRID30-7 advanced configuration screen*

Parameters that influence the appearance of the display are

- Pause alarm/statistics processing (see Paused Readings on page 10)
- Temperature display unit (see Display Overview on page 1)
- Switch off display after 30 seconds (Power save, see Power Save on page 11)
- showing the number of days on the display, for which statistical data have been collected (see Total Number of Days Statistics Collected on page 11)

Parameters influencing specific behaviour of the TRID30-7 are

- clear and reset alarm when the **START/CLEAR/STOP** button is pressed
- leaving the alarm turned on, even if readings return to the normal temperature range again
- allowing the user to stop the recorder with the **START/CLEAR/STOP** button
- allowing the user to reset the recorder with the **START/CLEAR/STOP** button

Enter the desired options and click **OK** to accept the new values. This returns you to the standard configuration dialogue.

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Display Overview

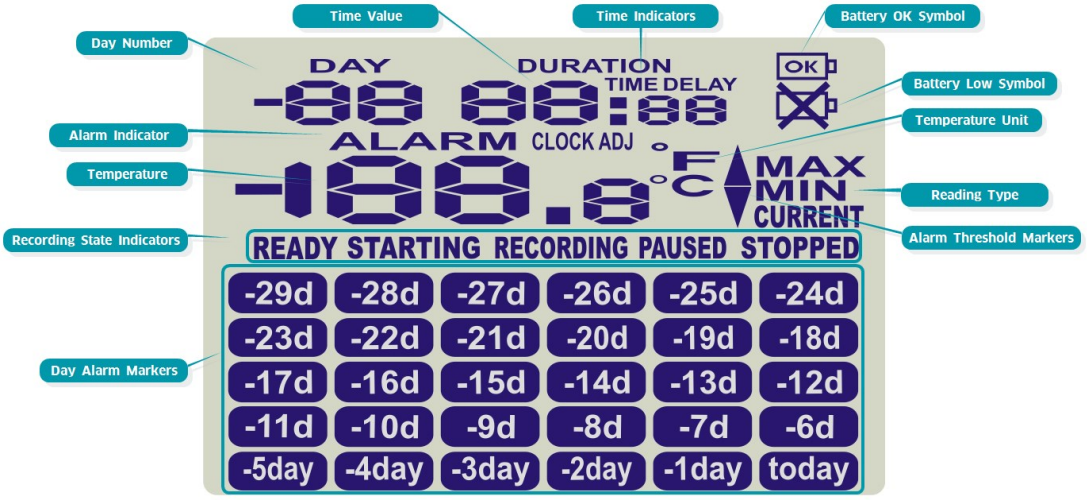

Figure 5: *Display Overview with all segments turned on*

Day Alarm Markers

This grid shows 5 rows of 6 markers, named ***Today*** (today) to ***Day -29*** (-29d), which are switched on when an alarm event occured that day.

Recording state indicators

The recording state indicators show if the TRID30-7 is currently recording data.

- If the **READY** symbol is shown, the TRID30-7 is ready to be started. Depending on the configuration it may already record pre-start readings.
- If the **STARTING** symbol is shown, the recorder has been configured with a start delay. The word **DELAY** is also shown, together with the time in hours and minutes until the start.
- If the **RECORDING** symbol is shown, the TRID30-7 is recording temperatures at the sample interval defined during configuration with LogTag® Analyzer.
- If **RECORDING** is shown together with the word **PAUSED**, the product is also recording, but the recorded values are not taken into account when calculating alarm events and durations.
- If the word **STOPPED** is shown, the TRID30-7 has finished recording temperature data.

Temperature

This 4 character, 7-segment display shows the last recorded temperature while the TRID30-7 is recording . Once the recorder has stopped, nothing will be displayed.

ALARM indicator

The **ALARM** symbol is shown as soon as the TRID30-7 has registered an alarm event. If no alarms have been registered, or if an existing alarm has been cleared, the alarm symbol is not shown.

Day Number

During Review, this shows the day number of the currently displayed day statistic. Today is **00DAY**, days in the past are represented between yesterday **-01DAY** and **-29DAY**. During configuration of the recorder in LogTag® Analyzer you can also enable this to show the total number of days on which data were collected while recording.

Time Value and Time Indicators

The time value display is used to show one of the following:

- a clock with the current time,
- time remaining to start of logging with a delayed start or
- duration, for example of an alarm.

The time indicators identify, which of those is displayed:

- If the word **TIME** is shown, the time value represents the current time in hours and minutes (24- hour format).
- If the word **DELAY** is shown, the time value represents a start delay in hours and minutes.
- If the word **DURATION** is shown, the time value represents the length of time in hours and minutes an alarm threshold was exceeded, for example the time above the upper alarm threshold.

The word **dt St rt** appears in place of a time value if the recorder is configured for a date/time start, and the start time has not yet passed.

Battery OK/Low Condition

An automatic battery test is performed hourly. The battery low symbol will appear if the TRID30-7's battery is low[1]. If the battery OK symbol OK is shown, the battery is still OK.

Temperature Units

Depending on the selected display temperature units during configuration, this shows either °F or °C.

Reading Type

The word **CURRENT** is shown when the temperature on the display represents the last recorded temperature.

The word **MAX** is shown in Review mode, when the temperature on the display represents the maximum recorded temperature for the day displayed.

The word **MIN** is shown in Review mode, when the temperature on the display represents the minimum recorded temperature for the day displayed.

Alarm Threshold Markers

The up-arrow ▲ is shown when the temperature displayed (i.e. last recorded) is above the specified upper temperature threshold. The down-arrow ▼ is shown when the temperature displayed is below the specified lower temperature threshold.

[1] If your model is a TRID30-7R you can replace the battery yourself . Please follow the instructions provided in Appendix 1 - Battery Replacement on page 16.

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Real Time Clock

The time shown on the recording display is linked to the recorder's internal real time clock.

A day change occurs when the display time rolls through midnight (i.e 00:00). This is the primary function of the display clock.

Each time the recorder is configured with LogTag® Analyzer the display clock value is set to the PC's current local time (or timezone). The time can also be adjusted directly on the unit using the buttons (see Adjusting the Display Clock below).

Note that the recorder's internal real time clock value is only updated when the recorder is configured with LogTag® Analyzer. This prevents the data logging becoming discontinuous, which would be the case if the real time clock were to be changed together with the display clock.

LogTag® Analyzer can display the logged readings in the following times:-

- UTC (GMT)
- Configuration time zone
- Download timezone
- Display clock timezone (default)

Adjusting the Display Clock

The display clock of the recorder can be set to the correct time, either by using LogTag® Analyzer software or directly on the unit, using the buttons.

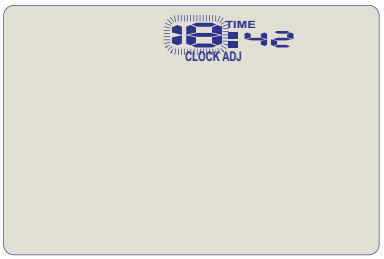
To set the clock, press and hold the button, then press and hold the button. Keep holding both buttons together continuously for a period of 8 seconds. ***Press the buttons firmly!***

During this period the **CLOCKADJ** icon flashes. Release the buttons when the flashing stops. The clock can now be adjusted.

Initially, the minutes digits flash.

Press the button to increment the minutes digit (once it reaches 59 it rolls back to 00 on the next press).

Accept the minutes value by pressing . The hours value now flashes.



Press the button to increment the hours digits (once it reaches 23 it rolls back to 00 on the next press).

Accept the hours value by pressing . The new clock value is now stored, and the display shows the normal screen.

NOTE: It is advised that the real time clock is only adjusted when in STOPPED or READY modes (i.e not recording) to avoid large shifts in day boundary data.

If a display clock adjustment is made while in RECORDING mode, the next log taken will be identified in the downloaded data with a time change mark.

Changes to the display clock do not affect the internal real time clock value, so the logged data does not show time gaps.

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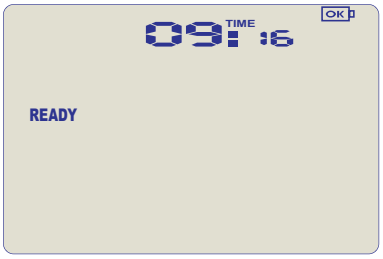
Starting the Recorder

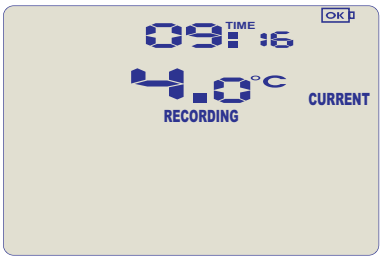
Push button start

The recorder must be in **READY** mode for it to be started. Current time and the **READY** symbol are shown.



Press and hold the **START/CLEAR/STOP** button. The **STARTING** symbol starts flashing for about 6 seconds.

Then the symbol remains on permanently for 2 seconds. If you release the button during this time, the **STARTING** symbol goes off and the recorder starts taking temperature readings.



If the button is released earlier than 6 seconds or later than 6 seconds, the display shows **READY** again, and the recorder does not start.

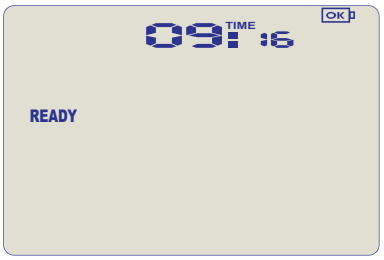
Push Button Start with Start Delay

If the recorder has been configured for push button start with a start delay, the word **DELAY** is shown instead of the REC• symbol. The delay time is shown in hours and minutes.

The time counts down and the TRID30-7 starts recording when it reaches 0:00.

The timer can be cancelled and the recorder re-set to **READY**. While **STARTING** and **DELAY** are shown, press and hold the **START/CLEAR/STOP** button. **STOPPED** will flash.

Release the button when the flashing stops. **STOPPED** and **DELAY** will both disappear, and **READY** will show, together with the current time, and the recorder can now be started again as normal.



The TRID30-7 will ***not*** be re-set if you ...

... release the button before **STOPPED** stops flashing, or
... if you keep holding the button until **STOPPED** disappears.

Automatic date/time start

If you configured the TRID30-7 for a date/time start, it will start recording temperature values as soon as the entered start time is reached. The recorder will display the following if a Date/Time Start has been chosen:

Hibernating the recorder using LogTag® Analyzer will disable the Date/Time start function.

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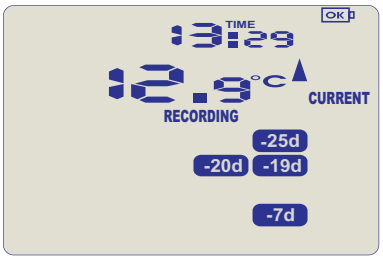
During Recording

During normal operation the display shows the most recently recorded temperature. This temperature is updated at the same rate as the logging interval. The current time is also displayed (in 24 hour format).

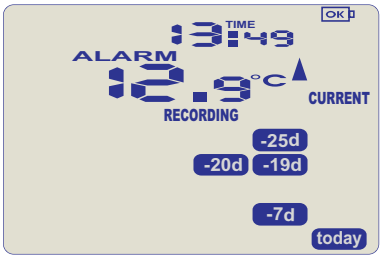
If an alarm event is registered, the **ALARM** symbol is shown.
At the bottom of the display you can see an alarm day summary, where any days on which an alarm was recorded are highlighted.
Following are some sample display screens:

At 1:29 pm the display shows the following:



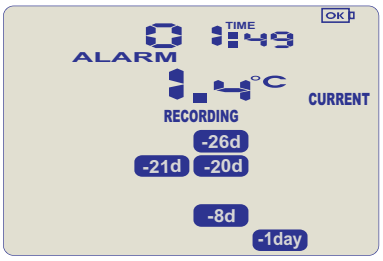
- Alarm events were recorded 7, 19, 20 & 25 days ago
- These alarms were cleared by an inspector, as the display currently shows no **ALARM** symbol.
- The current temperature is over the upper alarm threshold, as indicated by the upper alarm marker (▲).
- the duration, however, of this temperature excursion has not yet triggered an alarm

At 1:49pm (20 minutes later) the display shows the following:



- The temperature has remained above the upper alarm threshold and has now triggered an alarm event.
- The alarm symbol **ALARM** is shown to indicate an alarm event occurred
- The day marker for the current day (today) is shown.

At 1:49am on the next day the display shows the following:



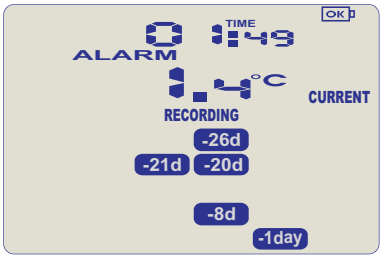
- The temperature has returned to within the accepted range (none of the alarm threshold markers are visible), but the alarm remains present, as it has not been inspected and cleared
- The day summary has shifted by 1 day as the display time has passed through midnight (00:00).

Marking a reading with an inspection mark

When you press the button, the next reading taken by the TRID30-7 will be identified in the downloaded data with an inspection mark.

Clearing an Alarm

During configuration with LogTag® Analyzer you can allow a user to clear an alarm on the display. This is a useful function for an inspector, so new alarms can be recognised easier.
This display screen shows an existing alarm that occurred yesterday, but has not yet been cleared:

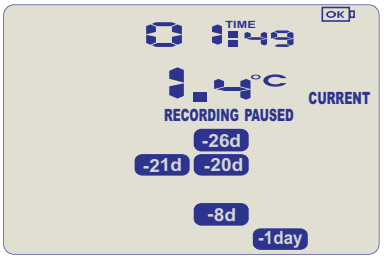


To clear this alarm, press and hold the **START/CLEAR/STOP** button.
The **ALARM** symbol will flash for approx. 6 seconds. When the **ALARM** symbol remains permanently on, release the button within 2 seconds. The **ALARM** symbol now turns off, and the alarm is cleared.
The alarm will ***not*** be cleared if you ...

... release the button before the **ALARM** symbol remains permanently on, or

... if you keep holding the button after the **ALARM** symbol remains permanently on for more than 2 seconds.

In this example the paused function was activated, and the paused symbol is shown on the display. For more information about paused readings please see the section about Paused Readings below.



Note: Only the Alarm Indicator can be cleared! The day alarm marker (-1day in the above example) remains shown, as it is part of the statistic summary.

Paused Readings

During configuration of the TRID30-7 you can set the option to ignore up to 15 readings for alarm- and statistics calculations after either button is pressed. The readings are still shown on the graph and in the data listing, but they are labelled as **paused**, and their value is ignored when determining alarm trigger conditions, minimum/maximum values an other statistical calculations. This function is useful when you wish to review readings during the recorder's operation (or clear an alarm), but you do not wish to trigger an alarm due to your handling the product. It also allows the recorder to acclimatise to the environmental conditions again, before further readings are processed.

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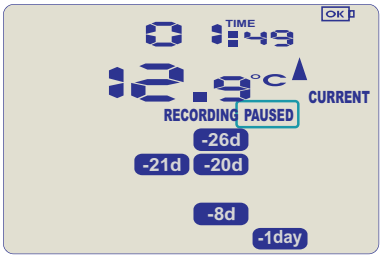
After a button press the display shows the word **PAUSED** next to the **RECORDING** symbol.



Paused readings are specially marked in the graph and data listings. The option is set in the advanced options dialogue in LogTag® Analyzer during configuration and is expressed in ***number of readings after the last button press*** (see Advanced Configuration Options on page 6).

PAUSED will turn off as soon as the last ignored reading has been recorded. It will show longer, if your last button press was just after the recorder took a temperature reading, but will be displayed for a shorter period if you pressed the button just before a reading is taken. With the options configured in the example on page 5 and on page 6 the time for **PAUSED** to show could be as short as 10 minutes, but as long as 20 minutes.

Power Save

When **Power save mode** is enabled, the display will automatically switch off after 30 seconds of no button activity.

The recorder uses significantly less battery power with the display off (typically only around 1/3 of the average power with the display on).

This function is appropriate in applications where the current temperature display is not required to be seen frequently, such as in transit monitoring applications.

Pressing any button will re-activate the display.

The power save mode is enabled or disabled when configuring the TRID30-7 via LogTag® Analyzer in the **Advanced Options** dialogue (see Advanced Configuration Options on page 6).

Total Number of Days Statistics Collected

The recorder can be configured to show the total number of days for which statistics data was collected. This feature is enabled when configuring the TRID30-7 via LogTag® Analyzer and can be located in the **Advanced Options** dialogue (see Advanced Configuration Options on page 6).

When enabled, the total number of days for which statistics data was collected are shown on both the **Recording Display** and the **Stopped Display**.

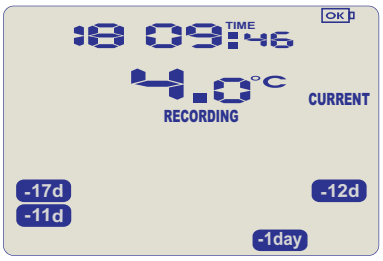


Figure 6: *TRID30-7 recording, showing '18' days of data has been collected.*

Figure 7: *TRID30-7 stopped, showing '27' days of data has been collected.*

Note, this is not always the number of days the recorder has collected data. Depending on the sampling interval the recorder can hold more than 30 days of temperature readings, but since the maximum number of days for which statistics can be collected is 30, the highest number that can be shown here is 30.

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Reviewing Day Statistics on the TRID30-7

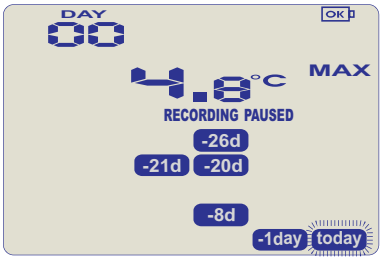
The review of day statistics history is accessed by pressing the **REVIEW/MARK** button.

You can review the data regardless of whether the recorder is still logging data, or has already been stopped.

Following are some sample display screens you might see during a statistics review. All display screens are based on the alarm settings made in Alarm Configuration Options on page 5:

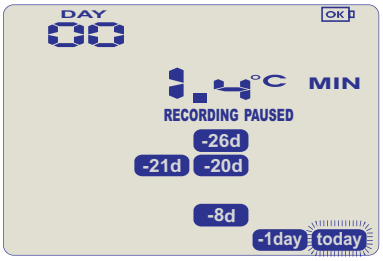
Today's data

Pressing the button displays the current day's maximum statistic:



- The Today marker today flashes and 00 **DAY** is shown to indicate that today's data are being displayed.
- Today, no temperature values were recorded above the upper alarm threshold, and no alarm event was generated.
- The maximum temperature recorded today was 4.8°C.
- The paused function is enabled

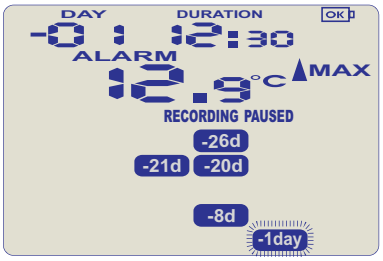
Pressing the button again displays the current day's minimum statistic:



- today still flashes and 00 **DAY** is still shown, as the same day's data (today) is being displayed.
- Today, no temperature values were recorded below the lower alarm threshold, and no alarm event was generated.
- The minimum temperature recorded today was 1.4°C.

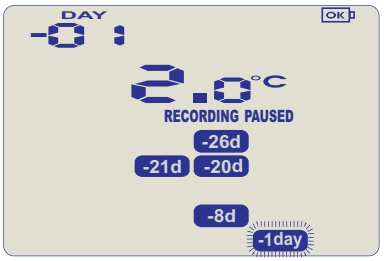
Yesterday's data

Pressing the button now displays yesterday's maximum statistic:



- The -1 marker -1day flashes and -01 **DAY** is shown to indicate that yesterday's data is being displayed.
- Yesterday, recordings above the upper threshold were recorded, indicated by the upper alarm threshold marker ▲
- the duration value shows the amount of time recorded above the limit yesterday, which was 12 hours 30 minutes
- an alarm was triggered, indicated by the **ALARM**, as this duration was longer than the allowed time above the threshold
- The maximum temperature recorded yesterday was 12.9°C.

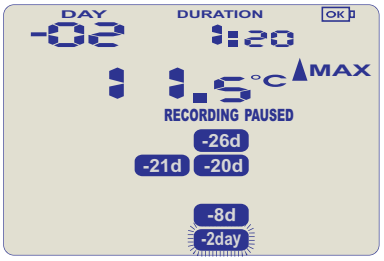
Pressing the button now displays yesterday's minimum statistic:



- -1day still flashes and -01 **DAY** still shows, as we are still looking at yesterday's data.
- Yesterday, no temperature values were recorded below the lower alarm threshold. The alarm for the day -1day was generated by the upper alarm, not by the lower alarm, so the **ALARM** symbol does not appear.
- The minimum temperature recorded yesterday was 2.0°C.

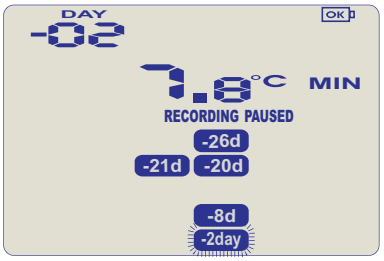
Data from the day before yesterday

Pressing the button now displays the maximum statistic from two days ago:



- The -2day flashes and -02 **DAY** is shown to indicate that the data being displayed is from two days ago.
- Two days ago recordings above the upper threshold were recorded, indicated by the upper alarm threshold marker
- The duration was 1 hour 20 minutes, which was shorter than the allowed period, so no alarm event was generated
- The maximum temperature recorded on the day before yesterday was 11.5°C.

Pressing the button now displays the minimum statistic from two days ago:



- -2day still flashes and -02 **DAY** still shows, as we are still looking at the data from 2 days ago.
- Yesterday, no temperature values were recorded below the lower alarm threshold, and no alarm event was generated .

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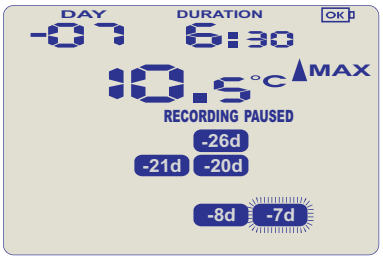
- The minimum temperature recorded on the day before yesterday was 7.8°C.

Data from 7 days ago

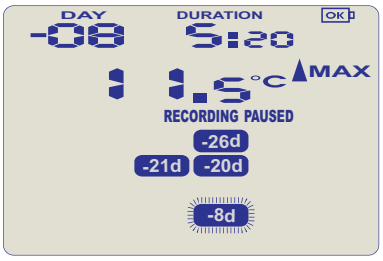
After pressing the button for a few times (skipping days -3 to -6) the maximum statistic from seven days ago is displayed:



- The -7d flashes and -07 **DAY** is shown to indicate that the data being displayed is from seven days ago.
- Seven days ago recordings above the upper threshold were recorded, indicated by the upper alarm threshold marker
- The duration was 6 hour 30 minutes, which was shorter than the allowed period, so no alarm event was generated
- The maximum temperature recorded seven days ago was 10.5°C.

Data from 8 days ago

After pressing the button twice (skipping the minimum statistics for day -7) the maximum statistic from eight days ago is displayed:



- The -8d flashes and -08 **DAY** is shown to indicate that the data being displayed is from eight days ago.
- Eight days ago recordings above the upper threshold were recorded, indicated by the upper alarm threshold marker
- The duration was 5 hour 30 minutes
- An alarm event was generated **ALARM**. Neither duration from day -7 or -8 by itself would cause an alarm event, however the combined duration is 10 hours 50 minutes, which is more than the allowed 10 accumulative hours.
- The maximum temperature recorded eight days ago was 11.5°C.

Tip: Pressing and holding the button will get you back to the previous screen, rather than advancing one screen.

Stopping the TRID30-7

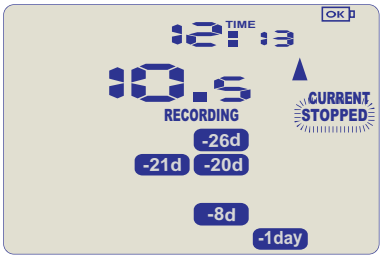
Automatically

The TRID30-7 automatically stops recording temperature when the maximum number of readings specified during configuration has been reached. Your unit can also be set up to stop automatically when it is downloaded. This option needs to be set up at the factory and cannot be changed during configuration with LogTag® Analyzer. Your distributor can supply more information about this option.

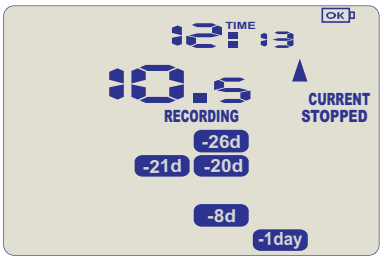
Manually

You can configure a TRID30-7 so it can be stopped with the **START/CLEAR/STOP** button. This feature is useful when you take the recorder out of a shipment and don't want to falsify the statistics with readings taken after the shipment completion. The stop function is enabled in the **Advanced Options** dialogue during configuration (see Advanced Configuration Options on page 6). When enabled, following will stop the unit:

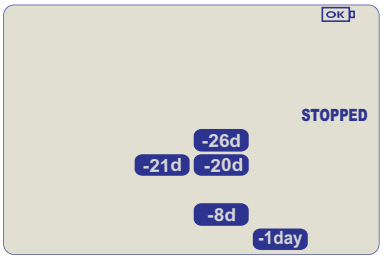
Press and hold the **START/CLEAR/STOP** button. The **STOPPED** symbol starts flashing for 6 seconds.



Then the **STOPPED** symbol remains permanently on:



Release the button within 2 seconds. The recorder will now stop taking readings.



The recorder will ***not*** stop if you...

... release the button before the **STOPPED** symbol remains permanently on, or

... keep holding the button for more than 2 seconds after the **STOPPED** symbol remains permanently on.

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If an ALARM is present (**ALARM**) and the **Clear alarm by pressing STOP button** function is enabled, you will need to clear the alarm first before you can stop the recorder. Please see Clearing an Alarm on page 10 for more information on how to clear an alarm.

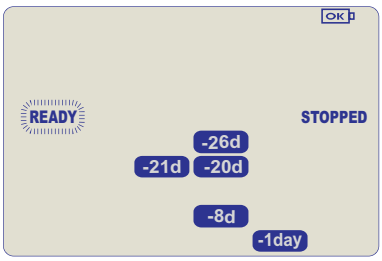
Resetting the Recorder

You can reset a recorder back to its original **READY** state.
Once re-set, recording can be started again as described in Starting the Recorder on page 1.

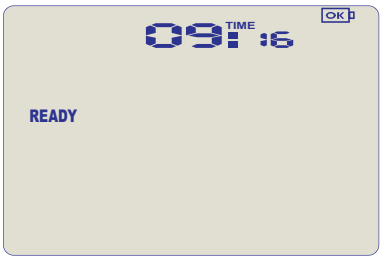
Note that when performing this procedure all recordings and statistics stored in the recorder are deleted and cannot be recovered. Please ensure your data has been saved!

For this process to work, the recorder must be in the **STOPPED** state.

- Press and hold the button. The **READY** symbol will flash.



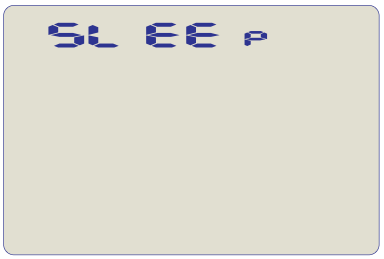
- When the **READY** symbol remains permanently on, release the button within 2 seconds. The recorder is now ready to be started again.



The ability to reset a recorder is enabled or disabled in the **Advanced Options** dialogue when configuring the TRID30-7 via LogTag® Analyzer (see Advanced Configuration Options on page 6).

Hibernating a TRID30-7

When hibernated, the recorder's power consumption falls to near zero and the life of the battery approaches its shelf life (typically 5 or more years).
This is useful for conserving battery life when the recorder is not used for extended periods .
TRID30-7 recorders are placed into Hibernation using LogTag® Analyzer by clicking **Hibernate** on the **LogTag** menu.
The disply shows SLEEP for a few seconds, before turning itself off.

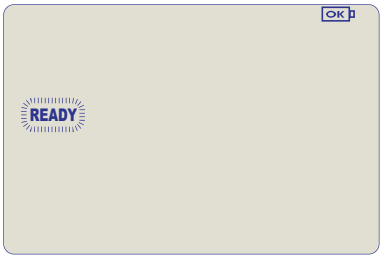


A hibernated recorder has no active display, however a button press will wake the recorder up briefly. The display will show:

- The battery OK symbol
- the low battery symbol if the battery requires replacing.

A hibernated recorder can be activated again by pressing the and buttons together continuously for a period of 6 seconds.

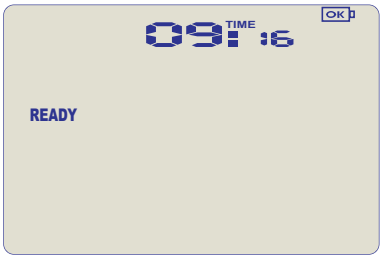
During this time the **READY** symbol flashes. Release the buttons when the flashing stops.



You can re-activate a recorder with a low battery, however it is not recommended to commence another trip.

Note: The real time clock is not running in a hibernated recorder and must be set up if the recorder is manually activated. Therefore, the **CLOCKADJ** procedure is automatically invoked (see Adjusting the Display Clock on page 8).

Once the clock has been set, the recorder is ready to be started again.



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Technical Specifications

Model Number
TRID30-7F with fixed battery
TRID30-7R with replaceable battery

Temperature Sensor Measurement Range
-40°C to +99°C (-40°F to +210°F[2])

Recorder Operating Temperature Range
-30°C to +60°C (-22°F to +140°F)

Storage Temperature Range
0°C to +40°C (32°F to +104°F)

Ambient humidity range during transport and use
0 to 95%RH

Rated Temperature Accuracy
- Better than ±0.5°C (±0.9°F) for -20°C to +40°C (-4°F to +104°F), typically ±0.3°C (0.6°F)
- Better than ±0.8°C (±1.4°F) for -40°C to -20°C (-40°F to -4°F), typically ±0.5°C (0.9°F)
- Better than ±0.8°C (±1.4°F) for +40°C to +70°C (+104°F to +158°F), typically ±0.7°C (1.3°F)
- Better than ±1.2°C (±2.2°F) for +70°C to +99°C (+158°F to +210°F), typically ±1°C (1.8°F)

Sensor Type
Precision Thermistor

Clock accuracy
Quartz crystal locked real time clock, rated accuracy ±25ppm @ 25°C (equiv to 2.5 seconds/day)
Rated temperature coefficient is -0.034±0.006ppm/°C (i.e. typically +/- 0.00294seconds/day/°C)

Recording Capacity
7,770 real time temperature values, giving
- 33 days @ 6 minute logging interval or
- 55 days @ 10 minute logging interval
- 82 days @ 15 minute logging interval.

Supports continuous logging ("wrap-around") or specific recording period.

Statistics memory
for displaying statistics on LCD
- Max/Min values for the past 30 days
- Alarm duration values for the past 30 days.

Memory type
Non volatile

Sampling Interval
Configurable from 30 seconds to 18 hours.

Start options
- Push button start with optional configurable start delay from 1 minute to 18 hours
- Push button start with quick start option
- Date/time start up to 180 days in the future

Alarm functions
- one configurable upper alarm
- one configurable lower alarm
- **ALARM** indicator on display, linked to alarms

Vibration
Withstands vibration specification as detailed in EN12830:1999

Shock
- Withstands shock specification as detailed in EN12830:1999
- Withstands 5 drops from 1m onto smooth concrete floor without loss of function or calibration

EMC compliance
- EC EMC directives (EN 61000-6-1:2005 & EN 61000-6-3:2006)
- Includes electrostatic discharge as prescribed in EN 61000-4-2
- Complies with FCC Part 15 Subparts A and B

Environmental
IP64
Fits into IP67 Protective Enclosure 200-000020

Case Material
Polycarbonate

Power source
TRID30-7R: CR2032 3V Li-MnO_2battery with extended temperature Chemistry – User replaceable, non-rechargeable
TRID30-7F: CR2450 3V Li-MnO_2battery with extended temperature Chemistry , non-replaceable, non-rechargeable

Battery life
TRID30-7R: Typically 1 year of operation with normal use (6 minute logging, statistics reviewed on the display no more than once daily for no longer than 30 seconds each time, download data monthly) provided recorder is kept within the storage temperature range when not in use.
TRID30-7F: Typically 2 years of operation with normal use (6 minute logging, statistics reviewed on the display no more than once daily for no longer than 30 seconds each time, download data monthly) provided recorder is kept within the storage temperature range when not in use.

Size
93mm(H) x 54.5mm (W) x 8.6mm (T)

Weight
39g

Calibration
Calibration traceable to an ISO/IEC 17025 accredited testing laboratory

Download time
- Typically with full memory (7,770 readings) less than 10 seconds, depending on computer or readout device used

Software requirements
- LogTag® Analyzer version 2.3 release 19 or later to configure and download

Accessories
- Wall holder 200-000010
- LTI/USB Interface Cradle

[2] Values above 199.9°F cannot be shown on the display. The values will, however, be recorded and shown in the LogTag® Analyzer software

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Appendix 1 - Battery Replacement

Prepare the recorder

- Download the unit to save any recorded data.
- Hibernate the unit using LogTag® Analyzer.

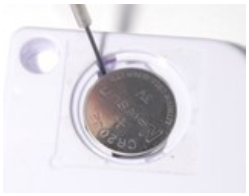
> Failing to hibernate the recorder may result in serious memory corruption. As a result you may no longer be able to use this product.

Remove the old battery

- Carefully remove the rear label covering the battery door using a small-bladed screwdriver or knife:

- Use a coin to turn the battery door anti-clockwise; remove it from the case:

- Remove the battery using a small-bladed screwdriver, as shown:



Insert the new battery

> Only use batteries from a reputable manufacturer! Check the operational temperature range of the battery and make sure it covers the range of the TRID30-7.

- Put a new CR2032 cell into the battery compartment as shown; the right hand edge of the battery is inserted first against the contact:

- Press firmly down on the left hand side of the battery to click the battery into place:

- Replace the battery door; turn clockwise to lock it into place.

- Cover the battery door with either a new label (Part # 100-000502) or reuse the old one.

- Re-configure the recorder with LogTag® Analyzer.

> Please recycle or dispose of the old battery according to your local environmental regulations.

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