zLogg

SMALL BUT MIGHTY
MINI T DATA LOGGERS

sales@z-logg.com

Mini T Series
Multi-use loggers with individual statement of accuracy (NIST)

-200C to +80C
Available with humidity, external probe, and cryogenic probe

Memory 48,000 data points
It means 333 days of data with a 10 minutes interval

No wireless transmission by design = airlines approved (list on request).

Replaceable battery (yearly). Keep your logger for +4 years. Amortize costs over a longer period of time.

Add-ons:

Magnet: Place it nicely on the side of your equipment (offered by default)

Magnetic steel bracket: Install it solidly on your cryogenic tank

Installation on your cryogenic lid offered

Single-Use version: Those loggers are available in single-use

Special customization: Volume depending, get its label entirely customizable (color, text, logo..etc)

SOP (template) and protocol of validation (IOQ) available on request

Designed, produced, and calibrated in the USA
Most temperature loggers flood the market, mass-produced overseas to cut costs and boost margins. On the opposite, we design, manufacture and calibrate ourselves from the US (Boca Raton, FL). Leveraging automation to decrease costs. And also have a Canadian entity (ON) to facilitate transactions in Canada.

Replaceable batteries
No label requirements for IATA dangerous good air transportation. And better than tossing your logger away just because its battery is empty. Time-consuming, costly, and not exactly eco-friendly, right?

2-year NIST statement of accuracy
Yes, you might want to do it every year. But we know that our logger will be accurate for 2 years. So we state it!

Calibration with adjustment on the logger
To calibrate you could observe a drift and if it is within your acceptable criteria, it passes. Or you could do the same observation and correct the reading in the logger. We prefer this method.

Resolution of 0.01C
Chances are that you are used to a 0.1 resolution. Our readings are 10X more precise.

Accuracy of 0.2C on the entire range of your logger from -30 to +70C
0.2C is common. But rarely all along its operating range. Your results are more precise.

Raw data is included in the PDF, and no cradle is needed to read them.
Some loggers on the market (still) need a cradle to be read. Others require extra software to access raw data or to play with your data. We won't want that for ourselves. So we included everything under the same roof.

2X stronger RTD probe
Most loggers have a weak point: the cryogenic probe. It breaks easily and can't be fixed, forcing you to replace the whole costly logger. Our external probe is 2X stronger than standard RTDs, built with durable coaxial.

Rental available for your validation projects
Ever been in need of loggers for a mapping study? And you could just purchase them knowing they will last 2 months. We rent them. And we could even post-calibrate them. Care of your budget!

Designed, manufactured and calibrated in the US
Visit www.z-logg.com or email us at sales@z-logg.com
Samples available here

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SPECIFICATIONS

Order Code	Mini T (Temperature only), Mini TE (Temperature only External), Mini TH (Temeprature & Humidity), Mini TC (Temperature Cryogenic)
Logger Type	Multi-use / Single-use
Sensor	Thermistor for Mini T, Mini TE (external) External RTD for Mini TC (PT100) - Coaxial probe. Digital Sensirion SHT31 for Mini TH
Memory	48,000 records (About 500 days with a 15 minutes interval)
Operating Range	-40 to + 80C for Mini T, Mini TE and Mini TH -200C to +200C for Mini TC
Accuracy	+/- 0.2C over the complete measuring range for Mini T and Mini TH (0.1C/1% available) +/- 0.3C over the complete measuring range for Mini TE +/- 0.5C for Mini TC +/- 1.8% RH from 0% to 90% for Mini TH
Resolution	0.01C for Mini T, Mini TE, Mini TC 0.01% RH for Mini TH
Time Accuracy	+/- 15 minutes per year
Start Options	Manual start with or without delay Auto Start on date and time Auto start on set temperature with or without delay
Stop Options	Auto stop after a set period Auto stop on date and time Manual stop Disabled stop / Loop mode
Marked readings/comments	8 mark readings. Comments available in graph.
Log Interval	1 sec to 24 hours
Alarms	4, total and/or consecutive. Screen displays “ALARM” + specific icon during alarm status.
Sensor response time	T90. ~1.5 minutes to reach 90% of a 5 °C step change in air (20 °C → 25 °C) under controlled chamber conditions
Battery	CR2032, 3V lithium battery. Replaceable. Live reading of the remaining voltage battery on the logger.
Display	LCD reflective with 14 display modes. Can be deactivated and customized
Connection	Direct USB to computer (USB mass storage Device). Raw data included.
Auto generated filed	ZLG, TXT, CSV and PDF (in all supported languages). Auto saving on local or shared folders.
Software	zLoggManager. Free. CFR Part 11 compliant module. Validated (IOQ)
Compatibility	Windows, Mac, Linux
Calibration	Individual statement of accuracy and/or 6 points NIST certificate (with adjustment as found/as left).
Certificates	CE, RoHS. Airlines approved (list on request)
Dimension	10cm x 4 cm x 1.2cm (3.93in x 1.57in x 0.47in)
Weight	57g (2oz) (without probe)
Other (Logger)	Magnetic. Customized length external probe (detachable), steel bracket for fixture. external audible buzzer.
Other (Software)	Overlay loggers, automatic hot/cold spot calculation, reassessment reports, 12 languages, templates, auto savings of reports
Warranty	1 year

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Statement of Accuracy

Device Name: mini T
Serial: LMDB0100
Date: 02/11/2023

mini T data loggers are calibrated for temperature in zLogg's Calibration Chamber.
The reference equipment used is traceable to National Institute of Standards and Technology (NIST).
Temperature Reference Meter: Dostmann P655 Digital Thermometer and can be downloaded here.
This certificate is valid for 2 years from the date of purchase.

Full Range	Temp./Hum. Range	Accuracy
-40°C to +80°C	-40°C to +80°C	±0.2°C

zLogg LLC

CALIBRATION CERTIFICATE

Brand	zLogg (www.z-logg.com)
Model	mini TH
Serial no.	LMF90195 (Quality Report)
Description	Stress Test
Performed by / for	zLogg LLC for [redacted]
Date of calibration	01-10-2025
Suggested review date	01-10-2026

	As found						As left					
Offered T	-38.63	-20.49	-0.26	20.29	40.73	61.25	-38.63	-20.49	-0.26	20.29	40.73	61.25
Reading T	-38.95	-20.68	-0.34	20.33	40.79	61.33	-38.63	-20.49	-0.26	20.29	40.73	61.25
Deviation	0.32	0.19	0.08	-0.04	-0.06	-0.08	0.00	0.00	0.00	0.00	0.00	0.00

Offered RH	22.68	46.69	71.57	22.68	46.69	71.57
Reading RH	22.00	46.44	72.69	22.86	46.39	71.68
Deviation	0.68	0.25	-1.12	-0.18	0.30	-0.11

Calibration Conditions
Chamber: Weiss Technik ENDH7-40 Environmental Test Chamber (195L, -40°C to +180°C, 10% to 98% RH)
Reference Instrument: Dostmann P755 Thermometer/Hygrometer (Serial: 75523010963, Uncertainty: ±0.015°C, ±0.5% RH)
Calibration certificate can be downloaded here
Chamber Mapping: The chamber has been fully characterized in 3D (10 × 24 × 3 grid, >100 loggers with SHT45 sensors) to identify spatial temperature variations.
The resulting lookup tables are applied during calibration to correct both DUT and reference probe positions.
The detailed chamber deviation maps (Rev. 015) can be viewed at the following controlled link here
Accuracy Specification: ±0.2°C for temperature and ±1.8% %RH for humidity
Uncertainty: Expanded uncertainties are evaluated in accordance with ISO/IEC Guide 98-3 (GUM) with coverage factor k=2, corresponding to ~95 % confidence. A detailed uncertainty budget is published separately and may be accessed here

Temperature Calibration Results
Set Points: -38°C, -20°C, 0°C, 20°C, 40°C, 60°C
Procedure: 3H set point duration, up to 120 samples averaged. Adjustments via polynomial regression (up to order 11)

Humidity Calibration Results
Set Points: 23% RH, 47% RH, 72% RH
Procedure: 2H set point duration, up to 60 samples averaged. Adjustments via polynomial regression.

Calibration Statement
The logger was calibrated following zLogg LLC's standard procedures in a Weiss Technik ENDH7-40 chamber.
Temperature and humidity readings were adjusted using polynomial regression to achieve an accuracy of ±0.2°C and ±1.8% RH.
Chamber mapping results were applied to account for spatial temperature variations, ensuring precise calibration.
All measurements are traceable to the Dostmann P755 reference instrument.
The logger meets or exceeds the specified accuracy and is suitable for use until the validity date, subject to annual recalibration.
This calibration was performed by a non-accredited laboratory. Results are traceable to national/international standards.

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Specification & Configuration	
Device Name:	z1LcdMu
Device Type:	Multi-use Temp/Hum
Serial Number:	LMDB0001
Time Zone	GMT:+0
Firmware Version:	5.06A
Software Version:	1.23.10 Admin
Trip Number:	1
Trips Remaining:	Multiple
Temp. Unit:	Celsius
Temp. Range:	-40 to +80°C
Battery:	3.21V - 100%
Total Records:	2953
Sampling Rate:	30 sec
Start Delay:	0 sec
Start Time:	Parameter not set
Stop Time:	Parameter not set

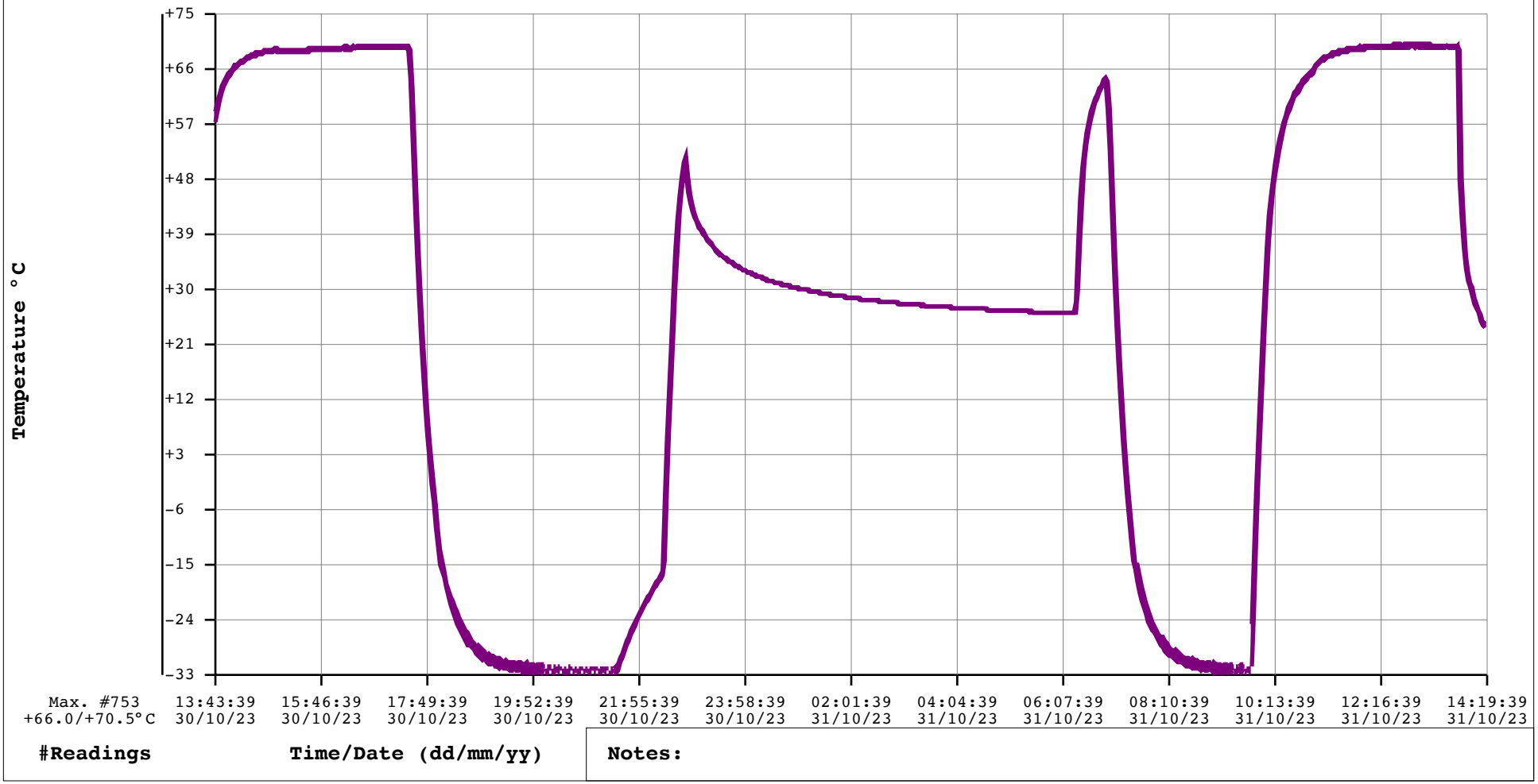
EL L N H EH

OK

Alarms (Time above / below Alarms)				
Type:	Temp.	Consecutive	Total	Out of Spec.
EH:	not set			
H:	not set			
L:	not set			
EL:	not set			

Summary / Statistics		File Created at: 15/11/23 10:05:36	
Maximum Temperature:	+70.25°C	Status:	Recording
Minimum Temperature:	-32.80°C	Trip Duration:	01d 00:36:00
Average Temperature:	+25.47°C	Time within Spec:	01d 00:36:00
Mean Kinetic Temp:	+20.53°C	Started Time:	30/10/23 13:43:39
Active Bookmarks:	0	Stopped Time:	31/10/23 14:19:39
Started by:	Temperature	Memory Used:	13% 5906/44544
Stopped by:		File Created by:	zLoggManager
F0	+0.0027 min	Calibration due:	01/01/2000

Description: Stress Test



This z1LcdMu with an accuracy of +/-0.3°C from -40°C to +80°C (+/-0.6°F from -40°F to +176°F) and a resolution of 0.01°C (°F) has been calibrated in the calibration chamber of zLogg.
The reference equipment used is traceable to National Institute of Standards and Technology. Device:#LMDB0001