

LOW TEMPERATURE AT A DISTANCE



**LogTag**®

**TREL-8**  
Multi-Use Low Temperature  
with External Probe

1.888.610.7664

 [www.calcert.com](http://www.calcert.com)

[sales@calcert.com](mailto:sales@calcert.com)



The TREL-8 Low Temperature Remote Probe Logger measures and stores up to 8000 temperature readings over  $-90^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$  ( $-130^{\circ}\text{F}$  to  $+104^{\circ}\text{F}$ ) measurement range from associated interchangeable LogTag® ST10 type remote probe temperature sensor (available in lengths up to 3 meters (9'10")).

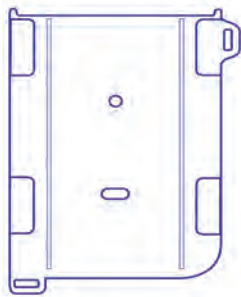
It is intended for use in monitoring of articles stored at low temperatures such as in dry ice type environments.

TREL-8 is easily configured for recording conditions including delayed start, sampling interval, number of readings and configuration of conditions to activate the ALERT indicator.

## Accessories



*ST10 Ext Probe*  
Not Included



*Wall Mount*  
Not Included



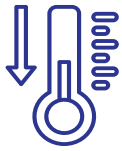
*LTI HID*  
Not Included



*Buffer assembly*  
Not Included  
(Silica sand recommended for temperatures below  $-40^{\circ}\text{C}$ )

# Features

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Records temperature from +40°C to as low as -90°C



A real time clock provides date/time stamps for each temperature reading.



Up to 8,000 recordings - enough for the longest trip.



Push-to-start button with optional delay or a specific time & date.



In-transit inspections can be recorded at the push of a button.



External Probe with high quality gold plated connector.



Comprehensive customization options including alarm settings, sample interval and trip duration.



# Applications



Vaccines Transport



Blood & Organ Transport



Chemical Transport



Manufacturing Distribution



Pharmaceutical Transport

# Specifications

<b>Product Model</b>	TREL-8
<b>External Temperature Sensor Measurement Range</b>	-90°C to +40°C (-130°F to +104°F).
<b>Operating Temperature Range</b>	-20°C to +40°C (-4°F to +104°F).
<b>Storage Temperature Range</b>	-10°C to +55°C (14°F to +131°F).
<b>Rated Temperature Reading Accuracy</b>	With the logger case sitting in an environmental temperature between 0°C and 50°C. Better than $\pm 1^{\circ}\text{C}$ ( $\pm 1.8^{\circ}\text{F}$ ) for -30°C to +20°C (-22°F to +68°F). Better than $\pm 1.2^{\circ}\text{C}$ ( $\pm 2.1^{\circ}\text{F}$ ) for -45°C to -30°C (-49°F to -22°F) and +20°C to +40°C (+68°F to +104°F). Better than $\pm 1.7^{\circ}\text{C}$ ( $\pm 3.1^{\circ}\text{F}$ ) for -80°C to -45°C (-112°F to -49°F). Better than $\pm 2.0^{\circ}\text{C}$ ( $\pm 3.6^{\circ}\text{F}$ ) for -90°C to -80°C (-130°F to -112°F). <i>Actual performance is typically much better than the rated values. Accuracy figures can be improved by recalibration.</i>
<b>Rated Temperature Reading Resolution</b>	0.1°C (0.2°F) for measurements -80°C to 0°C (-112°F to 32°F), 0.2°C (0.4°F) for measurements 0°C to 18°C (32°F to 64.4°F), and -90°C to -80°C (-130°F to -112°F) 0.3°C (0.5°F) for measurements 18°C to 30°C (64.4°F to 86°F) 0.5°C (0.9°F) for measurements 30°C to 40°C (86°F to 104°F) <i>LogTag Analyzer® currently displays to one decimal place of °C or °F. The native resolution is what is stored in the LogTag®.</i>
<b>Sensor Reaction Time</b>	Typically less than 2 minutes (T90) in moving air (1m/s) for ST10S type
<b>Recording Capacity</b>	8031 temperature readings. 53 days @ 10min logging, 80 days @ 15min logging.
<b>Sampling Interval</b>	Configurable from 30 seconds to several hours
<b>Logging Start Options</b>	Push button start with optional start delay or specific date & time.
<b>Recording Indication</b>	Flashing 'OK' indicator / flashing 'ALERT' indicator.
<b>Download Time</b>	Typically less than 5 seconds for full memory (8031 readings), depending on computer or readout device used.
<b>Environmental</b>	IP61.
<b>Power Source</b>	CR2450 3V LiMnO <sub>2</sub> Battery (Fixed).
<b>Battery Life</b>	Storage life of 1 year before 'start' (if it is hibernation mode), followed by: 2 – 3 years of normal use (based on 15 minute logging, download data monthly).
<b>Real Time Clock</b>	Built-in real time clock. Rated accuracy $\pm 25\text{ppm}$ @ 25°C (equivalent to 2.5 seconds/day). Rated temperature coefficient is $-0.034 \pm 0.006\text{ppm}/^{\circ}\text{C}$ (i.e typically $\pm 0.00294$ seconds/day/ $^{\circ}\text{C}$ ).
<b>Standard Remote Probe Cable Lengths</b>	Standard: 0.5m (19"). Extended: 3m (9'10") (recommended maximum).
<b>Remote Probe Cable Type</b>	PTFE (FDA food contact rated) coaxial.
<b>Size</b>	86mm(H) x 54.5mm(W) x 8.6mm(T).
<b>Weight</b>	34g.
<b>Case Material</b>	Polycarbonate.

