

# LogTag®

## TIC20

### TEMPERATURE INDICATOR

The **LogTag TIC20** is a disposable electronic temperature indicator for use in monitoring temperature & time statistics in pharmaceutical transport applications of up to 20 days duration.

Current temperature, elapsed time, load status, monitoring status and battery condition can all be seen at a glance at any time during the trip. On arrival at the destination, monitoring can be stopped and the user can then review time and temperature statistics for each day of the trip, up to 20 days maximum.

The LogTag TIC20 is factory pre-configured for one of a range of monitoring profiles. Special profiles are available on request, subject to conditions.

Statistical data can be downloaded from the TIC20 using an interface cradle and freely available LogTag Analyzer operating software if required.

The TIC20 offers an accurate and cost effective solution for monitoring the pharmaceutical cold chain in "last mile" distribution and other applications where full data logging capability is not required.

**LogTag® Recorders**



Monitoring Display  
LOAD OK



Monitoring Display  
LOAD REJECT



#### Features

- Factory pre-configured to monitor a range of standard vaccines
- Standard 60 minute start delay
- Clear indication of temperature history/alarm status at all times
- Up to 20 days temperature records can be viewed on the display
- Push button Start and Stop. Push Review button to display daily statistics in sequence
- Data can be downloaded via an interface cradle and LogTag Analyzer if required
- Robust and Accurate. Data collected is secure and cannot be manipulated
- Fits easily into packages and can be mailed via letter rate

#### Modes of Operation

##### Ready Mode

Push any button. "Ready" shows the indicator is ready to be started.

##### Start Mode

Press and hold the Start button. "Monitoring" will flash. Release Start button when flashing stops. The Indicator is now in the 60 minute start delay.

##### Monitoring Mode

"Monitoring" appears on the display. The indicator is now taking a temperature reading every 6 minutes. Elapsed time in hours and days appears on the display. If an Alarm occurs, the day segment is illuminated and the OK symbol is replaced by an X.

##### Stopped Mode

Press and Hold the Stop button. "Stopped" will flash. Release Stop button when flashing stops. The Indicator is now stopped.

##### Review Mode

#### Factory Configurations

##### Type 1 Alarm version

DTP, DT, TT, Td, HepB, IPV, liquid Hib, MenAfrivac, HPV and PCV vaccines.

##### Type 2 Alarm version

OPV, freeze-dried BCG, measles, MR, MMR, lyophilized Hib, yellow fever, meningitis, Rabies and Rotavirus vaccines.

##### Type P Alarm version

Prevenar 7 & 13 vaccines.

##### Type R Alarm version

RotaTeq® vaccines.

#### Specifications

See over page for detail specifications.

#### Hypothetical Example

See over page for screen images and description of a 5 day hypothetical scenario.

### Product Specifications

This product is designed to meet or better the WHO PQS performance specification E06/TR07.2

#### Operating Temperature Range

-30°C to +60°C

#### Storage Temperature Range

-30°C to +65°C

#### Ambient humidity range during transport and use

0 to 95%RH

#### Resolution

0.1°C or better in range of -30°C to +60°C

#### Accuracy

- Better than  $\pm 0.5^\circ\text{C}$  for  $-10^\circ\text{C}$  to  $+40^\circ\text{C}$
- Better than  $\pm 1.0^\circ\text{C}$  for  $-30^\circ\text{C}$  to  $-10^\circ\text{C}$
- Better than  $\pm 1.0^\circ\text{C}$  for  $+40^\circ\text{C}$  to  $+60^\circ\text{C}$

#### Capacity

- Minimum & Maximum temperature for each of the 20 days
- 1st activation of each Alarm for each day including trigger time and duration of each excursion

#### Memory type

Non volatile

#### Sampling Interval

Factory set to 6 minute interval (i.e 0.1hour)

#### Logging modes

20 day statistics, temperature/time excursions and Alarm trigger time and duration for each day

#### Logging Start delay

Factory set to 60 minute interval

#### Sensor

Precision thermistor

#### Sensor Reaction time

T90 less than 7 minutes by method detailed in EN12830:1999

#### Vibration

Withstands vibration specification as detailed in EN12830:1999

#### Shock

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

#### Environmental

IEC 60529: IP64

#### Power source

3V Lithium battery – non replaceable

#### Battery life

- Minimum storage life of 18 Months before 'start'
- Monitoring period: 20 days
- Minimum accessibility (display) period of 6 months after 'stopped'

#### Size

73mm(H) x 54.5mm(W) x 8.6mm(T) (Volume < 34cm³)

#### Weight

30g

#### Case Material

Polycarbonate

#### Calibration

Covered by Certificate of Traceability. Calibration traceable to an ISO/IEC 17025 accredited testing laboratory.

#### 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

#### Alarms function & display

- Alarm functions as prescribed in the WHO PQS performance specification E06/TR07.2
- Alarms are displayed on a custom LCD
- Display activates when any button is pressed
- Display is static allowing photocopying

## TIC20

### Configured with: Type 1 Alarms

Alarm type	Temperature alarm threshold	Period of exposure
High threshold	$\geq 45^\circ\text{C}$	1 hour of continuous exposure
Medium threshold	$\geq 30^\circ\text{C}$	10 hours of cumulative exposure
Low threshold	$\leq -0.5^\circ\text{C}$	1 hour of continuous exposure

