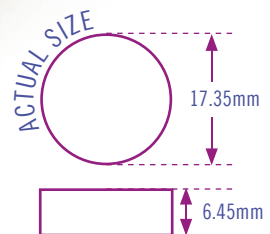


signatrol



SL56T SERIES

MINIATURE BUTTON TEMPERATURE DATA LOGGER

The simple to use, miniature battery powered SL56T series of temperature data loggers, together with its high security TempIT software, are used in a vast number of applications within the pharmaceutical, medical, food & beverage, environmental monitoring and logistic industries. Now with extended memory with up to 125,440 readings and non volatile memory so readings can be downloaded even if the battery is depleted.

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MINIATURE BATTERY POWERED TEMPERATURE DATA LOGGER FOR PROCESS MONITORING

The high security TempIT software platform ensures that the data recorded is a true and faithful record of the actual conditions your sensitive items have been exposed to. These are essential requirements when wanting to achieve the various facets of an FDA21 CFR Part 11 validated system or, as part of a hazard analysis & critical control point (HACCP) based food safety programme.

Compliant to BS EN 12830:2018, this compact (17.35mm x 6.45mm) button like data logger with a battery life of up to 5 years, data storage capacity of up to 125,440 readings along with several accessory options allows you to use this device in a seemingly endless number of applications. From measuring temperature in a warehouse, measuring the water temperature in an industrial washing machine or, measuring the cooking cycle temperature from within the centre of a steak pie, this tiny data logger gives you an infinite number of options to measure your temperature requirements.

HOW TO GET STARTED

1. THE DATA LOGGER

Choose which option you want, a high accuracy with an individual calibration certificate or, a lower accuracy unit without a calibration certificate.

2. A USB COMMUNICATION / PROGRAMMING LEAD

You will require a USB communications cable to program and download data from your data logger.

3. DOWNLOAD OUR FREE SOFTWARE

Download our free high security TempIT-LITE software from our website. If you then find later that you need to analyse your data in greater detail, then you can simply upgrade to our low cost TempIT-PRO option. Please refer to page 3 for more information. Once you have this you are good to go.

Starter kits are available providing you with everything you need to get started. Please see page 8. These can be purchased easily via our website, phone or email and can be dispatched the same day if orders are received by 12.00 noon.

What else do I need to consider?

Is your application in a wet, steam or pressurised environment? If so, you may need to use one of our compact enclosures. Please refer to pages 5 & 6 for more details.

Does your data logger need to be mounted securely? For more information, please refer to pages 6 & 7.

Do you require periodic re-calibration? Signatrol's Calibration Service Centre provides you with a low cost, fast 3-day turn-around service ensuring minimal disruption to your process. Please contact calibration@signatrol.com for your calibration requirements.

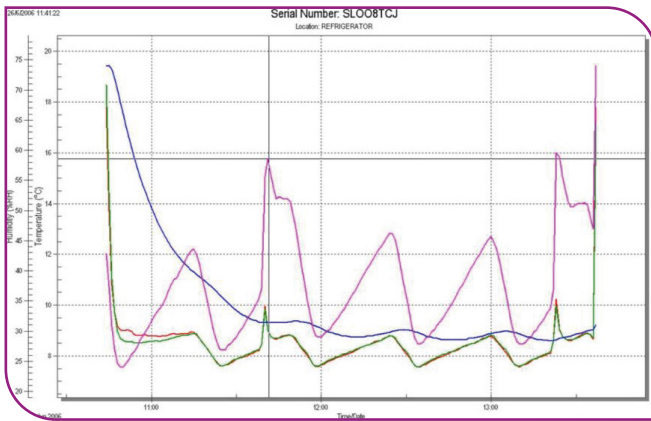
Do you require any technical support? Setting up our data loggers using our USB programming cable and our intuitive software is really very simple. However, free technical support can be provided either by emailing support@signatrol.com or over the phone by speaking to one of our engineers.

That's it. It really is that simple!

TempIT SOFTWARE

Miniature Battery Powered Temperature Data Logging for Process Monitoring.

TempIT is our high security configuration and data analysis software. TempIT provides an inviolate record of your data that cannot be tampered with or manipulated in any way, and is available in two versions, TempIT-LITE and TempIT-PRO. In many applications, especially when data loggers are used for monitoring storage and transport conditions of drugs, pharmaceuticals, blood products or any critical or important items or cargo, it is essential that the data is a true and faithful record of the actual conditions the sensitive items have been exposed to. The TempIT-PRO software is often used as part of an FDA 21 CFR Part 11 validated system or, as part of a hazard analysis & critical control point (HACCP) based food safety programme.



SOFTWARE SPECIFICATIONS

| | TempIT-LITE | TempIT-Pro |
|----------------------------------------------------------|-------------|------------|
| Issuing of SL50 Series Data Loggers | ● | ● |
| View and set owner and user manifest | ● | ● |
| View graph | ● | ● |
| X-Y Zoom | ● | ● |
| Auto scale of Y axis | ● | ● |
| Change units between °C and °F | ● | ● |
| Print Graph in PDF format | ● | ● |
| Export Data in CSV format | | ● |
| View Data in a tabular format | | ● |
| Open multiple logger files and overlay on the same graph | | ● |
| Add comments to the graph with pointers | | ● |
| “Show Measure” function to calculate rate of change | | ● |
| Automatic Calculation of FO, AO, PU's | | ● |
| Automatic Calculation of Mean Kinetic Temperature (MKT) | | ● |
| Carry out “time above” temperature / value test | | ● |
| PDF Print out includes all data in tabular format | | ● |
| Can be used as part of a FDA21 CFR Part 11 system | | ● |

TempIT-LITE (Free of Charge)

This enables all SL50 series miniature button data loggers to be issued with all relevant parameters set and data retrieved and displayed using a powerful graphics engine.

TempIT-PRO

This offers all the functionality of the TempIT-LITE version with the following enhancements:

- Export to spreadsheet function in CSV format
- View data in a tabular format
- Multi-trace graphing i.e. displays several data graphs on the same axis at the same time.
- Automatic calculation of mean kinetic temperature (MKT)
- Automatic Calculation of AO, FO and Pasteurisation Units (PU's)
- Add comments to graphs
- Carry out ‘time above’ temperature / value test

TempIT-PRO licences are available to purchase for any number of users and is a one-off fee with no ongoing annual subscription costs. All future updates are free of charge.

TempIT-PRO is available in three versions:

- Single machine licence: This enables TempIT-PRO to be installed on a single machine.
- Multi machine licence. This enables TempIT-PRO to be installed on up to 10 machines/PC's.
For more than 10 users, please contact Signatrol.
- USB key licence: This enables TempIT-LITE to be installed on as many machines as required. To upgrade LITE to PRO on any machine, you simply insert the USB key into an available USB port. The software reverts back to the LITE version once the USB key is removed.

SL56T / SL56T-A - MINIATURE BUTTON DATA LOGGER TECHNICAL SPECIFICATIONS



SL56T

Temperature Only
Large 125,440 Readings Memory
-40°C to +85°C

Accuracy:
±0.5°C from -30°C to +70°C

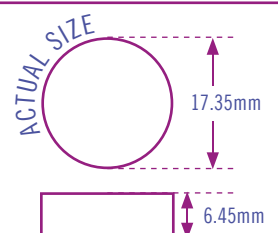


SL56T-A

Temperature Only
ISO UKAS 17025 traceable cal-cert
-40°C to 85°C

±0.14°C from 0°C to +40°C
Other Calibration Ranges
Available

| PRODUCT | SL56T / SL56T-A |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| POWER SUPPLY | Internal, non-replaceable 3.0V lithium battery |
| BATTERY LIFE | Approximately 4 years, 2 months at +20°C see battery life calculator on our website www.signatrol.com |
| SAMPLING | 5 minutes to 24 hours |
| MEMORY SIZE | 125,440 measured values with 8 bit resolution or 62,720 measured values with 11 bit resolution |
| RESOLUTION | 0.5°C (8 bit) or 0.07°C (11 bit) |
| RESPONSE TIME | Approximately 90 seconds (in air) |
| DIMENSIONS | Ø 17.35mm × 6.45 mm |
| WEIGHT | 3.3g |
| HOUSING MATERIAL | 305 stainless steel |
| PROTECTION CLASS | IP55– splash proof; IP68– enclosures for higher protection classes are available (see pages 5 & 6) |
| READING PROTECTION | All readings stored in non-volatile memory. Readings can be retrieved even after battery depletion |
| PC CONNECTION | USB interface |
| TIME, MAX. DEVIATION | ± 1 minutes per month @ +25°C |
| RECORDING MODES | Stop when full |
| START TIME DELAY | Max. 12 months at 5 minute measurement frequency |
| START ON ALARM | Yes |
| CALIBRATION | Annual re-calibration reminder function setting |



SL50 SERIES - MINIATURE BUTTON DATA LOGGER ACCESSORIES

We offer a range of waterproof enclosures that have been developed to protect the SL50 series in harsh environments. These are recommended when the data logger is likely or expected to be subjected to pressure variations or to come into contact with fluids.



SL50-ACC01

Stainless steel enclosure that protects the data loggers in harsh environments or where there is likely to pressures in excess of 100mB.

| | |
|-------------------------------|-----------------------------------------------------------|
| MATERIAL | 316 Stainless Steel |
| PROTECTION | Up to 10bar or 100m submersion |
| RESPONSE TIME IN WATER | 73 s (61% step change) 142 s (10% to 90% step change) |
| RESPONSE TIME IN AIR | 373 s (61% step change) 717 s (10% to 90% step change) |
| O-RING | Silicone (VMQ) FDA 70 ShA |



SL50-ACC03

Lightweight enclosure constructed from Polyphenylene Sulphide (PPS Ryton), that protects the data logger at pressures up to 1 bar or depths of 10 m. Maximum operating temperature 125°C.

| | |
|-------------------------------|-----------------------------------------------------------|
| MATERIAL | Polyphenylene Sulphide |
| PROTECTION | Up to 1bar or 10m submersion |
| RESPONSE TIME IN WATER | 118 s (61% step change) 237 s (10% to 90% step change) |
| RESPONSE TIME IN AIR | 407 s (61% step change) 827 s (10% to 90% step change) |
| O-RING | Silicone S500-70 FDA Approved |



SL50-ACC06 SILICONE ENCLOSURE (Sinking)

Two part silicone enclosure to protect all SL50 series data loggers. Available in packs of five or ten

| | |
|-------------------------------|-----------------------------------------------------------|
| MATERIAL | Silicone Rubber |
| PROTECTION | Up to 0.5bar or 5m submersion |
| RESPONSE TIME IN WATER | 90 s (61% step change) 243 s (10% to 90% step change) |
| RESPONSE TIME IN AIR | 270 s (61% step change) 575 s (10% to 90% step change) |



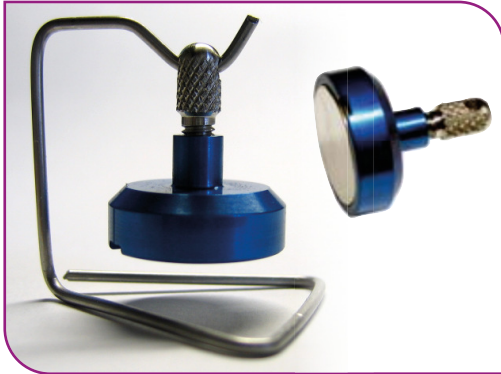
SL50-ACC08 SILICONE ENCLOSURE (Floating)

A coloured waterproof enclosure with blue handle for all SL50 series data loggers. Supplied in packs of five or ten.

| | |
|-------------------------------|------------------------------------------------------------------------|
| MATERIAL | Silicone Rubber |
| PROTECTION | Up to 0.5 Bar or 5m submersion |
| RESPONSE TIME IN WATER | 63% Step Change: 90 Seconds 10% to 90% Step Change: 243 Seconds |
| RESPONSE TIME IN AIR | 63% Step Change: 270 Seconds 10% to 90% Step Change: 545 Seconds |
| WEIGHT | 5g excluding data logger |

SL50 SERIES - MINIATURE BUTTON DATA LOGGER ACCESSORIES

We offer a range of mounting options that have been developed to securely fix the SL50 series in many different applications.



SL50-ACC10

Constructed from blue anodised aluminium, the SL50-ACC10 is a fast response enclosure for use with all SL50 data loggers.

| | |
|-------------------------------|------------------------------------------------------------|
| MATERIAL | Hard Anodised Aluminum Casing 316 Stainless Steel Screw |
| PROTECTION | Up to 3.5bar or 35m submersion |
| RESPONSE TIME IN WATER | 28 s (61% step change) 60 s (10% to 90% step change) |
| RESPONSE TIME IN AIR | 117 s (61% step change) 238 s (10% to 90% step change) |
| O-RING | FDA Food Grade EPDM |



SL50 - WALL MOUNTING HOLDER (Pack of 5)

Pack of five wall mount holders for all SL50 series data loggers. Ideal for fixing to walls, racking or pallets.



SL50-CLIP (Pack of 5)

The SL50-CLIP is a small black, plastic key fob that will accept any of the SL50 series data loggers. Can be held in place with a single screw or tie wrap.



SL50-ACC02 - RUBBERISED HOLDER WITH MAGNET

A strong self-adhesive magnet suitable for use with all SL50 series button data loggers for quick and easy fixing.

SL50 SERIES - MINIATURE BUTTON DATA LOGGER ACCESSORIES

We offer a range of mounting options that have been developed to securely fix the SL50 series in many different applications.



A self-adhesive magnet suitable for use with all SL50 series button data loggers for quick and easy fixing.



SL50 INTERFACE-USB

USB communication interface for connecting all SL50 series data loggers to a computer.

CALIBRATION & RE-CALIBRATION SERVICE

We can provide you with an individual UKAS ISO 17025 traceable calibration certificate with each of your new data loggers as an option. In addition, we can also provide you with a 3-day turnaround UKAS ISO 17025 traceable re-calibration service for your existing data loggers. We provide our standard 3-point default re-calibration or, your own custom 3-point calibration range at no additional cost. Extra points can be added at an additional cost if required. Please contact calibration@signatrol.com for your calibration requirements.

STARTER KITS

Starter kits are available providing you with everything you need to get going.

THE KIT INCLUDES:

- 2 or 5 data loggers of your choice
- Each data logger comes with an individual 3-point UKAS traceable calibration certificate
- TempIT-PRO software
- A USB communications / programming cable

Every effort has been taken to ensure the accuracy of this specification, however we do not accept responsibility for damage, injury, loss or expense resulting from errors and omissions, and we reserve the right of amendment without notice.

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