Signatrol.com
Data Logging Solutions

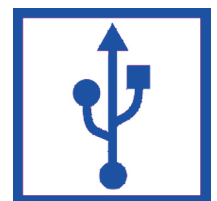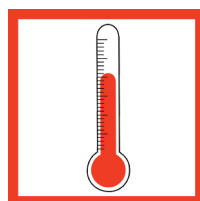# SL50 Series
Miniature Temperature & RH Data Loggers

- -40°C to +140°C Measuring Range
- ±0.5°C Accuracy
- Up to 10 Years Battery Life @ 20°C
- Temperature & Relative Humidity Versions
- Up to 8,000 Readings

10yrs

SL50 Series

Miniature Temperature & Relative Humidity Data Loggers

The SL50 series of miniature data loggers comprises of four data loggers:

The SL51T measures temperature from -40˚C to +85˚C with an accuracy of ±1.0˚C.

The SL52T operates over the same temperature range of the SL51T, -40˚C to +85˚C but has an improved accuracy of ±0.5˚C.

The SL53T operates over the range 0 to +125˚C with an accuracy of ±0.5˚C

The SL54TH measures temperature over the range -40˚C to +85˚C and also measures relative humidity from 0 to 100%

SL55T-A measures from +15˚C to +140˚C with an accuracy of ±0.5˚C from +80˚C to +140˚C

All models are available supplied complete with UKAS traceable calibration certificates. These models are identified with the -A suffix and in the case of the SL53T-A and the SL54TH-A, are calibrated to give an improved accuracy over the "standard" version.

All members of the SL50 series are fully compatible with our TempIT software which is available as a free download from the Signatrol website.

The SL50 series data loggers connect to the computer using the USB interface (sold separately)

There are also a range of accessories available to assist with mounting or protection.

Specifications - SL51T / SL51T-A

Power	Internal Battery
Battery Life	Typically 10 years at 20°C. Detailed battery life calculator is available on the Signatrol website
Temperature Range	-40°C to +85°C -40°F to +185°F
Accuracy	±1.0°C from -30°C to +70°C ±1.3°C Outside of this range.
Resolution	0.5°C
Number of Readings	2048
IP Rating	IP55 'Protected against ingress of dust and protected against low-pressure jets of water' Protective enclosures are available.
Sample Rate	1 minute to 255 minutes
Delayed Start	Yes, up to 45 days, 1 minute resolution
Software Alarms	Yes
Material	305 Stainless Steel
Warranty	1 Year
Dimensions	17mm (Diameter) x 6mm (High)
Certifications	FDA 21 CFR Part 11 EN12830 Meets UL#913 (4th Edit.); Intrinsically Safe Apparatus, approval under Entity Concept for use in Class I, Division 1, Group A, B, C, and D Locations EEx ia IIC T4 (-40°C to +80°C)

Specifications - SL52T / SL52T-A

Power	Internal Battery
Battery Life	Typically 5 years at 30°C. Detailed battery life calculator is available on the Signatrol website
Temperature Range	-40°C to +85°C -40°F to +185°F
Accuracy	±0.5°C from -10°C to +65°C ±1.0°C Outside of this range.
Resolution	Low res mode (0.5°C) Hi res mode (0.07°C)
Number of Readings	8192 low res mode 4096 high res mode
IP Rating	IP55 'Protected against ingress of dust and protected against low-pressure jets of water' Protective enclosures are available.
Sample Rate	2 seconds to 24 hours 2 seconds to 1 minute in 5 second steps 1 minute to 1 hour in 1 minute steps 1 hour to 24 hours in 1 hour steps
Delayed Start	Yes, Up to 1 Year 1 minute resolution
Software Alarms	Yes
Material	305 Stainless Steel
Warranty	1 Year
Dimensions	17mm (Diameter) x 6mm (High)
Certifications	See SL51T / SL51T-A

Specifications - SL53T / SL53T-A

Power	Internal Battery
Battery Life	Typically 1 year at 80°C. Detailed battery life calculator is available on the Signatrol website
Temperature Range	0°C to +125°C 32°F to +257°F
Accuracy	**SL53T:** ±0.5°C from +20°C to +75°C ±1.0°C from 0°C to +20°C and +75°C to +115°C ±1.5°C from +115°C to +125°C **SL53T-A:** ±0.2°C from +80°C to +125°C
Resolution	Low res mode (0.5°C) Hi res mode (0.07°C)
Number of Readings	8192 low res mode 4096 high res mode
IP Rating	IP55
Sample Rate	2 seconds to 24 hours 2 seconds to 1 minute in 5 second steps 1 minute to 1 hour in 1 minute steps 1 hour to 24 hours in 1 hour steps
Delayed Start	Yes, Up to 1 Year 1 minute resolution
Software Alarms	Yes
Material	305 Stainless Steel
Warranty	1 Year
Dimensions	17mm (Diameter) x 6mm (High)
Certifications	See SL51T / SL51T-A

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Specifications SL54TH / SL54TH-A

Power	Internal Battery
Battery Life	Typically 5 years at 10 minute sample rate. Detailed battery life calculator is available on the Signatrol website
Temperature Range	-40°C to +85°C - Storage -40°F to +185°F -20°C to +85°C - Operating -4°F to +185°F
Temperature Accuracy	±0.5°C from -10°C to +70°C
Temperature Resolution	Low res mode (0.5°C) Hi res mode (0.07°C)
Relative Humidity Accuracy	SL54TH: ±5%RH SL54TH-A: ±2%RH
Relative Humidity Resolution	Low res mode: 0.64%RH High res mode: 0.04%RH
Number of Readings	8192 low res mode 4096 high res mode
Response Time	Response times in moving air. 63% time constant Temperature: 1 Min 29 Seconds Relative Humidity: 3 Min 44 Seconds 10-90 % time constant Temperature: 2 Min 50 Seconds Relative Humidity: 9 Min 54 Seconds
Sample Rate	2 seconds to 23 hours
Delayed Start	Yes, Up to 1 Year 1 minute resolution
Software Alarms	Yes
Material	305 Stainless Steel
Warranty	1 Year
Dimensions	17mm (Diameter) x 6mm (High)
Certifications	See SL51T / SL51T-A

Specifications SL55T-A

Power	Internal Battery
Battery Life	Typically 150 hours accumulative or 150 cycles in excess of +85°C.
Temperature Range	+15°C to +140°C +59°F to +284°F
Temperature Accuracy	±0.5°C from +80°C to +140°C
Temperature Resolution	Low res mode (0.5°C) Hi res mode (0.07°C)
Number of Readings	8192 low res mode 4096 high res mode
Response Time (In Circulating Air)	63% step change: 90 seconds 10% to 90% step change: 180 seconds
Sample Rate	1 second to 24 hours 1 second to 1 minute in 5 second steps 1 minute to 1 hour in 1 minute steps 1 hour to 24 hours in 1 hour steps
Delayed Start	Yes, Up to 1 Year 1 minute resolution
Software Alarms	Yes
Material	305 Stainless Steel
Warranty	1 Year
Dimensions	17mm (Diameter) x 6mm (High)
Certifications	See SL51T / SL51T-A

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Order Codes

Part Number	Description
SL51T	Temperature Data Logger -40°C to +85°C
SL51T-A	Temperature Data Logger supplied with 3 point UKAS traceable calibration certificate
SL52T	Temperature Data Logger -40°C to +85°C
SL52T-A	Temperature Data Logger supplied with 3 point UKAS traceable calibration certificate
SL53T	Temperature Data Logger 0°C to +125°C
SL53T-A	Temperature Data Logger supplied with 3 point UKAS traceable calibration certificate
SL54TH	Temperature and relative Humidity Data Logger
SL54TH-A	Temperature And Relative Humidity Data Logger supplied with 3 point UKAS traceable calibration certificate
SL55T-A	+15°C to +140°C Temperature Data Logger supplied with 3 point UKAS traceable calibration certificate
SL50-ACC-01	Stainless Steel protective enclosure
SL50-ACC-02	Rubberised, Magnetic Holder
SL50-ACC-03	Plastic Protective Enclosure
SL50-ACC06-PK5	Pack of five silicone enclosures (Sinking)
SL50-ACC06-PK10	Pack of 10 silicone enclosures (Sinking)
SL50-ACC08-PK5	Pack of five silicone enclosures (Floating)
SL50-ACC08-PK10	Pack of 10 silicone enclosures (Floating)
SL50-INTER-FACE-USB	USB Interface Lead
SL50-ACC-10	Fast Response Enclosure
SL50-CLIP	Key-fob type clip (Pack of 5)
SL50-WALL	Wall / Pallet Mount (Pack of 5)

Part Number	Description
TEMPIT-LITE	FREE Software Download from the Signatrol website
TEMPIT-PRO-4	Enhanced Software
TEMPIT-PRO-DONGLE4	USB Key version that activates the PRO functions when the key is present in the USB slot.
TEMPIT-MULTI-10	10 individual TEMPIT-PRO licences.

There are also a range of cost effective starter kits available containing either two or five data loggers, the TempIT-Pro software and a USB interface lead. Please see the website or contact the sales office for more details.

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