

Satellite50-TK

Data logger for thermocouple temperature measuring

Description

The **Mitec Satellite50-TK** is a compact, single-channel data logger for temperature measurement using a type K thermocouple sensor. Satellite50-TK is designed for professional applications and is highly accurate with a wide measurement range.

Practical and compact, the Satellite50-TK has a robust case of extruded aluminium. It is powered by a standard 1.5V battery that is simple and cost-effective to use.

Logged data can be analysed in Mitec WinSat, WinLog or Monitor software. All are Windows-based.

The Satellite50-TK is ideal for precision monitoring in applications such as temperature lapse in heating and cooling systems, in industrial or combustion processes, production plants, residential buildings or transport. Applications typically include research, troubleshooting, operation and maintenance.

Instruments in the Mitec Satellite series are manufactured in Sweden by Mitec Instrument.

Advantages

- Thermocouple type K
- Powered by a standard 1.5V battery
- Non-volatile data memory: 16,000 values
- Broad measuring range : -100°C to +1200°C
- High accuracy and resolution
- All Mitec analysis programs can be used
- Large range of sensors
- Made in Sweden
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Function

Mitec Satellite50-TK is powered by a single standard 1.5V battery, which reduces operating costs to one tenth of lithium-battery alternatives. The instrument's low energy usage means the battery will last for up to one year depending on usage.

The Mitec Satellite50-TK monitors temperature in the ranges: -100° to 1200°C. The instrument is available in two models with measuring range to either 600°C or 1200°C for best resolution.

Sensors are connected using a standard "mini" thermocouple contact plug so that the logger can be used with all available type K thermocouple sensors.

The built-in memory in the Satellite50-TK ensures that data will not be lost if the battery runs out. The memory can store up to 16,000 measurements.

Data is automatically coded with instrument identification to ensure full traceability and conformance to ISO9000 standards.

Mitec Satellite data loggers are part of the Mitec professional field monitoring system. Data can be analysed with Mitec WinSat analysis software or Mitec WinLog or Monitor software.



Satellite50-TK (sensor not included)

Technical Data SatelLite50-TK

GENERAL

Number of measuring channels	1.
Memory size	32k non-volatile data memory (EEPROM). Resolution storage: 16 bits.
Number of measured values	16,000.
Clock	Crystal controlled, date and time. Automatically loaded from computer.
Registration interval	62.5ms (16Hz), 125 ms (8 Hz), 250 ms (4 Hz), 500 ms (2 Hz), 1, 2, 5, 10, 15, 30sec, 1, 2, 5, 10, 15, 30min, 1, 2, 4, 6, 8, 12, 24hours.
Measuring frequency	Selection for each registration interval.
Power supply	1.5V battery LR6 (alkali) or Lithium size AA
Battery life span	From 1 month to 1 year. (depending on registration interval, measuring time and ambient temperature).
Ambient temperature	-20 to +60 °C. Non condensing.
EU standard	EN50081-1, EN50081-2, EN50082-1.

INPUTS

Type	Temperature thermocouple type K.
Resolution	12 bits exclusive sign (stored with 16 bits).
Linearising	Automatic according to IEC 584-1 1995.
Measuring range SAT50-TK/6	-100 to 600 °C (instrument max 60 °C).
Measuring range SAT50-TK/12	-100 to 1200 °C (instrument max 60 °C).
Calibration	Simulated thermocouple. Reference traceable to national standard RMP01.

Thermocouple input

Resolution (°C)	0.12 °C for SAT50-TK/6. 0.3°C for SAT50-TK/12.
Accuracy @ 25 °C instrument temperature	< ± 0,1% (< ± 0,3 °C for SAT-TK/6 and < ± 0,8 °C for SAT-TK/12) Note: Accuracy for CJC and external sensor is to be added.

Cold junk compensation (CJC)

Measuring range	-40 °C to 120 °C (Instrument max -20 to 60 °C).
Accuracy @ 25 °C instrument temperature	Max ± 0.3 °C within instruments working area. Internal sensor included.

FUNCTIONS

Start and stop condition	Adjustable. Time, manual and memory full stop.
Storage method	Mean value, adjustable number of measurements per registration.
Reading and setting	Via PC and one of the Mitec programs WinSat, WinLog or Monitor.

COMMUNICATION

Computer	RS232, 19200 baud. Control signal from the computer.
Indication	LED. One flash every 4th second while logging is in progress.

MECHANICS

Contact device, computer	4 pole modular contact, 4/4.
Contact device, sensor	Chassis mounted "mini" connector for thermocouple type K.
Casing	Powder-coated extruded aluminium. Size 75x 60x33 mm.
Protection class	IP65, (excluding contact devices).
Weight	130g including battery.

Ordering information

Article number:	Sat50-TK/6 Measuring range: -100°C to 600 °C Sat50-TK/12 Measuring range: -100°C to 1200 °C
Delivery includes:	Mitec SatelLite50-TK data logger with battery Manual in English
Accessories:	Mitec WinSat, WinLog or Monitor analysis program PC-cable LPC-6/1 for PC Sensor: Any model of type K thermocouple with mini connector