TEMPSENS

Highly accurate and fast, comes in a rugged housing to provide high operational safety in harsh industrial environments

CE

Smartrack 10

The new age data logger Smartrack 10 is constructed using a solid block of aluminium and is perfect for monitoring your day to day temperature requirements. It comes with 10 channels of thermocouples of various types namely K, J, E and T providing a wide temperature measurement range and upto 50,000 temperature readings per channel with date and time. It receives its power from 3 AA sized Ni-Mh rechargeable batteries which gives the user a hassle free operation and there is also provision for non-rechargeable battery for higher temperatures and longer duration. These batteries can be recharged using the USB option provided on the logger body. The device's communication can be established using the same process over INFRALOG software. By using this software a variety of functions can be performed which include retrieving the data, programming the logging parametrers and analysis of the stored data.

Technical Specifications

Specifications	Smartrack 10
No. of Channel	10
Thermocouple Type	Universal (K, E, J, T, N, R, S, B)
Accuracy	±0.5°C(for sampling interval ≤ 1sec.)
Resolution	0.1°C
Reference Junction Compensation	Internal
Memory Size	50000 readings per channel with date & Time
Sample Interval	100 msec to 1 hour
Communications	USB (Wireless RF telemetry optional)
Max. Operating Temperature	70°C (Rechargeable) 100°C (Non-Rechargeable)
Battery	Rechargeable : NiMH (3 nos, AA size) Non-Rechargeable : Lithium (3 nos, AA size)
Weight	500 gm
Parameterising via Software	Type selection, no of channel selection, Sampling interval, date and time setting etc.
LED Indications	Charging, low Battery, Communication, Start, Stop etc.

Drawing
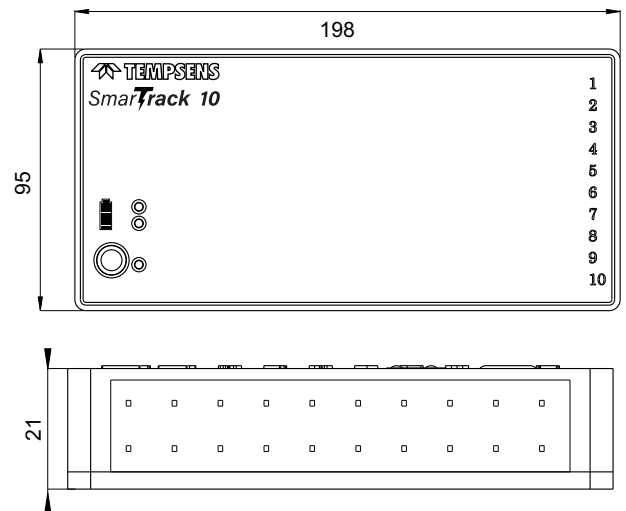
Accessories

TBB

Thermal & Cable Solutions

Thermal Barrier Box (TBB) for Temperature Data Logger

Data logger and thermal barriers together make a temperature profiling system. Thermal barriers provide essential protection for the data logger electronics against the high and low temperatures in the furnaces.

At Tempsens Instruments, We have designed and developed thermal barriers made with durable stainless steel for long and robust usage. Thermocouple exits with replaceable wear-strips to extend thermal barrier life and minimize maintenance cost.

The design of thermal barriers consists of majorly layer of insulated porous material, glass wool and a layer of phase change material (PCM). The main objective of micro porous insulated layer is to slowdown the heat conduction. The PCM maintains the internal temperature. While designing the thermal barrier optimum thickness of the layers has been considered such that maximum temperature drop can be obtained. The thermal barrier box should have rounded edges to account thermal stresses.

It is essential to consider your ACTUAL time and temperature values when specifying a barrier. customer can select the type of barrier needed according to the requirements from the table given in the table 01 and 02.

Table 01

Compatible With Smartrack 10 (198mm*95mm*21mm)					
Thermal Barrier	Length including handles	Width	Height	Weight	Heat Sink
TBB-180	500mm	240mm	180mm	25kg	Yes
TBB-250	550mm	360mm	250mm	35kg	Yes

*The maximum inside temperature of the thermal barrier box is 80°C.
*Place the heat sinks in refrigerator before use for better performance of thermal barriers.

Table 02

Thermal Duration(Cycle Time)					
Thermal Barrier	200°C	300°C	500°C	800°C	950°C
TBB-180	9 hrs.	4 hrs.	45 Min.	-	-
TBB-250	12 hrs.	8 hrs.	5 hrs.	2 hrs.	100 Min.

*Customized size barriers are available on request depending on max. temperature and time duration.
*Size and dimension of barriers may change depending on application without notice

Features

- Maximum temperature can be reached upto 950°C.
- Stainless steel casing(SS310) which provides resistance to oxidation at high temperatures.
- Replaceable wear strips to minimize maintenance cost.
- To avoid thermal stresses, rounded edge barriers are designed.

Infralog Software

Infralog software helps not only to collect data but also transforms it to information. This information allows you to analyze your data efficiently and optimize your process. For

- Compare data of multiple runs.
- Export & Import data in excel format.
- One page PDF report
- Calibration.
- Battery health.
- Multiple triggering modes.
- In-Built product manuals.

better analysis a variety of functions are provided where user can change the parameters according to their need.

Application

- Powder Coating/Paint Curing of products.
- Heat treatment process in glass and steel industries.
- Industrial castings heat treatment process.
- Temperature uniform surveying of furnaces.
- Roof tiles roller hearth kilns.

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