

DTS 5100 M10

Product Data Sheet



Distributed Temperature Sensing System

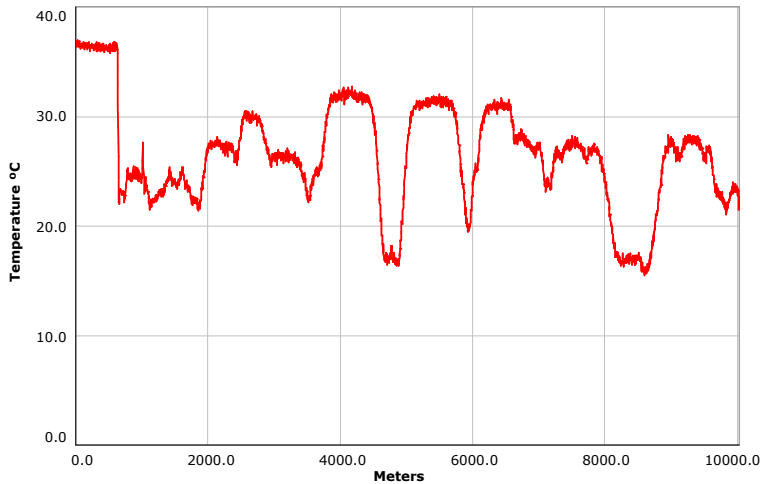


Rack-mount version

DTS 5100



Portable version



Typical temperature trace from DTS Manager software

Overview

SensorTran's DTS 5100-M10 is a robust and durable state-of-the-art Distributed Temperature Sensing (DTS) system. In conjunction with standard multimode optical fiber probes it provides fast, reliable temperature measurements up to a length of 10km with high resolution and accuracy.

The DTS 5100 range has an integral Ethernet-ready computer, pre-loaded with DTS Manager software, with effective networking and open communication capabilities.

The system boasts a wealth of standard and optional modules which provide:

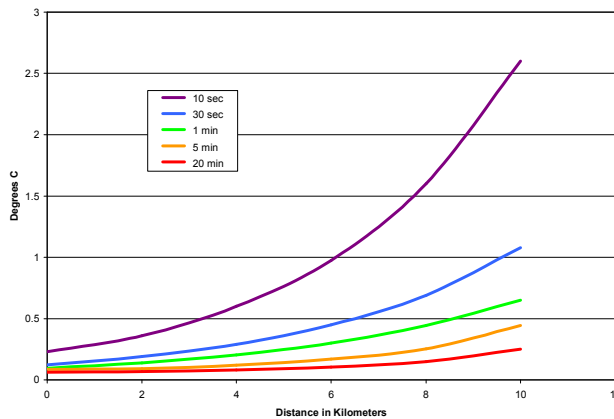
- autonomous data collection and storage
- multiple zones and alarms
- flexible data, alarm and remote control/access communications
- self-diagnostics, auto start & safe shut-down
- simple and intuitive calibration, configuration and operation
- application-specific graphical data visualization and user-interfaces
- easy and fast installation with modular cabinet packages including power back-up, displays and keyboards

Product Performance

Spatial Resolution	1.0 meters [3.2 feet] across entire Measurement Range
Sampling Resolution	down to 0.5 meters [0.25 meters optional] across the entire Measurement Range
Temperature Resolution	below 0.1°C [0.18°F]
Accuracy	down to +/- 0.5°C [+/- 0.9°F]
Measurement Speed	dependent upon Temperature Resolution (see Performance Chart)
Measurement Range	up to 10km [6.2 miles] per channel (single-ended or double-ended configuration)
Measurement Temperature Range	-190°C to +700°C [-310°F to +1292°F]

Performance Chart

Temperature Resolution (1m spatial resolution with 0.5m sampling)



All data shown for single-ended measurements (worst case) based on 20 pt. standard deviation

The DTS 5100 has a world-beating signal-to-noise ratio which, together with its advanced data processing techniques, provides the fastest measurement speeds in the industry.

Because of shorter read times, one DTS 5100, with or without multiple channels, can provide the same monitoring coverage of several less efficient DTS units with better overall system measurement time.

Product Specifications

Modular Package	19" rack-mount and fully integrated portable versions both with on-board network-enabled computer as standard
Channels	up to 16 integral channels (9 for portable version); up to 50 channels with external module
Software	DTS Manager running on Windows® XP with Microsoft® Office Basic pre-loaded as standard. Application-specific Software Modules also available to provide graphical user-interface
Communications	Ethernet, USB and RS232 as standard. Modbus, modem, OPC, RS485, GPIB, Relays, etc as add-on modules
Remote Control and Data Access	Full remote control and data access capability
Diagnostics	Extensive built-in self-diagnostics and self-start-up
Data Storage	Integral 100GB hard disk as standard, expandable to 750GB and recordable CD-RW / DVD-ROM drive
Data Zones and Alarms	Unlimited zones dependent upon RAM. Each zone configurable for multiple data alarms: high-high, high, low, low-low, rate of change, and temperature anomaly
Optical Fiber Compatibility and Configuration	Multimode GI 50/125µm (62.5µm also compatible); Configurable as single-ended or double-ended
Optical Budget	24+dB (two-way)
Laser Safety	Class 1 to IEC 60825-1
Operating Environment	Temperature: 0°C to +40°C [+32°F to 104°F] Humidity: <90% RH, non-condensing
Unit Dimensions	Rack-mount: 43 x 18 x 51cms [17 x 7 x 20"] Portable: 44 x 34 x 24cms [17 x 13 x 9"]
Unit Weights	Rack-mount: 20.4 Kg [45 lbs] Portable: 15.9 Kg [35 lbs]
Power	120/240VAC; 50/60Hz; 85W (120/240VAC; 50/60Hz)
Certification	FCC 47 CFR, Part 15, Subpart B, Class A; ANSI C63.4, Class A; Electronic Compatibility (2004/108/EC) EN 61000 3-2, 3-3; EN 61000 4-2, 4-3, 4-4, 4-5, 4-6, 4-8, 4-11; EN 61000 6-2, 6-4

SensorTran has made every effort to ensure information contained in this document is accurate at the time of printing, however, product specifications and features are subject to change without notice.

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