

Distributed Temperature Sensing System

Overview

Astra™ is a compact and reliable Distributed Temperature Sensing (DTS) system that offers fast and repeatable measurements. Astra™ is configured to be used with standard multimode optical fiber and supports up to 16 internal channels in a 3U rackmount design.

The Astra™ system has an integral single board computer, pre-loaded with SensorTran's DTS Commander™ software. DTS Commander™ provides for configuration, calibration, communication, alarm, autonomous operation, and basic data display functions. The software also allow the user to assign an unlimited number of alarm zones. Each of these zones is capable of reporting a variety of alarm conditions. The DTS Commander™ is available in several language options.

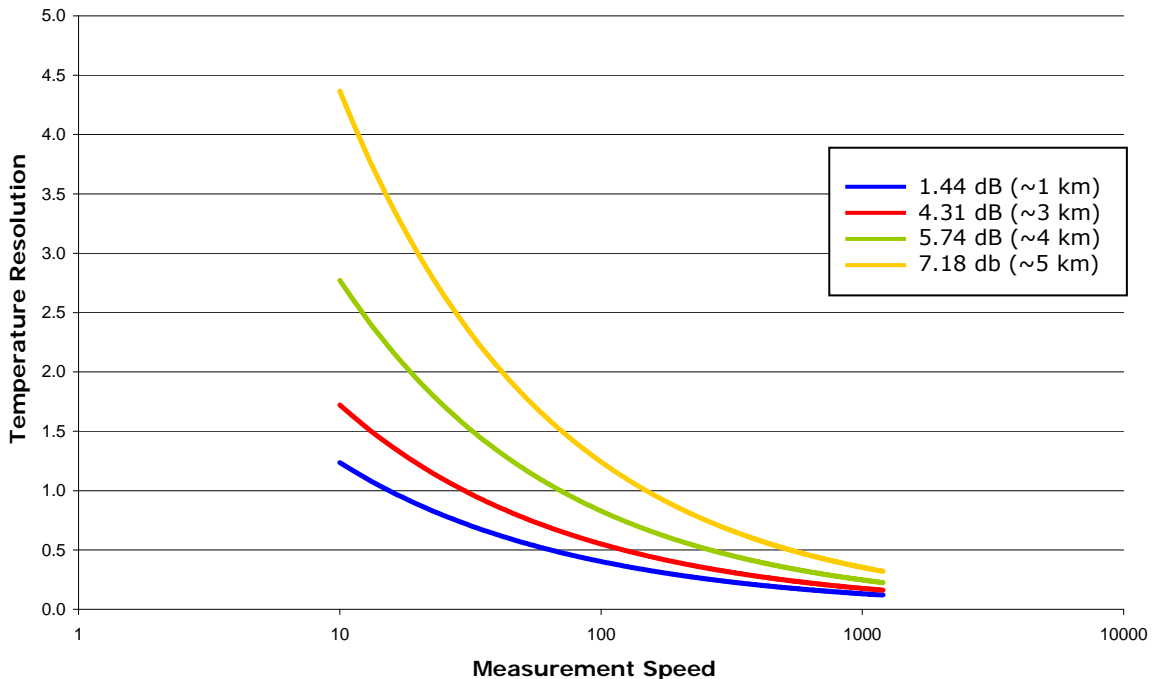
SensorTran's DataViewer™ is an optional software product that provides a graphical visualization of the temperature data. The DataViewer™ is automatically configured from the settings within SensorTran DTS Commander™ software and requires no additional setup. The software simultaneously displays multiple temperature profiles, summary temperature data, and alarm status information for each zone. Recorded data can also be replayed using the powerful Data Control facility to view historical events at various speeds.



Astra™ DTS 3U Rackmount

Astra™ can also be provided with the following optional Communication Modules: Modbus, DNP3, and Relays.

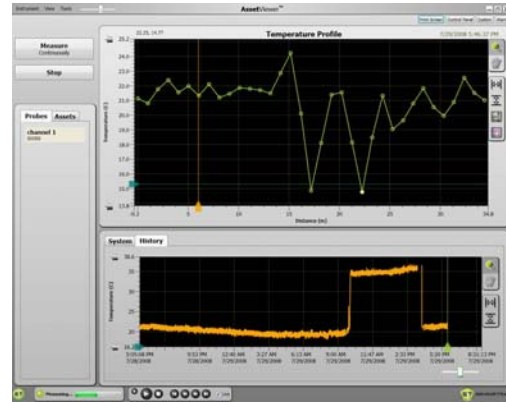
Astra™ DTS Performance
(0.5m sampling resolution, 1m spatial resolution)



Performance Features

Sample Screenshot

Spatial Resolution	1.0 meters [3.2 feet] across entire Measurement Range
Sampling Resolution	0.5 meters across entire Measurement Range
Temperature Resolution	below 0.2°C [0.36°F] dependent upon Measurement Speed
Accuracy	+/- 0.75°C [+/- 1.35°F]
Measurement Speed	dependent upon Temperature Resolution (ask your salesperson)
Measurement Range	up to 5km [3.1 miles] per channel (single or double-ended configuration)



SensorTran DTS Commander™

Product Specifications	
Processor & Data Storage	Single-board network-enabled single CPU processor with 160GB hard disk storage as standard
Channels	Up to 16 integral channels; expandable with external module
Software	SensorTran DTS Commander™ software (available in a selection of multiple languages) running on Microsoft Windows XP. SensorTran DataViewer™ software available as option
Communications	2 x TCP/IP, 2 x RS232, 1 x DB9, 2 x USB, 1 x VGA, 1 x Keyboard. External Modbus, DNP3 and relay communication modules are optional for Astra™
Remote Access and Control	Full remote control and data access capability
Diagnostics	Advanced and extensive self-diagnostics with soft shut-down and self-start functionality
Data Zones and Alarms	Unlimited zone configuration. High temperature and rate of temperature change alarms configurable for each zone as standard
Optical Fiber Compatibility	Multimode GI 50/125µm (62.5µm also compatible); Configurable as single-ended or double-ended
Optical Budget	8.0dB (one-way)
Laser Safety	Class 1 to IEC 60825-1
Operating Environment	Temperature: -10°C to +50°C [+14°F to 122°F] Humidity: <90% RH, non-condensing
Unit Dimensions	3U standard 19" rackmount 483mm (W) x 451mm (D) x 134mm (H) [19" (W) x 17.75" (D) x 5.25" (H)]
Unit Weight	Approximately 7 kg (15.4 lbs)
Power	120/240VAC; 50/60Hz; 24VDC (optional); 60W average power draw
Certification	FCC 47 CFR, Part 15 Subpart B Class A; ANSI C63.4 Class A; Electromagnetic 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; EN61000 6-2, 6-4; CE Marked

SensorTran has made every effort to ensure that information contained in this document is accurate at the time of printing, however, product specifications and features are subject to change without notice. As this is a draft version of this data sheet, significant changes are reasonable to expect, although the performance metrics will meet or exceed the values indicated in this document.

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