SENTINEL DTS™ - DATA SHEET DTS-SR, MR, LR & XR

TENDEKA

INDUSTRY LEADING PERFORMANCE

The Sentinel DTS™ is the most technologically advanced distributed temperature sensing system today.

The Sentinel range of DTS units, lead the way in terms of performance in DTS technology, with temperature resolutions as fine as 0.004°C achieved in the field, the fastest measurement speeds available and the greatest coverage of up to 30km from a single channel. The self contained Sentinel DTS surface system operates with an intuitive user interface allowing fast and simple calibration and configuration. The system has been designed with safety in mind and has been tested to some of the industry's most rigorous standards.

Features	Benefits
• High performance	Industry leading temperature resolution as fine as 0.004°C enables interpretation in the most difficult applications.
• Fine spatial resolution	1m spatial resolution allows accurate location of changing temperature events.
• Fast measurement speed	Measurements as short as 10 seconds to enable real time monitoring of transient events, particularly in safety critical applications.
• Intuitive configuration	Intuitive user interface allowing fast and simple calibration and configuration. Double-ended calibration through use of a multiplexer.
• Multiple channels	2, 4, 8 and 16 channel multiplexer modules available to increase system flexibility.
• Alarms functionality	User configurable zones and alarms available to tie in to SCADA systems. MODBUS/OPC/WITSML data formats. Relay contact module also available.
• Remote operation	System can be configured and operated remotely through its Ethernet interface.

Summary of sensing capabilities

Range	Sentinel DTS Model	Description	Temperature Resolution*	Spatial Resolution	Sampling Resolution
0 – 5km	Sentinel DTS-SR	Short Range	<0.01°C	1m	0.5m
0 – 8km	Sentinel DTS-MR	Medium Range	<0.01°C	1m	0.5m
0 – 10km	Sentinel DTS-LR	Long Range	<0.01°C	1m	0.5m
0 – 30km	Sentinel DTS-XR	Extreme Range	<0.05°C	1m (<20km) 2m (>20km)	1m (<20km) 2m (>20km)

Operating environment

Operating Temperature	Storage Temperature	Humidity
+5°C to +40°C	-15°C to +65°C	5% to 95% relative humidity, non-condensing

Power requirements

AC Power	DC Power	Power Consumption
100V - 240V, 50Hz - 60Hz	24V or 48V supply option available	120W maximum

Physical dimensions

H x W x D*	Weight
180 x 435 x 480mm (7.1 x 17.1 x 18.9")	21kg (46lb)

*fits in standard 19" rack mounting.

Certification & compliance

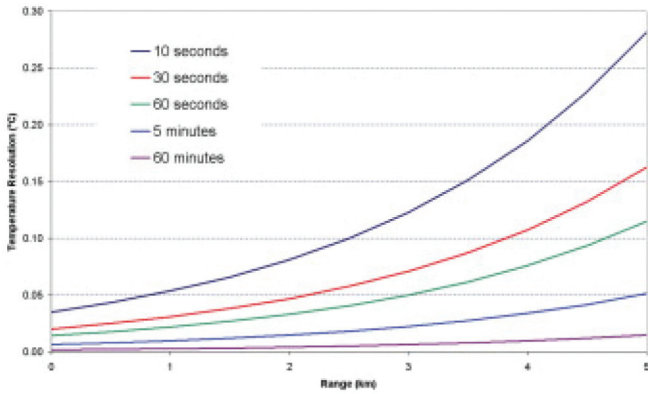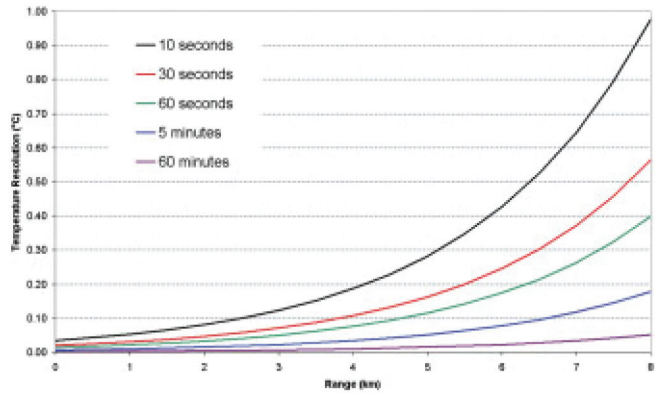| Safety	EMC	CE Mark
The Sentinel DTS has been independently classified to EN 60825-1 (2001-03) as a Class 1M laser product. The DTS (1mW mean power output) is suitable to monitor Zone 0 Hazardous areas according to the European Commission report no. EUR 16011 EN (1994).	EN61326:1997/A1:1998; Conducted Emissions: Class B; Radiated Emissions: Class A**; EN 61000-4-3:1996; EN 61000-4-6:1996; EN 61000-4-4:1995; EN 61000-4- 2:1995/A1:1998/A2:2001; EN 61000-4- 11:1994; EN 61000-4-5:1995; EN 61000-3-2:1995; EN 61000-3-2:2000; EN 61000-3- 3:1995 ** Excluding monitor and keyboard	Accordance with 89/336 EEC EMC Directive Accordance with LVD 72/23 EEC Directive: EN 41003; EN 50178; EN 60065; EN 60825-1; EN 60950; EN 61010-1

PRODUCT CAPABILITES

The following graphs illustrate the temperature resolution of each Sentinel DTS with sensing range and measurement time. Further specifications are available from Tendeka on request.
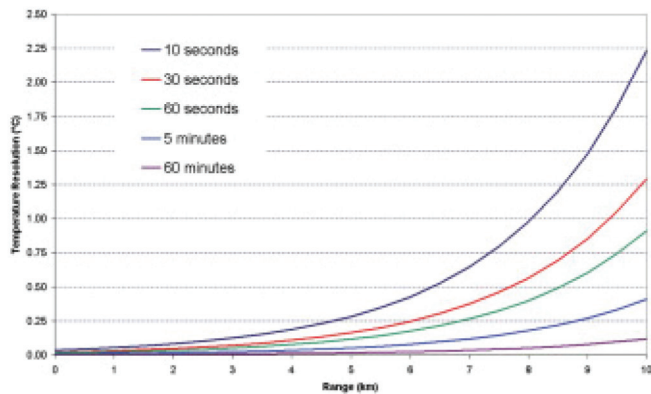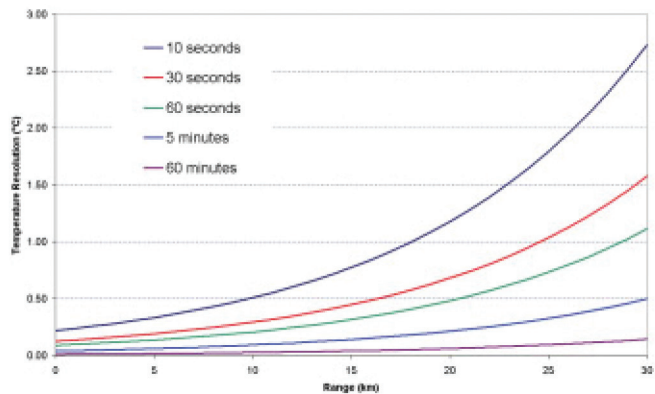
Sentinel DTS-SR Performance

Sentinel DTS-MR Performance

Sentinel DTS-LR Performance

Sentinel DTS-XR Performance

BE SURE WITH TENDEKA

Tendeka offers the widest range of DTS to meet your every monitoring requirement, specific to any need, environment and challenge.
You can rely on us to provide the full solution - from system engineering and design, to installation, data interpretation services and global support services. We'll take the time to fully understand your business goals and the unique context and physical circumstances of your asset to provide the best solution to you.

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