

Distributed Temperature Sensing System

Model No. PS-DTS-25KM-SM-E2000-01

The Planck Sensing 25 km single-mode DTS system provides long-range distributed temperature monitoring in a standard rackmount platform, combining stable single-mode sensing performance with integrated software, alarm I/O, and REST API/WebSocket interfaces for reliable field deployment and system integration.



Key Highlights

Up to 25 km sensing range	4 optical channels with optical switch
0.1 °C temperature resolution	5 m spatial resolution
SMF with E2000 connector	Standard 19-inch 2U rackmount chassis

Sensing Capabilities

Parameter	Min.	Typ.	Max.	Unit	Notes
Sensing Range	-	25	25	km	-
Measurement Time	-	-	5	min	per channel
Temperature Accuracy	-	±3	-	°C	@ 25 km, 300 s
Temperature Resolution	-	0.1	-	°C	-
Sampling Resolution	-	0.4	-	m	-
Spatial Resolution	-	5	-	m	-
Position Accuracy	-	±1	-	m	-
Sensing Temperature Range	-20	-	120	°C	w/ standard cable
Number of Channels	-	-	4	ch	w/ optical switch
Sensing Fiber	SMF	-	-	-	-

Working Environment

Parameter	Min.	Typ.	Max.	Unit	Notes
Working Temperature Range	-10	+25	+50	°C	-
Storage Temperature Range	-40	-	+70	°C	-
Relative Humidity	5	-	90	%	-

Electrical Specifications

Parameter	Min.	Typ.	Max.	Unit	Notes
Power Supply	100	220	240	V	-
Power Consumption @25°C	-	25	30	W	-
Power Consumption (Case Temp.)	-	30	35	W	-

Interfaces

Interface	Specification	Notes
Serial	RS485	Modbus
Ethernet	RJ45	TCP-IP, UDP
Power	100-240 V AC	-
Optical Ports	4 × E2000	-
USB	USB 3.0	-
Alarm I/O	DB44	Relay output

RS485 Communication Protocol

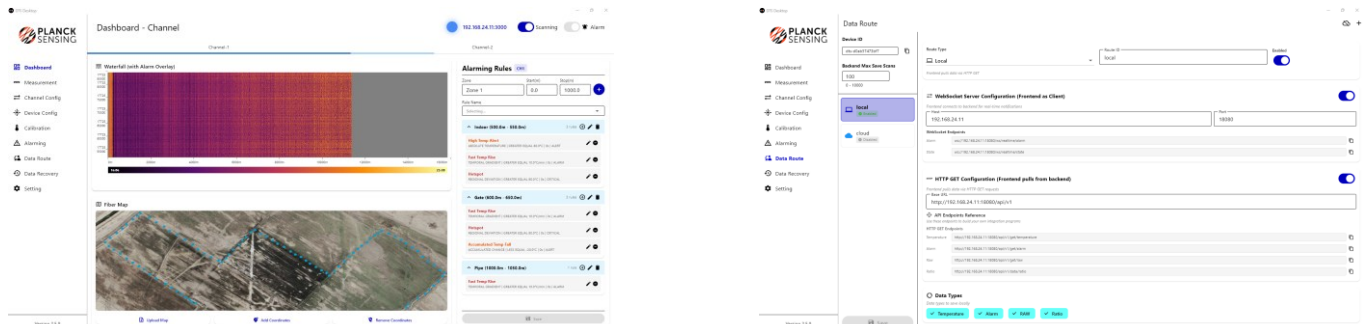
Parameter	Specification	Unit
Baud Rate	9600	bit/s
Data Bits	8	bit
Stop Bits	1	bit
Parity	None	-

Mechanical

Parameter	Specification	Notes
Dimensions	19-inch 2U rackmount (88.9 × 482.6 mm)	H × W
Fiber Type	SMF	-
Connector Type	E2000	-

Software Interface

Planck Sensing provides a comprehensive REST API and WebSocket interface for managing DTS (Distributed Temperature Sensing) devices, data acquisition, configuration, and cloud distribution.



Safety & Handling



Laser Radiation



ESD Sensitive



Protective Earth



Read Manual

The product specifications and descriptions in this document are subject to change without notice and are not binding.