

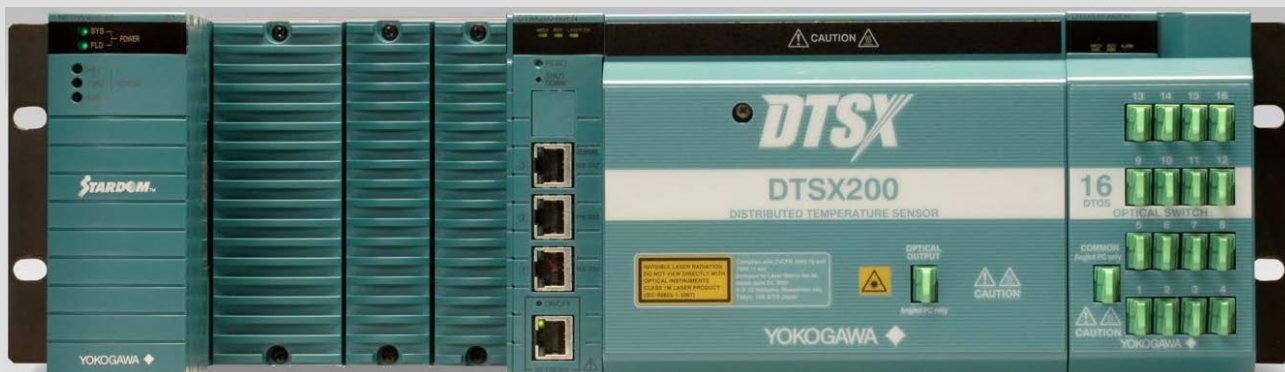


DTSX200 Distributed Temperature Sensor



New Standard for Fiber Optic Sensing

DTSX200 Distributed Temperature Sensor (DTS)



Smart DTS Solution for Oil and Gas

Intelligent and Modular System

Yokogawa sets a new standard for Distributed Temperature Sensing (DTS) in Performance, Price, and Intelligence that reduce operating cost and increase production. The DTSX200 modular design allows interchangeable configurations up to 16 channels, Yokogawa STARDOM Field Controller option, and multiple power supplies. Yokogawa is the only supplier that can provide an integrated automation solution with DTSX200, DCS, SCADA, Field Instruments and outdoor housing.

The DTSX200 is designed for Oil/Gas conventional and unconventional in-well applications, LNG and Refinery facilities, Pipeline and Tank leak detection, and other thermal monitoring applications. The DTSX200 can be used in all regions world-wide with an Operating Temperature of -40 degree C to +65 degree C. You can expect to get the same high performance and reliability found in Yokogawa products.



Optical switch modules (Option)

Features

- Easy to integrate in process control system
- Wide Temperature range operation
- Compact and low power consumption

- Measure up to 6km
- 2, 4, and 16 channels (modular optical switch)
- Ethernet and Serial Modbus Communication
- LAS 2.0 and WITSML 1.3.1.1 Data Format
- STARDOM Field Controller (NFCP050) option
- Outdoor housing with Solar Panels, Batteries, and Wireless Communication is applicable.

= LAS is Log ASCII Standard.

= WITSML is Well site Information Transfer Standard Markup Language.

Bulletin 39J06B45-01E

www.yokogawa.co.jp

Specifications

DTSX200 Distributed Temperature Sensor

== Distance

Measurement distance range	1 to 6 km
Sampling resolution	10 cm to 1 m
Spatial resolution	1 m

== Temperature

Measurement temp. range	-200 to 800 °C (depending on optical fiber characteristics)													
Temperature resolution (°C , typical)	<table border="0"> <tr> <td></td> <td>Time</td> <td>1 km</td> <td>3 km</td> <td>6 km</td> </tr> <tr> <td></td> <td>10 min.</td> <td>0.07</td> <td>0.15</td> <td>0.5</td> </tr> </table>					Time	1 km	3 km	6 km		10 min.	0.07	0.15	0.5
	Time	1 km	3 km	6 km										
	10 min.	0.07	0.15	0.5										
	(1 sigma, at 1m sampling resolution, Sensing fiber connected to DTSX200.)													

== Optical conditions

Optical connector and fiber E2000/APC, 50/125GI optical fiber

== Communication Interface

Modbus	Serial, Modbus/TCP
LAN	10 BASE-T or 100 BASE-T

== General specifications

Operating temperature	-40 to 65°C (-40 to 149°F)
Supply voltage	selectable by Power Supply
Power consumption	10 W (All temperature range) 2 W (Power save mode)
Laser Safety	IEC 60825-1 Class 1M, FDA 21CFR Part 1040.10

Optical Switch module (option)

Channels	2ch DTOS2
	4ch DTOS4
	16ch DTOS16

== General specifications

Operating temperature	-40 to 65°C (-40 to 149°F)
DTOS2 and DTOS4	0 to 50°C (32 to 122°F)
DTOS16	

Selection Guide

Only necessary modules need to be selected for application.

	DTSX200	DTSBM10	DTOS2 2ch	DTOS4 4ch	DTOS16 16ch	Power Supply
Outdoor -40 to 65 degree C	✓	✓	○	—	—	✓ NFPW426(10-30V DC)
Indoor 0 to 50 degree C	✓	✓	○	—	—	□ NFPW426 (10-30VDC) NFPW441 (100-120VAC) NFPW442 (220-240VAC) NFPW444 (2-4VDC)

✓ mark: Required ○ mark : Optional — mark : Not applicable □ mark: Select one

Ordering Information

DTSX200 Distributed Temperature Sensor
DTSX200-N0EN E2000/APC

Base module for DTSX200
DTSBM10-N0N Standard type

Optical Switch module
DTOS2-N0EN 2ch, E2000/APC
DTOS4-N0EN 4ch, E2000/APC
DTOS16-N0EN 16ch, E2000/APC

Power Supply
be selected from NFPW426, NFPW441, NFPW442, NFPW444.

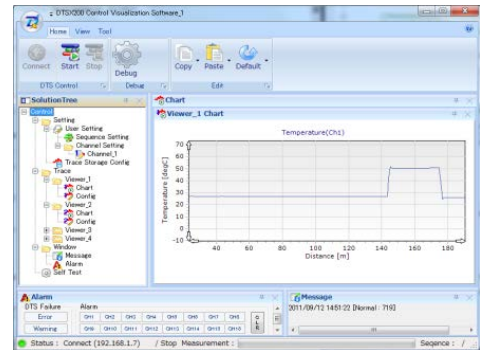
Notes: Please contact us about ISA Standard G3 option.

When DTSX200 is used under the ATEX Type "n" environment, the Instruction Manual, I M 39J06845-10E "Explosion Protection of DTSX200 Products" is required for safer installation and wiring.

- DTSX is a registered trademark of Yokogawa Electric Corporation.
- STARDOM is a trademark of Yokogawa Electric Corporation.
- Ethernet is a registered trademark of Xerox Corporation.
- Modbus is a registered trademark of AEG Schneider.
- E2000 is a trademark of Swiss Diamond.

Application Software

The DTSX200 Control Visualization Software (DTAP200) is used to control the DTSX200 and visualize DTS data on a PC.



The DTAP200 is used to configure and control the DTSX200, as well as display measurement data graphs and generate LAS format. DTAP200 option allows a user to perform control, monitoring and analysis from anywhere on Ethernet network.

The Data Conversion Software option (DTAP200D) allows the DTSX200 to generate data files in WITSML format. When the DTSX200 is configured for WITSML conversion using DTAP200D, then the DTSX200 will generate data files in WITSML format.

Ordering Information

DTSX200 Control Visualization Software	
DTAP200-N0E	Standard type, one license for one PC
Data Conversion Software	
DTAP200D-N1E	WITSML 1.3.1.1, one license for one DTS

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VigilantPlant is Yokogawa's automation concept for safe, reliable, and profitable plant operations. VigilantPlant aims to enable an ongoing state of Operational Excellence where plant personnel are watchful and attentive, well-informed, and ready to take actions that optimize plant and business performance.

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