



nortech

Nortech Sentinel II

ENERGY

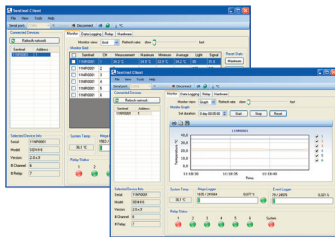


**MULTI-CHANNEL
FIBEROPTIC OPTIC MONITOR
FOR ENERGY APPLICATIONS**

Accurate, Reliable & Cost Effective Winding Hot Spot Temperature Monitoring Solution for Transformers and Reactors.

Description

The Nortech Sentinel II is a cost effective, flexible, multi-channel fiber optic signal conditioner designer for direct, accurate and real-time temperature monitoring.



The new Nortech Client Software allows full configuration and monitoring of your system.

It is now possible to consult the data logging information live on your computer without downloading the complete file.

The Sentinel II offers on-board self diagnostic for easier system installation.

For over 15 years, FISO Technologies Inc. has been the leader in Fiber Optic white light technology. The Sentinel II is using the temperature dependent bandgap shift of the GaAs crystal to provide fast and accurate measurement.

Inherent to the technology, the system will not drift nor require any recalibration for the life of the transformer.

Key Features

- Real-time Temperature Monitoring
- Robust Design
- Large LCD Screen
- Internal Memory
- Relays & Analog Output
- Nortech Client Software
- IEC 61850, IEC 61870-5-104 or DNP 3.0
- No Calibration Required
- Light Source Good for the Life of the Transformer
- 5 Year Warranty

Applications

- EHV/UHV/HVDC Transformers
- Power Transformers
- Distribution Transformers
- Reactors, Generators
- Load Tap Changer
- Switchgears
- Power Cables





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Specifications

Number of channels	2, 4 & 6
Reading temperature range	-40 °C to 225 °C
Temperature accuracy	±1°C
Resolution	0.1°C
Sampling rate	1 Hz
Operating temperature	-20°C to 65°C
Storage temperature	-30°C to 85°C
Light source life	Life of the Transformer.
EMI/RFI susceptibility	Completely Immune
Humidity	95% RH Non-Condensing
Display	Large LCD screen

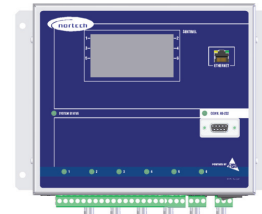
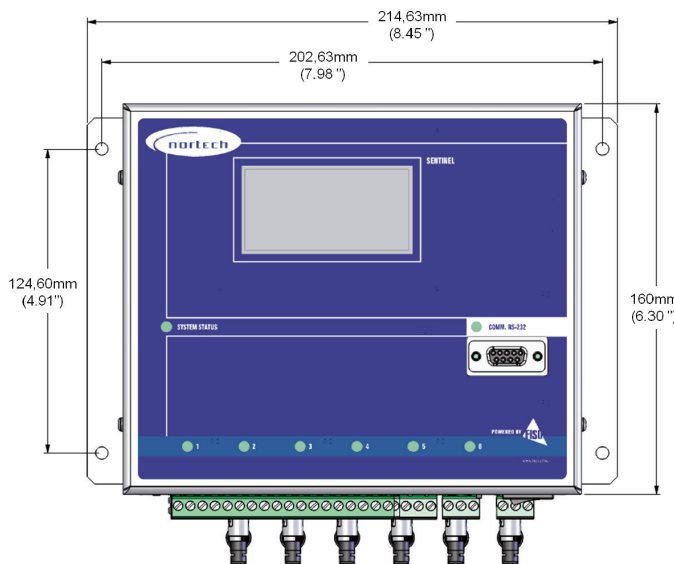
Communication port	RS-232,RS-485 & RJ45 (Optional)
Communication	Protocol Modbus, Nortech IEC61850*, IEC60870-5-104*,DNP3.0* TCP/IP/Modbus*, TCP/IP/Serial*
Analog output	4 -20 mA Configurable, 0 -1 mA also Available
Relays	6 Programmable Form-C
System fault relay	1 Dedicated System Fault Relay
System Status Indicator	LED
Memory	> 300 Days at 1 Measurement/Minute 262,000 Logs
Auto-Diagnostic	Light Level, Signal Level
Input Power	12-24 VDC (13W)

Environmental standards

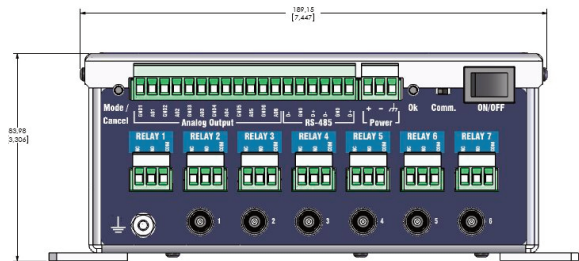
IEC 600068-1	Environmental testing: General
IEC 600068-2-1	Test A: Cold
IEC 600068-2-2	Test B: Dry heat
IEC 600068-2-14	Test N: Change of temperature
IEC 600068-2-30	Test Db and guidance: Damp
IEC 600068-2-78	Test Cab: Damp heat, steady
MIL-STD-810F	Vibration and shock

IEEE C37.90.1-2002 (4000V) Surge protection	
EN 61326	
EN 55011 Class A (Industrial)	
EN61000-4-2	EN61000-4-5
EN61000-4-3	EN61000-4-6
EN61000-4-4	EN61000-4-11

*Optional



Sentinel with Ethernet Connection



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FISO technologies Inc. reserves the right to make any changes in the specifications without prior notice.

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