InsuLogix® T HOT SPOT TEMPERATURE MONITOR

FIBER BASED TEMPERATURE MEASUREMENT FOR LIQUID FILLED TRANSFORMERS

Monitoring up to 16 measurement channels, the Weidmann InsuLogix®T offers reliable, proven hot spot winding temperature monitoring at a cost effective price.

TEMPERATURE MEASUREMENT APPLICATIONS

- EHV/UHV/HVDC Transformers
- Power Transformers
- Distribution Transformers
- Reactors, Generators
- Load Tap Changers
- Switchgear
- Bus Bars

SYSTEM DESCRIPTION

- Choice of 2 to 16 measurement channels
- Complete immunity for fiber probes and sensors to RFI, EMI, NMR and microwave radiation
- The monitor features watchdog function, one system fault relay, one relay for probe error and two relays for temperature thresholds
- Configurable at factory 4-20mA or 0-10 V DC analog outputs
- No drift, no re-calibration required, light source does not change for the life of the transformer
- MODBUS communication protocol
- Can be supplied with Weidmann SmartSpacer®
- 2 years warranty

POWER TRANSFORMER MONITORING APPLICATION

Power transformers often take the brunt of an overload condition, and are the most likely to be damaged without the appropriate control and protection.

Weidmann InsuLogix®T is designed to measure transformer winding hot spots in real time. The drift-free, re-calibration-free and maintenance-free InsuLogix®T allows for optimum operation of the transformer at safe load capacity during normal and emergency conditions.

InsuLogix®T Monitor

The temperature measurement is based on Gallium Arsenide sensor mounted on 200 µm all-silica fiber. The probe consists of a glass fiber with PTFE sheath, which is also protected by a PTFE spiral wrap.

The sensor possesses a resilient construction and has dielectric resistant materials featuring complete immunity to EMI and RFI environments. The optic cable is specially designed for permanent installation in a liquid-immersed transformer.

Unlike conventional top oil temperature measurements which can lag hours behind in response time, optics provide direct, real-time accurate measurements of the transformer winding temperature, suitable for dynamic load control or as a valuable input to calibrate thermal models.

InsuLogix® T CONFIGURATION

- Up to 16 channels
- LCD display
- System fault relay, probe fault relay, two relays for temperature thresholds
- 4-20mA or 0-10 V DC analog outputs
- Instrument configurable with USB, RS232, RS485, or Ethernet ports
- MODBUS communication protocol is available over RS485 and Ethernet
- Tank wall plate with connectors pre-installed
- External fiber optic extension cables
- 24 V DC power supply

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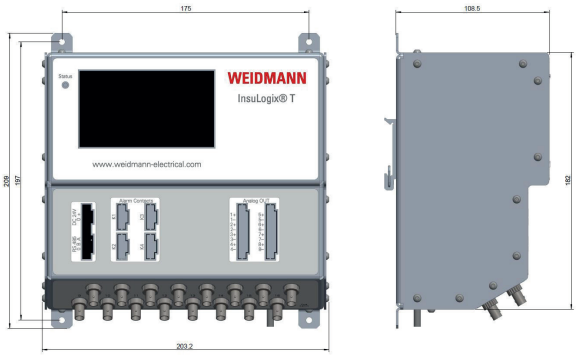
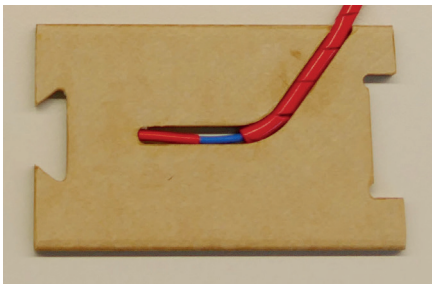
InsuLogix® T Specifications	
Number of Channels	2 to 16
All silica core fiber thickness	200 µm
Fiber protection jackets	PTFE sheath, PTFE spiral wrap
Measuring Range	-20 °C to 200 °C
Accuracy	< ± 1 K
Resolution	0.1 K
Measuring time/channel	250 ms
Operating temperature	-20 °C to 60 °C
Storage temperature	-20 °C to 70 °C
Light source lifetime	Life of the transformer
EMI/RFI susceptibility	Immune
Humidity	95 % RH non-condensing
Communication ports	Configurable at factory per customer specification: USB, RS232, RS-485, Ethernet
Communication protocol	Modbus over RS-485 and Ethernet
Analog output	4-20 mA or 0-10 V DC Configurable at factory
Relays	2 for temperature thresholds
System fault relays	1 dedicated system fault relay for instrument ; one dedicated relay for probe operation
System status indicator	LED
Data recording	Via connection to a PC or another device with data recording capability
Fiber optic connectors	ST
Auto diagnostic	Light level, signal level
Power supply	24 VDC
Power consumption	Maximum 40 Watts
Instrument mounting	DIN Rail or standard mounting brackets
Warranty	2 years



InsuLogix® T dimensions



Certified SmartSpacer®

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