



T/Guard Link™ (RevB)

Fiber Optic Power Transformer Winding Temperature Monitoring System

A small form factor and cost oriented fiber optic hot spot monitoring system for dry type and oil filled power transformers

- Offers an easy way to link Neoptix probes to Qualitrol 509 and 507 transformer controllers
- This updated module offers a similar SCADA interface to existing Neoptix T/Guard-Link systems
- Interfaces to all Neoptix probes
- Small and sturdy cast aluminum enclosure
- RS-485 serial interface (Modbus and ASCII communication)
- 4-20 mA analog outputs
- Accuracy of +/- 1 °C
- Available with up to 8 channels. With Modbus, up to 32 modules can be cascaded together
- Ideal for OEM applications

Product Summary

Description: A small form factor and cost oriented fiber optic hot spot monitoring transducer for dry type and oil-filled power transformers. Its standard MODBUS communication protocol allows for a quick and easy integration to any SCADA system. Optimized for use with the Qualitrol 507 and 509 systems.

Application: Fiber optic hot spot monitoring system for any type of transformers.

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QUALITROL[®]
Defining Reliability

TECHNICAL SPECIFICATIONS		T/Guard-Link-RevB, for GaAs Neoptix probes
Compatibility	Probe	Compatible with ALL Neoptix probes
	Number of channels	2, 4, 6 or 8. With Modbus, up to 32 modules can be linked together, to a theoretical total of 256 channels
Communication and I/O	Operating Mode	ASCII commands and Modbus over RS-485
	Communication (hardware)	Optically isolated RS-485 and analog outputs. Can be user configured in half or full duplex
	Communication protocols	ASCII (Neoptix commands) or serial Modbus RTU (full or half duplex). Mode can be changed via a front panel key, with an indicator
	Remote (SCADA outputs)	4-20 mA outputs, one output per optical channel. Detachable header connector blocks, 3.5 mm pitch
	Relays	None
	System status reading and indicators	A LED confirms communication mode (ASCII or Modbus) on panel System has internal built-in temperature sensor; value is available through serial port
Mechanical and environmental	Operating temperature	-40 to +72 °C, 5-90 % humidity, non-condensing
	Storage temperature	-50 to +80 °C, 5-95 % humidity, non-condensing
	Board level environmental protection	MIL-I-46058C (IPC-CC-830) Type SR silicone conformal coating
	Light source MTBF	Light source lifespan and optimal system performance superior to 300 years of continuous use
	Vibrations	60/120 Hz @ 0.1 mm displacement
	Shock	10g half-sine in three orthogonal planes
	Form factor	Solid aluminum enclosure, mounting brackets at each corner. Must be protected from rain, dust, etc. Complete mechanical compatibility with legacy T/Guard-Link system
	Front membrane	UV stabilized polyester
	Connectors	Optical: ST connectors; Serial, analog out and power in: 3.5 mm pitch connectors, socket for plugs with screw terminal
	Dimensions / weight	Width: 190 mm; Height: 113 mm; Thickness: 38 mm; Weight: 0.7 kg
Compliance	Conducted/Radiated Emissions and Surge Withstand	IEC 61000-4-2 ESD; IEC 61000-4-3 Radiated RFI; IEC 61000-4-4 Burst; IEC 61000-4-5 Surge; IEC 61000-4-6 Induced (Conducted) RFI; ICES-003 Issue 5, Aug 2012; IEC 60255-5 Dielectric strength; IEEE C37.90 Dielectric strength; IEEE C37.90.1-2002 Fast transient; IEEE C37.90.1-2002 Oscillatory; IEC 60068-2-14 Temperature -40 to +72 °C
Power	Power requirement	24 VDC nominal (20-28 VDC acceptable)
	Consumption	6 watts
Other	Probe compatibility	Double calibration: Neoptix and older Nortech Fibronic probes
	Measurement range	-80 to +250 °C
	Resolution reading	0.1 °C
	Warranty	Five-year Limited international warranty - Extended warranty available
	Option	RS-485 to USB bridge - Neoptix part number NXP-349

System Ordering Codes

TGL - XX - RevB

XX = Number of channels (02, 04, 06 or 08)