

Qualitrol® 506 VTM / 507 ITM



Vault Transformer Monitor / Intelligent Transformer Monitor

Extend the life of your transformer

- Implement Condition Based Monitoring
- Compare direct vs simulated winding temperature
- Minimize personnel time in the vault
- The power to know your transformer health immediately with Translife™
- Superior temperature control for increased transformer loading

Product Summary

Description Vaults can be dangerous, with Qualitrol's 506 VTM you can move to real time continuous remote monitoring. Qualitrol offer a fixed or wireless solution to monitor your assets remotely. The 507 ITM now introduces fiber optic inputs for direct winding monitoring to accurately monitor all aspects of your transformer.

Application Remote and local monitoring of oil-filled transformer parameters, third party systems, alarming and advanced control of cooling systems.



QUALITROL®
Defining Reliability

QUALITROL® 506 VTM / 507 ITM

Vault Transformer Monitor / Intelligent Transformer Monitor

Implement Condition Based Maintenance

- Move from a reactive maintenance mode or a fixed-interval time based mode of preventive maintenance to condition based
 - Using the 506 VTM enables inputs from pressure, level and temperature to monitored and automatically actioned
 - The 507 ITM enables all of the above with the addition of direct real time accurate measurement of Direct winding temperature via calibration and drift free fiber optic technology
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Compare direct vs simulated winding temperature

- Real time comparison of direct (*what the temperature actual is*) and calculated (*what the temperature should be*) winding temperatures insures that the transformer continues to operate within OEM specifications and sends an alarm if it is not
 - QUALITROL advanced calculated winding temperature uses IEEE and IEC models to estimate the winding temperature based on information provided by the transformer OEM
 - QUALITROL hot spot temperature measures the actual temperatures wherever the probe is installed directly
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Minimize personnel time in the vault

- Minimize expensive and potentially hazardous vault visits for your personnel
 - Monitor pressure, level and third party devices such as water level in vault, fire sensors, vault entry and much more
 - Through RS485 or RS232, we transmit the health of the transformer via DNP or Modbus
 - This can be fixed or using wireless such as secure WiFi
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The power to know your transformer health immediately with TransLife™

- TransLife™ feature provides a dashboard of required critical information
 - Computes loss of asset life rate, life consumption and remaining asset life
 - Critical Forecast feature determines the time remaining until a critical temperature is reached based on current conditions
 - Monitor your windings with TransLife™
 - Temperature Profiler feature provides the history of the transformer's temperature
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Superior temperature control for increased transformer loading

- Improved accuracy gained by use of advanced calculated winding temperature measurement permit safe operation at higher loads
 - Automatic cooling bank switching normalizes fan and pump usage for maximum life
 - Pre-cooling functionality reduces damaging high temperatures produced by overloads.
 - Adaptive setback improves cooling system efficiency by measuring ambient temperature and then adapting cooling and alarm set points based on temperature trends
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Superior temperature control for increased transformer loading – cont.

- Advanced transformer monitor makes it easy to configure, control and accurately track all aspects of your network transformer
- Dynamic loading analysis included to optimize loading and maximize asset life
- Simplify root cause analysis for condition-based maintenance
- Up to four flexible modular inputs and 16 Fiber Optic inputs
- *Includes:* TransLife™
 - Predictive loading
 - SCADA outputs (0-1mA or 4-20mA)
 - Digital communication (RS 485, RS 232)
 - Protocols (DNP 3.0, MODBUS)
 - Cooling system optimization
 - Local and remote alarms



◀ **035**
Retrofit oil level indication gauges to add remote electronic monitoring of oil levels



◀ **RTD**
Provides transformer temperature measurements. Many varieties available to custom fit hundreds of transformer applications with easy upgrade to different types of equipment
Magnetic RTDs
available for easy retrofit when wells are not available



◀ **TRN-013-1**
Monitors static tank pressure



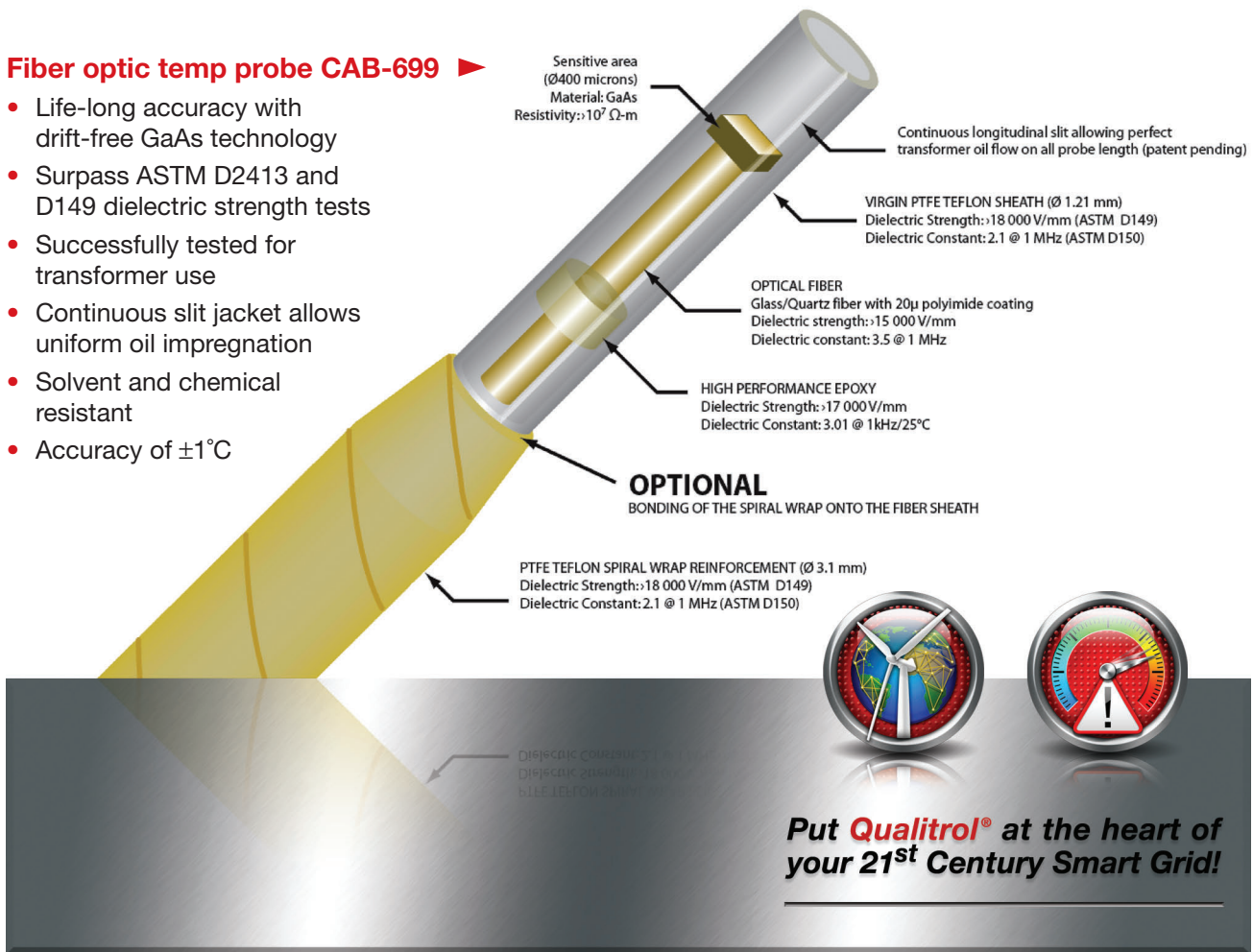
◀ **Optical hot spot module MOD 638**

- Based on Neoptix field proven technology
- Up to 8 channels of fiber inputs
- Robust, machined aluminum enclosure
- Data logging capable with OptiLink™ software
- Compatible with any Neoptix probes (with no calibration)
- Light source has a MTBF of 300 years
- Up to 2 modules (16 channels) can connect to one 507 ITM

neoptix T2™ Fiber Optic Temperature Sensor (Patent Pending)

Fiber optic temp probe CAB-699 ▶

- Life-long accuracy with drift-free GaAs technology
- Surpass ASTM D2413 and D149 dielectric strength tests
- Successfully tested for transformer use
- Continuous slit jacket allows uniform oil impregnation
- Solvent and chemical resistant
- Accuracy of ±1°C



Put Qualitrol® at the heart of your 21st Century Smart Grid!

About QUALITROL®

QUALITROL® manufactures substation and transformer monitoring and protection devices used by electric utilities and manufacturing companies. It is the global leader in sales and installations of transformer asset protection equipment, fault recorders and fault locators. Established in 1945, QUALITROL® produces thousands of different types of products on demand, each customized to customers' unique requirements.

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