

ITM & QTMS

TRANSFORMER MONITORING SOLUTIONS



ITM SERIES

Complete transformer monitors for all parameters required to accurately track and control power transformers

Remote communications, integrated data logging and event recording capabilities

Seamless integration with Qualitrol Neoptix Fibers for direct winding temperature and DGA-150 for single gas hydrogen measurements



QTMS SERIES

Advanced modular transformer monitors for condition based, continuous online monitoring of asset health

Bring all sensor data into one single monitoring solution, including Partial Discharge and Bushing monitoring

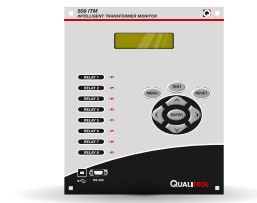
Bring data from multiple QTMS devices into a centralized location with scalable Qualitrol SmartSub enterprise software

A Model for Every Application

Advanced Transformer Monitoring Solutions

ITM Series

ITM 505 | 507 | 509

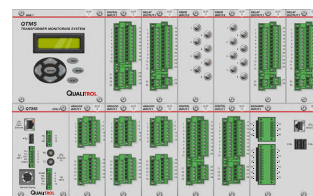
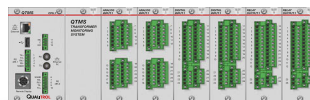
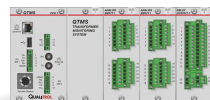


INPUT OPTIONS	ITM 505	ITM 507	ITM 509
Number of inputs	(4) input modules	(4) input modules	(8) input Modules. (16 w/ expansion)
Input style	(1) signal per module	(1) signal per module	(1) signal per module
Input type	Input 1 - fixed as RTD input Input 2 - fixed as CT Input Inputs 3 & 4 - any analog or digital input	Any analog or digital input for each module	Any analog or digital input for each module
OUTPUTS	505	507	509
Relay outputs	(4) configurable relays (1) system status relay	(4) configurable relays (1) system status relay	(8) configurable relays (1) system status relay
ADVANCED FEATURES	505	507	509
Cooling monitoring	Bank switching	Bank switching	Cooling monitor Bank switching Seasonal setback Adaptive ambient control
LTC monitoring	n/a	n/a	Tap position and count Motor sensing Current sensing Alarm conditions
Fiber optics	n/a	Up to 2 hotspot modules (8 fibers per module)	Up to 2 hotspot modules (8 fibers per module)
Qualitrol DGA	Integration through analog input only	DGA150/250 integration via RS-485 TM1/3/8 integration via analog inputs	DGA150/250 integration via RS-485 TM1/3/8 integration via analog inputs
Bushing monitoring	n/a	n/a	n/a
Partial Discharge (PD)	n/a	n/a	n/a
COMMUNICATIONS / PROTOCOLS	505	507	509
Communications	(1) RS-485 serial port	(1) RS-485 serial port	(1) RS-485 serial port (1) ST serial fiber optic port (1) RJ45 Ethernet Port (1) ST-TCP/IP fiber Ethernet port
Protocols	DNP 3.0 Modbus ASCII	DNP 3.0 Modbus ASCII	DNP 3.0 Modbus ASCII IEC 61850 IEC 60870
SOFTWARE AND DATA STORAGE	505	507	509
Software	Loaded on PC	Loaded on PC	Loaded on PC
Advanced algorithms	Translife - loss of life	Translife - loss of life	Translife - loss of life
Event recording	n/a	n/a	Up to 8 event parameters
Data logging	n/a	Up to 10 parameters	Up to 20 parameters
Storage capacity	n/a	32 MB	32MB
INSTALLATION & HARDWARE	505	507	509
Display	Front panel	Front panel	Front panel
Mounting options	Panel or enclosure	Panel or enclosure	Panel or enclosure
Wiring	Rear of unit	Rear of unit	Rear of unit

Total Transformer Monitoring Solutions

QTMS Series

QTMS STX | MTX | LTX



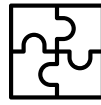
INPUT OPTIONS	QTMS STX	QTMS MTX	QTMS LTX
Number of inputs	Up to (4) modules, any configuration	Up to (7) modules, any configuration	Up to (14) modules, any configuration
Input style	(14) signals per module	(14) signals per module	(14) signals per module
Input type	Analog or digital input module Advanced sensor module	Analog or digital input module Advanced sensor module	Analog or digital input module Advanced sensor module
OUTPUTS	STX	MTX	LTX
Relay outputs	(8) Relays per module Up to (4) modules	(8) Relays per module Up to (7) modules	(8) Relays per module Up to (14) modules
ADVANCED FEATURES	STX	MTX	LTX
Cooling monitoring	Cooling monitor Bank switching Seasonal setback Adaptive ambient control	Cooling monitor Bank switching Seasonal setback Adaptive ambient control	Cooling monitor Bank switching Seasonal setback Adaptive ambient control
LTC monitoring	Tap position and count Motor sensing Current sensing Alarm conditions	Tap position and count Motor sensing Current sensing Alarm conditions	Tap position and count Motor sensing Current sensing Alarm conditions
Fiber optics	(4, 6, or 8) fibers per module Up to (4) modules	(4, 6, or 8) fibers per module Up to (7) modules	(4, 6, or 8) fibers per module Up to (14) modules
Qualitrol DGA	TM1, TM3, TM8 compatible	TM1, TM3, TM8 compatible	TM1, TM3, TM8 compatible
Bushing monitoring	Up to 6 bushing taps	Up to 6 bushing taps	Up to 6 bushing taps
Partial Discharge (PD)	UHF PD measurements	UHF PD measurements	UHF PD measurements
COMMUNICATIONS / PROTOCOLS	STX	MTX	LTX
Communications	(1) RJ45 Ethernet port (1) ST-TCP/IP fiber Ethernet port	(1) RJ45 Ethernet port (1) ST-TCP/IP fiber Ethernet port	(1) RJ45 Ethernet port (1) ST-TCP/IP fiber Ethernet port
Protocols	DNP 3.0 Modbus IEC 61850 w/GOOSE IEC 60870	DNP 3.0 Modbus IEC 61850 w/GOOSE IEC 60870	DNP 3.0 Modbus IEC 61850 w/GOOSE IEC 60870
SOFTWARE AND DATA STORAGE	STX	MTX	LTX
Software	Web based interface	Web based interface	Web based interface
Advanced algorithms	Translife - loss of life Bubbling temperature Actual losses Leakage rate of bushing Efficiency of transformer	Translife - loss of life Bubbling temperature Actual losses Leakage rate of bushing Efficiency of transformer	Translife - loss of life Bubbling temperature Actual losses Leakage rate of bushing Efficiency of transformer
Event recording	n/a	n/a	n/a
Data logging	Up to 100 parameters	Up to 100 parameters	Up to 100 parameters
Storage capacity	4 GB (8 GB available)	4 GB (8 GB available)	4 GB (8 GB available)
INSTALLATION & HARDWARE	STX	MTX	LTX
Display	Remote	Remote or front panel	Remote or front panel
Mounting options	Rack Cabinet NEMA w/ pedestal	Rack Cabinet NEMA w/ pedestal	Rack Cabinet NEMA w/ pedestal
Wiring	Front of unit	Front of unit	Front of unit



Experience

with industry leaders

Qualitrol has over 20 years of transformer monitoring experience and is considered an industry leader



Complete

monitoring solutions

Qualitrol offers all necessary sensors for an easy and complete monitoring solution



Configure

to precise requirements

Qualitrol's ITM and QTMS transformer monitoring solutions are both fully configurable for any application



ITM
series

Advanced monitoring

- Configurable from a basic temperature monitor to a complete transformer monitoring system
- Perfect for retrofitting old mechanical gauges and adding remote communications to your asset
- Includes advanced cooling monitoring features to ensure your systems are operating at optimal parameters
- Seamless integration with other Qualitrol sensors

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QTMS
series

Total monitoring

- Feature packed, modular system to cover any advanced monitoring needs
- Includes advanced sensor options including Bushing and Partial Discharge monitoring all in one package
- By bringing many sensors into one system, the QTMS can provide a snapshot of transformer health to aid in condition based maintenance
- Can accommodate a large number of I/O signals in a small footprint, monitor multiple transformers

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