Franklin Electric
GRID SOLUTIONS

INCON®

DISTRIBUTION TRANSFORMER MONITOR

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The INCON® Distribution Transformer Monitor (DTM) provides continuous, meter-grade precision performance monitoring of high-value, mission critical, low voltage pad mount transformers and conventional pole top transformers.

TRANSFORMER STATE-OF-HEALTH

By continuously monitoring the key indicators of a transformer's performance, including temperature and load, the DTM provides remote access to real-time transformer health data and automated threshold alarms for condition-based maintenance planning.

DATA-DRIVEN DECISION MAKING

With the ability to monitor and trend transformer output voltage, loading (current) by phase, temperature, and Power Factor for an entire network of transformers, utilities are armed with powerful information regarding power distribution and equipment maintenance.

HIGH PERFORMANCE HARDWARE

A powerful industrial IOT grade processor and sophisticated polyphase energy measurement integrated circuit provide superior on-board computation capability and Power Quality Monitor level fidelity.

CUSTOMIZED ALARMS & NOTIFICATIONS

Via the CONVERGE™ web interface, utilities can manage by exception with customized threshold alarms and notifications:

- Voltage Signal Delta
- Current Signal Delta
- Fault Current
- Voltage Sag and Swell
- K-Factor Harmonics
- Top/Bottom Tank Temperature
- Temperature Delta
- Winding Hot Spot Load Ratio
- Winding Load
- Winding Hot Spot Temperature

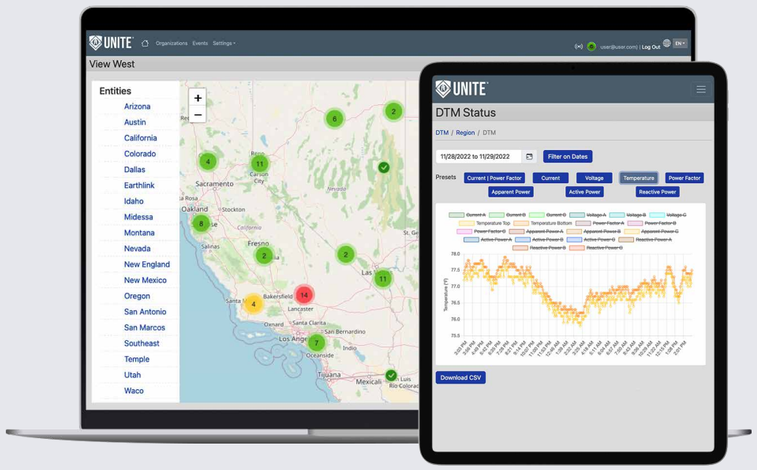
POWER FACTOR MONITORING

The DTM provides a transformer's Power Factor, which is a trend of useful power delivered. Power Factor helps utilities to determine the most efficient distribution of power during peak times and to ensure the delivery of high-quality outbound power when their customers need it the most.

DEPLOY ANYWHERE AT SCALE

A built-in Cat M1/NB2 cellular modem allows the DTM to communicate via a cellular network, enabling utilities to deploy DTMs virtually anywhere and at scale (i.e. one unit to thousands of units).

1. IP67 weather-proof enclosure
2. Voltage leads (5)
3. Split-core Rogowski coils (4)
4. RTD temperature sensors (2)
5. Cable strain relief



UNITE™

ASSET MANAGEMENT DATABASE

A secure MQTT communication protocol allows the DTM to safely communicate with the web-based UNITE™ asset management database. UNITE™ provides user-friendly access to all distribution transformer performance data for convenient centralized analysis and reporting. Arm service and maintenance personnel with a consolidated view of an entire network of distribution transformer health and performance data.

EASY INSTALLATION

The DTM can be applied to any type of distribution transformer with a secondary output of 480 volts or less, phase to neutral. This includes, single-phase, split-phase, or three-phase transformers.

Installation has been kept simple with only a few connections required to the transformer secondary. Four split-core Rogowski Coils measure load current. Five voltage leads measure Phase A, Phase B, Phase C, as well as neutral and ground. Two magnetically mounted RTD sensors measure top and bottom transformer temperature.

The DTM is powered by the transformer itself, using the Phase A and Neutral voltage leads. No external power source is required.

MAGNETIC MOUNTING

Four powerful 25 lbs. magnets integrated into the mounting plate allow the DTM to be installed vertically or horizontally without any drilling or adhesives.

» CRITICAL «
ASSET MONITORING

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