



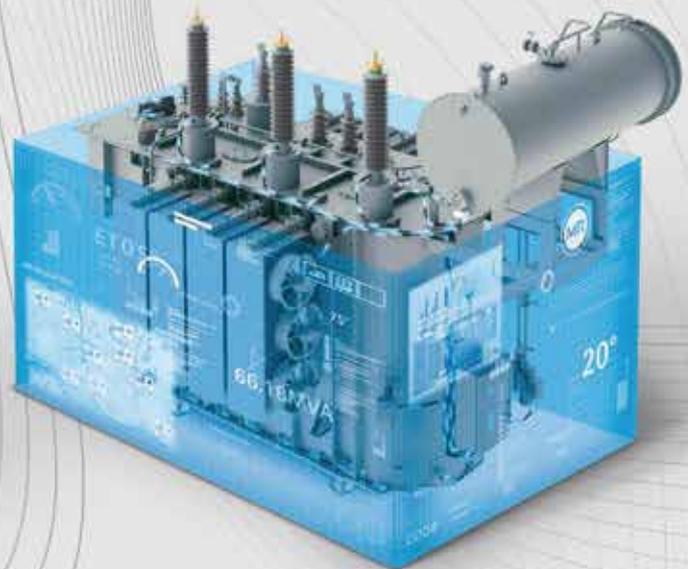
FEDERAL ELECTRIC

SMART ELECTRIFICATION & AUTOMATION

THE NEXT GENERATION OF POWER TRANSFORMATION



 **FEDERAL SMART**



 **FEDERAL SMART PLUS**

KEY FEATURES OF DIGITAL TRANSFORMERS

- Real-Time Monitoring and Data Collection
- Advanced Analytics and Predictive Maintenance
- Enhanced Communication and Integration
- Improved Efficiency and Reliability
- Cybersecurity

APPLICATIONS AREAS OF DIGITAL TRANSFORMERS

- Utility Grids
- Industrial Plants
- Renewable Energy Integration

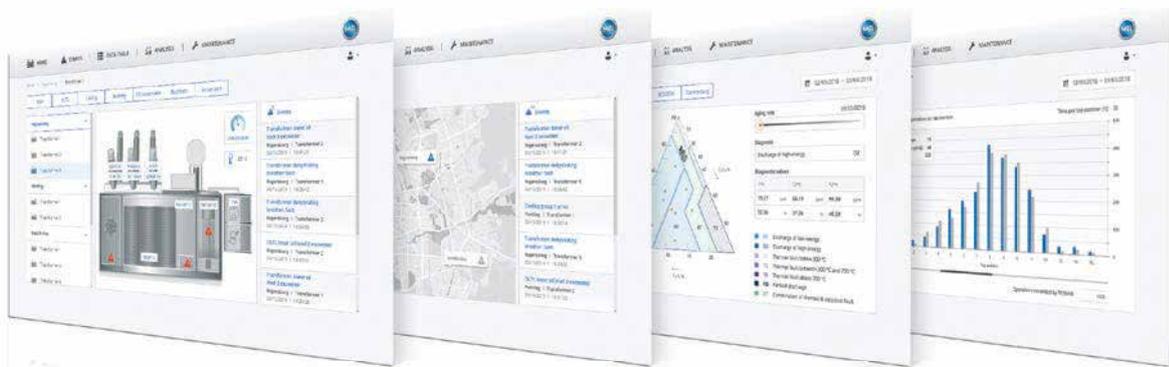
FEDERAL - SMART SOLUTION

FOR DISTRIBUTION TRANSFORMER (OIL & DRY) & SPECIAL TRANSFORMERS

We are proud to present to you an extensive overview of our premier transformer solutions, designed to meet the diverse and dynamic needs of various industries. Federal Transformer Abu Dhabi is a leading provider of innovative and reliable transformer products and services, committed to delivering excellence and driving technological advancements in the power and energy sector.

INTEGRATION PROCESS

- ENQUIRY
- SPECIFICATION STUDY
- CLIENT DISCUSSIONS
- SOLUTION DEVELOPMENT
- SOLUTION DEMONSTRATION
- APPROVALS
- IMPLEMENTATION
- DEMONSTRATION
- DEVELOP AS PER CLIENT SUGGESTIONS
- TRAINING
- HAND OVER

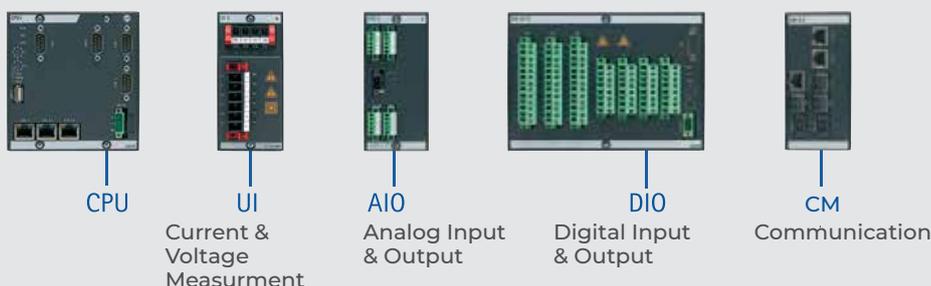


Comprehensive Asset Performance Monitoring Gives

Benefits of Asset Monitoring

- Temperature Monitoring and Analysis
- Load Analysis
- Efficiency and Losses
- Power Quality Analysis
- Health Monitoring and Diagnostics
- Predictive Maintenance
- Energy Management
- Real-Time Monitoring and Alerts
- Data Analysis with AI technologies
- Machine Learning & Real time
- Advanced analytics
- Improved Asset Utilization
- Proactive Maintenance
- Cost Reduction
- Enhanced Productivity
- Better Compliance and Safety
- Data-Driven Insights
- Asset Security
- Remote Monitoring
- Customer Satisfaction
- Scalability

Modular and efficient hardware design



FEDERAL SMART PLUS - POWER TRANSFORMER SOLUTION



We are delighted to present you with a comprehensive guide to our innovative digital transformation services and solutions. At Transformer Digital Solutions, our mission is to empower businesses to thrive in the digital era through cutting-edge technology and expert consultation.

ETOS® from MR is the central control and monitoring system for actuators, control and monitoring on the transformer. The bundling of all required functions in one system and the possibility of integrating previously separate transformer control cabinets in ETOS® significantly reduces corresponding costs and simplifies handling through a uniform, central visualization.



INTEGRATION PROCESS

- ON-SITE ASSESSMENT
- INSTALLATION AND TESTING
- CONSULTING
- IMPLEMENTATION
- PREPARING QUOTATIONS
- COMMISSIONING
- ENGINEERING AND DOCUMENTATION
- FURTHER SUPPORT
- LOGISTICS AND PROCUREMENT
- DOCUMENTATION

MONITORING PARAMETERS

BASIC PARAMETERS

- Oil Temperature
- Winding Temperature
- Oil Level
- Oil/Gas Pressure
- Alarm/Trip Status

ADVANCED PARAMETERS

- Ambient Temperature
- Energy Consumption & Efficiency
- Cooling Fan Losses
- 3 Phase Load Current & Voltage
- Online BDV, DGA & PD Monitoring
- Thermal, Load & Power Quality Analysis

FUNCTIONS FEATURES

- Bushing Monitoring
- DGA Analysis
- OLTC Monitoring & Drive function
- Thermal Monitoring
- Cooling Control & Monitoring
- Voltage Regulation

FEDERAL SMART PLUS

ETOS® TD



Innovative top drive



Integration solution in the motor-drive unit

ETOS® ED

Classic drive technology (with a mechanical linkage)



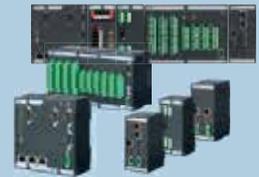
Standalone variant in the control cabinet

ETOS®



ETOS® IM

Plug-in modules



Solution for integration in a customer control cabinet



AVAILABLE PACKAGES



Transformer monitoring



Dissolved Gas Analysis (Online DGA)



Bushing monitoring



OLTC monitoring



Voltage regulation



Cooling system control and monitoring

MONITORING

CONTROL AND REGULATION



TRANSFORMING ENERGY EFFICIENCY WITH INTELLIGENCE

Real-time monitoring and alerts are essential for effective transformer management, enabling proactive maintenance, improved reliability, and operational efficiency. By deploying advanced sensors, implementing robust data analysis and alert systems, and defining clear response protocols, utilities and industries can enhance Asset performance, prevent failures, and ensure safe and reliable power delivery.



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CONTACT

