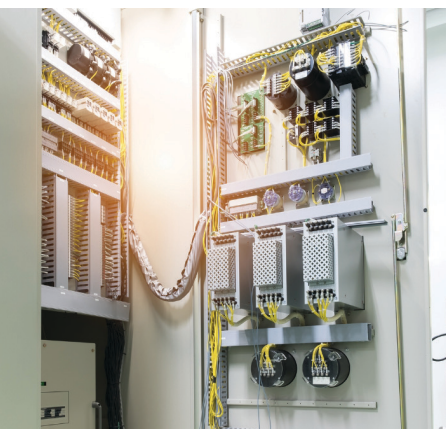
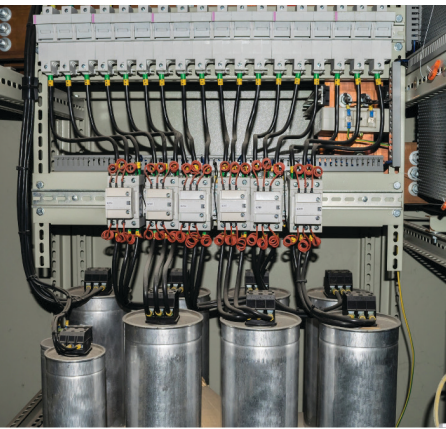


## APPLICATION STUDY: THE VCFP96M OPTIMIZES CAPACITIVE LOAD BANK MANAGEMENT WITH ADVANCED DIGITAL METERING



### BACKGROUND:

Capacitive load banks are vital for maintaining the reliability of power systems by simulating electrical loads. Accurate measurement and monitoring of electrical parameters such as voltage, current, power factor, and energy are crucial to improve Power Quality and ensure optimal performance. The VCFP96M Multifunction Meter offers a comprehensive digital metering solution for load banks, with advanced features for three-phase systems. Its versatility makes it suitable for a wide range of applications, including low, medium, and high voltage control panels, generators, building management systems, and power management systems. Traditional metering solutions often lack the flexibility and precision needed for modern load bank applications, creating a demand for a more advanced and user-friendly alternative.

### THE CHALLENGE:

To effectively monitor and maintain power systems, capacitive load banks are used to counteract undesirable changes in Power Factor from real world inductive loads. This requires precise monitoring of a wide range of electrical parameters, seamless integration with existing systems, and adaptability to various configurations. The VCFP96M addresses these challenges by providing a comprehensive and versatile metering solution that enhances the accuracy, reliability, and efficiency of load bank operations.

### THE SOLUTION:

The **VCFP96M Multifunction Meter** offers a robust and adaptable solution for capacitive load bank management, featuring:

- **Comprehensive Parameter Monitoring:** Measures voltage, current, power (active, reactive, apparent), power factor, energy, and frequency for precise load simulation.
- **CT Polarity Error Detection:** Allows smooth adjustment of current limits and time delays to eliminate short-term spikes and ensure precise control.
- **Total Harmonic Distortion (THD) Monitoring:** Measures harmonic distortion up to the 31st level, helping to identify and mitigate power quality issues.
- **Modbus RTU Communication (RS485):** Facilitates seamless integration with PC, PLC, RTU, data loggers, and SCADA systems for comprehensive data management and analysis.
- **Neutral Current Measurement:** Monitors neutral current to ensure balanced load conditions.

### THE FUTURE:

The VCFP96M Multifunction Meter will continue to play a pivotal role in capacitive load bank management, offering reliable and versatile metering solutions. Its advanced features, precision, and robust performance make it an essential tool for optimizing load bank operations and ensuring the reliability and efficiency of power systems across diverse applications.



Division of the Marsh Bellofram  
Group of Companies  
8019 Ohio River Blvd.  
Newell, WV 26050 USA  
Phone: 800-727-5646  
Fax: 304-387-1212  
[www.atcdiversified.com](http://www.atcdiversified.com)