Advantages of Remote Load Bank Testing

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The introduction of remote load bank testing into the marketplace is disrupting expectations and outcomes for load testing in a variety of ways. Remote technology streamlines the testing process by providing contractors and technicians the ability to control tests with greater accuracy while achieving higher safety standards than previously possible with panel-controlled units. This increase in accuracy gives data centers greater confidence that electrical systems will perform as specified and saves a significant amount of time and money.

Data centers house complex computer systems including redundant or backup power supplies consisting of multiple components such as rack-mounted servers, remote power panels (RPP), bus tracks, power distribution units (PDU), uninterruptible power supplies (UPS), and backup generators. Larger data centers will even be accompanied by a dedicated power substation to ensure consistent operation. For decades, contractors conducted multiple-load bank testing manually on these immensely complex systems and required dozens of technicians to be on hand throughout the testing process. It was, and in some cases, still is, done at great cost and time to the data center.

Remote technology is revolutionizing the testing process and having a dramatic impact on the efficiency and cost-effectiveness of load bank testing for data centers. This article looks at the primary factors dictating this shift and the advantages of remotes, beginning with a look at the objectives of remote load bank testing.

Objectives of Remote Load Bank Testing

The objectives of remote load bank testing are similar to those of traditional load banking, though may vary from one test site to another. No matter which industry you represent, a reduction in labor costs and the ability to perform complex tests with ease are two primary considerations when testing and commissioning any electrical system. Remote load bank testing removes much of the burden from personnel, who no longer need to activate load sequences manually during the testing process. This result decreases the amount of labor required to conduct a load test, as well as the time in which these tests can be completed, having an overwhelmingly positive impact on ROI.

Most remote capable load banks allow the operator to activate fans and control load distribution equally on all units within the network testing environment. Some remotes enable control of all load banks or offer the convenience for the operator to select individual load banks within a network and run tests solely on the group. The right load bank provider will have remotes available with pre-determined test sequences already programmed or customizable to your testing and commissioning needs.

Questions to ask Your Load Bank Provider regarding Remotes

There are several questions to ask your load bank provider to ensure the most accurate and safe test.

What ***Latency Does Your Remote Provide?*** In data center applications and for other large-scale electrical systems, accuracy throughout load testing is critical for a successful commissioning process. Latency refers to the milliseconds (1/1000 sec) it normally takes between an initial input signal received by a UPS system that power disruption has occurred and the UPS system's ability to begin operation and handle the electrical load necessary to continue data center operation. To achieve maximum testing accuracy and to properly simulate a real-world loss of power, the Information Technology Industry Council (ITIC) recommends latency at or below 16.6 milliseconds per cycle of AC wave. Industry range of current remotes on the market today range from 20 to120 milliseconds. This nearly-10-fold disparity in the length of latency can translate to inaccurate results during emulation testing, given that real-world latency for backup power systems is much faster.

Networking. The latest generation of load bank controllers enables users to interface with up to 50 networked load banks at any given time throughout the testing process. Individual load banks, as well as groups of load banks, can be given designated names. With the ability to sync each unit up to a single remote device, test operators can conduct more complex system-wide tests or tests that focus on specific parts of a larger network. In a data center setting, individual or group names can be configured to operate according to preset sequences. This method can help observers determine the precise location of weaknesses in a sequence and resolve any issues before going live with their data center.

ComRent and our team of remote load bank experts are prepared to address any inquiry and ensure the success of your testing project.

Contact us today at 888-881-7118 for a complimentary consultation. We will review your requirements and propose the right load bank solution for your application.

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