

Case Study

Teaming Up for More Power

Aggreko – global leader in temporary power solutions

B&B Electronics – manufacturer of industrial communication products

Aggreko is the world leader in the provision of temporary power and temperature control rental services. Aggreko operates in over 120 locations across the world with projects in a variety of climate conditions and locations—from utility grid support and mining operations to movie sets and even the Olympic games.

Aggreko provides large power installations for deployment in remotely located, developing regions. A typical power project installation includes a set of six generators and a transformer housed in 20 to 40 foot containers. Diesel or gas powered generators supply 0.5 MW to 1.0 MW power.

Recently, Aggreko incorporated a SCADA control system to monitor and control the diesel engine sets and monitor various I/O in generators and transformers. In addition to linking to engine control systems, each individual generator or transformer has a fire safety system. These engine and fire detection controllers use serial interfaces. The system includes other control components (such as Allen Bradley PLC® units) and operates on MODBUS/TCP protocol.

B&B Electronics provides Aggreko with two custom panel assemblies, incorporating industrial Ethernet serial servers to convert these serial devices to an Ethernet based SCADA system and to provide conversion to Modbus/TCP protocol.

Inside each transformer unit is a NEMA-rated panel kit from B&B Electronics utilizing two RS-485 data acquisition modules for I/O connections, a Modbus Ethernet serial server, power supply, relays, wiring, etc.

Mounted outside each transformer unit, another NEMA panel is comprised of an Ethernet unmanaged switch, power supply/battery charger, two 12V batteries, plus numerous connectors and Ethernet cable lengths. This panel is connected to each of the six generator and transformer sets and then connected back to the SCADA Master. IP67 rated Ethernet cables run between the transformer and generator units. IP67 Ethernet pass-through receptacles connect the cabling in and out of the panel enclosures.

In addition to the two panel assemblies, B&B Electronics also provides Aggreko with various Ethernet serial servers, managed switches, unmanaged switches, RS-485 and Ethernet I/O modules.

Of especial interest is the fact that B&B Electronics new line of serial servers, the Vlinx MESR series, was driven by Aggreko's unique power application needs. These Modbus Ethernet to serial servers offer total fiber networking and auto detection/reconnection to keep power systems up and running.

B&B Electronics serves a broad array of customer interests, including electrical power utilities, heavy electrical industries, oil and gas suppliers, medical instrumentation, defense contractors. Off-the shelf or custom, whether you need one product or an assembly of data products, B&B Electronics has the technical expertise and customization services to make your communication needs become a reality.

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