

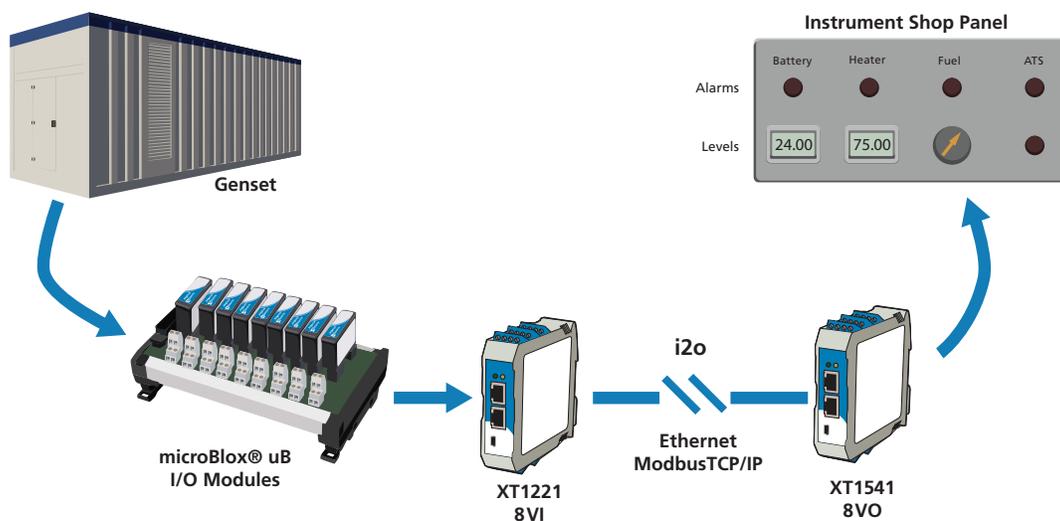
Application Note: Monitoring Genset Systems in Standby Mode to Ensure Reliable Backup Power

Defining the Problem:

Gensets typically include control systems that monitor and control the engine functions. Primary functions are start/stop control, engine speed, operating parameters, and protection/shutdown. As back-up systems, gensets may operate less than 100 hours per year. While in the standby mode, it is critical to monitor and maintain the genset system to prevent a failure-to-start condition.

System Requirements:

During standby mode, the battery voltage, fuel level, block heater and transfer switch operation must be monitored. With most gensets installed in remote locations, a suitable method to transmit conditions during standby mode back to an instrument shop is required. Remote acquisition over an Ethernet LAN is preferred for short to medium distances. For longer distances, cellular, satellite or cloud services can be required. Analog and alarm status should be displayed for continuous monitoring in the instrument shop.



Implementing the Solution:

1. The microBlox® uB modules accept many types of inputs including battery voltage, low fuel level (4-20mA), heater temp (RTD) and genset ON/OFF (switched voltage).
2. With configuration via *Bluetooth*® technology, each uB can be set up as a transmitter (0 to 5V output) or an alarm (0 or 5V output).
3. Using i2o: In the field, the XT1221-000 has 8 VI. At the shop, the XT1541-000 has 8 VO.
4. For i2o, map each VI to a VO. Modbus TCP/IP messages are sent over any Ethernet media.

Featured Products:

microBlox® Configured via Bluetooth® technology:
[uB31-B](#), [uB32-B](#), [uB34-B](#)
 Ethernet i2o: [XT1221-000](#), [XT1541-000](#)
 Acromag [Agility™ Mobile App](#)

Why Acromag:

Acromag offers versatile signal conditioners providing transmitter or alarm outputs as well as easy to set up and fast configuration using the Agility™ mobile application. MicroBlox® uB modules offer high performance with wide temperature operation for outdoor applications and vibration/shock ratings for engine monitoring.