

API-Cecom Group *n'fo*

Technical & Application Note A104

Application: Monitoring station battery current and voltage

Type of Company: Public Utility

Location: Wyoming

Problem: A battery room is a room in a facility used to house batteries for large-scale custom-built backup or uninterruptible power systems providing electric power for telecommunication and computing equipment in datacenters, telephone company central office facilities, and remote telecommunications stations. Battery rooms are also found in electric power plants and substations where reliable power is required for operation of switchgear, critical standby systems, and possibly black start of the station. The batteries provide direct current (DC) electricity primarily for uninterruptible power supply (UPS) equipment, which in turn provides continuous, uninterrupted alternating current (AC) power for the facility. The batteries may provide power for minutes, hours or days depending on the electrical system design. Often batteries for large switchgear line-ups are 125 V or 250 V nominal systems, and feature redundant battery chargers with independent power sources. The customer needed to monitor both the voltage and current for the station batteries. He already had a DC millivolt shunt installed from an obsolete system but he needed a unit to interface with his new “Foxboro” DCS system.

Note: for additional information on this process see http://en.wikipedia.org/wiki/Battery_room

Solution: API furnished him an APD 2000 with Channel 1 factory ranged for the output from the DC shunt and Channel 2 factory ranged for the battery voltage. The unit has independent span and zero adjustments as well as LED's to help the maintenance technician with installation and maintenance. The end result is that the customer has confidence that his batteries are always ready for emergencies.



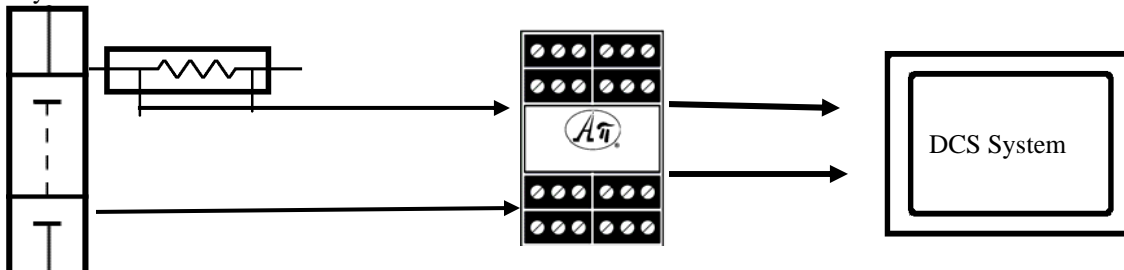
APD 2000

Dual Channel DC to DC Converter/Isolator/Transmitter



Photo by Jelson25

Battery Bank



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