

# API-Cecom Group *n'fo*

## Technical & Application Note A133

Application: Monitoring water quality using pH and ORP

Type of Company: OEM for chemical monitor and control

Location: Illinois

**Problem:** The customer manufactures the equipment and control system to maintain water quality in commercial swimming pools. Contaminants introduced by swimmers and environmental sources can dramatically influence the operation of both indoor and outdoor swimming pools and are of great concern as they have been associated with numerous recreational water illnesses such as diarrhea, swimmers ear, skin rashes and respiratory infections. The customer uses an Automation Direct PLC with Van London-pHoenix pH and ORP sensors to ensure that the chemicals used to sanitize the undesired contaminants are at the proper and safe levels. The main issues are the interface interaction and isolation issues between the sensors and the PLC.

*Note: for additional information on this process see [http://en.wikipedia.org/wiki/Swimming\\_pool\\_sanitation](http://en.wikipedia.org/wiki/Swimming_pool_sanitation)*

**Solution:** The customer used a custom modified APD 2000 to interface the outputs from the sensors (one channel for pH and one channel for ORP) to the inputs to the PLC. The APD 2000 also furnishes the required isolation to eliminate the interaction problems between the PLC input channels.

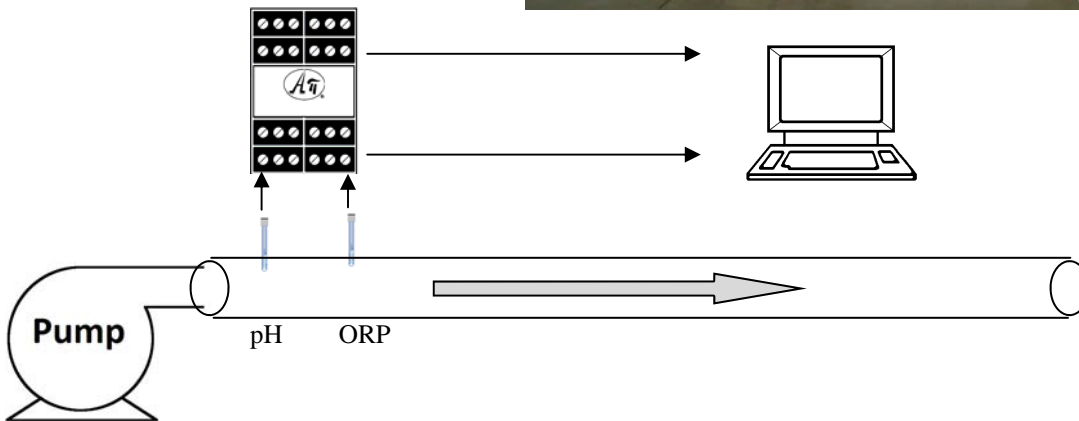


APD 2000

Two Channel DC to DC Signal Converter/Isolator/Transmitter



Photo by GaryRuley



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