

API-Cecom Group *n'fo*

Technical & Application Note A102

Application: Monitoring voltage on SCR motor drives

Type Of company: Oil drilling rig manufacturer

Location: Texas

Problem: The customer is a manufacturer of oil drilling rigs. They utilize SCR drives because the application requires smooth stepless speed control with reverse and braking capabilities. SCR drives have become the standard for DC motor drives on land rig equipment as well as offshore because they are built to last. The components used for these drives are carefully selected to endure the extensive demands of drilling rig applications and have lower maintenance costs.

Note: For additional information on SCR drives see http://en.wikipedia.org/wiki/Motor_controller#SCR_or_thyristor_drive

The customer has a requirement to monitor the 1000 VDC on the SCR drive. This information will be sent to a PLC to calculate power usage and efficiency. This information is integrated into the rigs control and power monitoring system.

Solution: The customer purchased an APD HV-DC D The customer does require isolation for the analog input card to the PLC and the APD provides this as well as the ability for sinking/sourcing for the 4-20 mA output signal for either single ended or differential inputs. This solution allows the customer to seamlessly integrate the motor usage/operation information into the rigs control and power monitoring system.

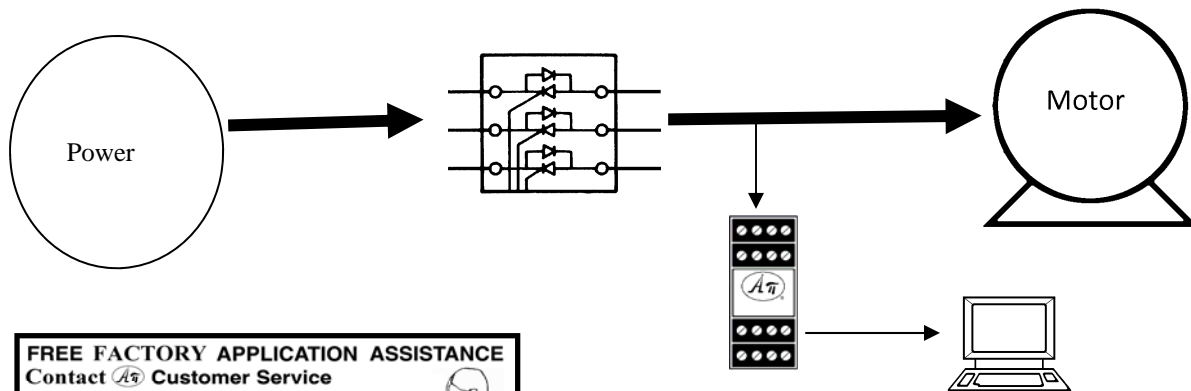


APD HV-DC

High Voltage DC to DC Isolated Transmitter



Photo by Lindsey Girard



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