



Applications for DC Transducers and DC Switches

Many catastrophes can be avoided by using current sensors to monitor critical loads. When loads are powered by DC current it becomes more of a challenge than monitoring AC current. By far the simplest and most accurate method is to use an NK Technologies DT or DS series current sensor. This Hall-based non-contact design requires no cutting or terminating of the conductor. Just pass the lead through the sensor, or snap the sensor in place over the lead, and the sensor is ready to go.

DT transducers produce a signal to the control system proportional to the current in the conductor, and the DS switches provide a contact, solid-state or electromechanical relay, which changes state at an adjustable current level.

NK Technologies can provide a cost effective method to monitor DC powered loads. Compare features with competitive methods; we hope your choice will be the most accurate, reliable and responsive current sensing products available.

Common DC loads

- **Welders**
Measure output, duration and operation
- **DC Powered Saws**
Monitor for proper operation
- **Overhead Cranes**
Interlock drive with auxiliary equipment
- **HV Switch gear**
Fail-safe magnetic interlock
- **Electrolizers**
Monitor process conditions
- **Water Purification**
Electrodeionization (EDI)
- **Locomotives**
Positive indication of brake operation
- **Trolleys**
Drive motor field loss protection
- **Battery Charging**
Proportional signal to charge or discharge current
- **Photovoltaic Arrays**
Indicates proper output and connection integrity

New Bi-Directional Sensor Output

Bi-Directional transducers produce a positive voltage signal proportional to the DC current circulating in the primary direction and a negative voltage proportional to the DC current in opposite direction.

Applications include:

- Monitoring battery charge or discharge current magnitude
- Indication of DC motor rotational direction

Photovoltaic Array Combiner Box

The photo to the right shows NK Technologies' DC current sensors in a photovoltaic array combiner box application. The current produced by each PV string provides the facilities manager with the data required to maintain the collectors and keep the system working at the optimal level.

