

Smarter Preventative Maintenance with NK Technologies

Description

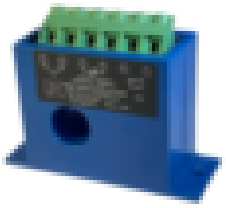


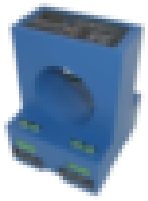
The Challenge

In many industrial applications, monitoring electrical heating elements for leakage to earth is essential. Over time, insulation of electrical apparatus can degrade, contributing to leakage.

When a heating process should not be interrupted until itâ€™s completed, disconnecting power through a ground fault circuit interrupter isnâ€™t ideal. For example, if the heating process is halted before annealing parts reach the target temperature, they will not be properly hardened and must be scrapped.

While allowing the process to finish isnâ€™t as safe as disconnecting the faulty circuit, itâ€™s certainly better â€” and far more cost effective â€” than scrapping entire batches of parts.







The Solution

NK Technologies provides a smart way to prevent premature process interruptions with the AGT-FD Series Ground Fault Relay.

This relay produces an output signal proportional to current leakage to earth, allowing operators to monitor deteriorating insulation or direct shorts to ground. The sensorâ€™s signal can be read with a panel meter or a programmable logic controller (PLC).

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If the fault current exceeds a set threshold, a limit alarm contact or PLC output can trigger audible or visual alerts, notifying operators that an issue is imminent or that a hard fault has occurred. At that point, corrective procedures can be initiated before a full system shutdown is required.

Because the relay provides an analog sensor output, multiple alarm points can be established. For example, one alarm may trigger if leakage exceeds 10â€“20 mA, while another can activate at 50 mA to prompt more extensive action.

Preventative Maintenance Benefits

This monitoring approach also strengthens preventative maintenance programs. Leakage thresholds can be defined at which maintenance should be performed, allowing faulty elements to be replaced before failure.

Beyond heating processes, additional applications that benefit from the AGT-FD relay include:

- Semiconductor wafer fabrication
- AC motor load monitoring
- Plastic molding processes
- Heat trace cable systems
- Snow melt protection

By incorporating this solution, operators can improve safety, reduce costly downtime, and extend equipment life â€” all while keeping critical processes running smoothly.

Partnering for Smarter, Safer Maintenance

CDI proudly partners with NK Technologies to deliver innovative solutions that boost safety, reduce downtime, and support cost-effective preventative maintenance.

Let us help you lower your productivity costs and build a smarter maintenance strategy!

About CDI

Component Distributors Inc. (CDI) is a value added distributor of electronic components providing Power, LED Lighting Solutions, RF & Microwave, Sensors & Wireless Solutions, and Precision Measurement products for simple to complex system applications.

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