



PulseClosing® Technology Saves Transformers From the Stress of Damaging Fault Current

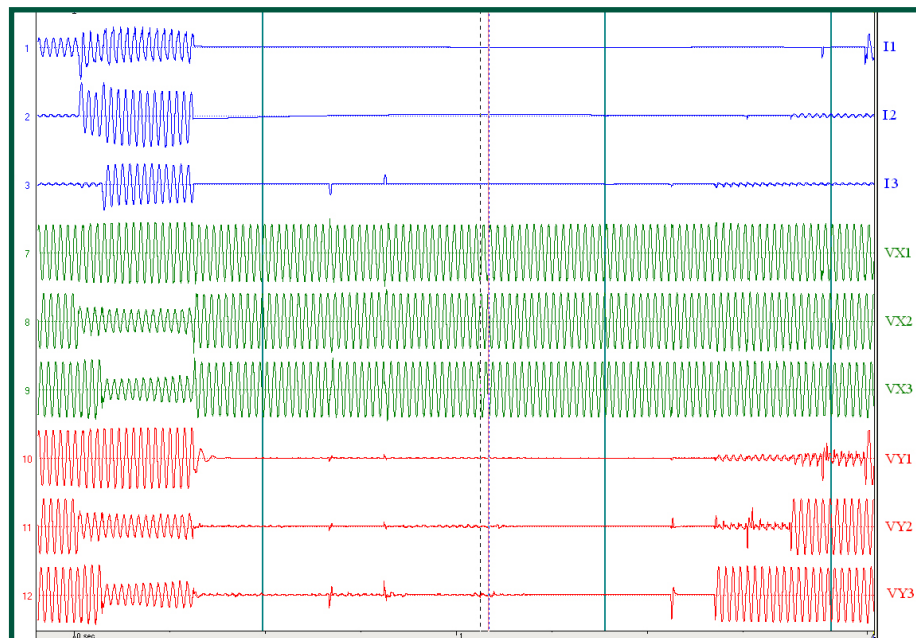
S&C Featured Solution:

A major benefit of S&C's revolutionary IntelliRupter® PulseCloser® Fault Interrupter—PulseClosing® Technology—was recently demonstrated at Murfreesboro Electric Department, the electric utility serving customers in Murfreesboro, Tennessee.

In July, an IntelliRupter® fault interrupter on their system tripped upon sensing a 2700-ampere phase-to-phase fault. After a 0.3-second delay, the IntelliRupter fault interrupter then used PulseClosing Technology to verify that the line was clear of faults before initiating a closing operation. Fault current was indeed still detected on one phase . . . so the IntelliRupter fault interrupter did not close.

By contrast, a conventional recloser would have closed in this instance. The substation transformer, conductor splices, and other equipment would have been subjected to damaging fault current until the recloser decided to open again. And upstream customers would have been subjected to another irritating voltage sag in the interim. The consequences would have been magnified if multiple reclosing attempts were necessary.

After a 15-second delay, the IntelliRupter fault interrupter used PulseClosing Technology to sense the fault. But no fault current was detected this time, so IntelliRupter fault interrupter closed, restoring service to downstream customers.



The illustration shows a nine-channel waveform captured by IntelliRupter fault interrupter, showing 2700-ampere phase-to-phase fault that triggered tripping. After a 0.3-second open interval, PulseClosing Technology still detected fault current, so closing was not initiated. After an additional 15-second delay, PulseClosing Technology detected no fault current, so closing was initiated, restoring service downstream. Source-side voltage—shown in the middle three waveforms—was virtually unaffected by PulseClosing Technology.

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S&C ELECTRIC COMPANY

Excellence Through Innovation

PulseClosing Technology reduces the wear and tear on power system equipment by saving it from the repeated stress of fault current. It extends the life of costly assets, helping to defer the need for replacement equipment. By dramatically cutting let-through energy, PulseClosing Technology greatly reduces the risk of fire in dry areas too.

But PulseClosing Technology is only one of the unique features of IntelliRupter fault interrupter. With its compact flash storage, IntelliRupter fault interrupter can retain tens of thousands of event records...over a half year of time-averaged data. Data is not only available locally, but can be downloaded at your office using

S&C's IntelliLink® Remote Setup Software. And IntelliRupter fault interrupter features the PulseFinding™ Fault Location Technique, which allows simpler and better series coordination and greater segmentation.

IntelliRupter fault interrupter is, of course, fully compatible with S&C's IntelliTeam II® Automatic Restoration System. This self-healing, scalable feeder reconfiguration system is a universal Smart Grid solution. It offers unmatched interoperability and can automate new as well as existing circuits.