HOW DO NOSPARC ARC SUPPRESSORS WORK?

Power contactors have been switching power to electrical systems (motors, compressors, etc.) for more than a century, but all of these contactors have one fatal flaw: Each time a pair of contact points opens, a powerful arc is generated that pits and scars the surfaces of the points and eventually (and prematurely) destroys them.

NOsparc® arc suppressors solve this problem by sensing the precise moment of contact point separation, and then briefly shunting the arc-causing current through the NOsparc device itself. This process removes 99.9% of the arc energy, which effectively ends self-destructive contact arcing and enables the contactors to last at least 10 times longer than their specified number of cycles.

There are five primary, functional elements to a solid-state NOsparc arc suppressor:

- A trigger lock (TL), which prevents triggering when the contact is in the open position
- A contact separation detector (CSD) that detects the very moment of contact separation
- A by-pass trigger (BPT), which triggers the BPE upon receipt of contact separation signal
- A current by-pass element (BPE) that shunts the current away from the contact for a short period of time:
  - For up to a half cycle in AC NOsparc products
  - For a few milliseconds in DC NOsparc products
- An overvoltage protector (OVP) that protects the arc suppressor from external voltage stresses

Three issued patents protect this novel technology, and an additional three patents are pending.