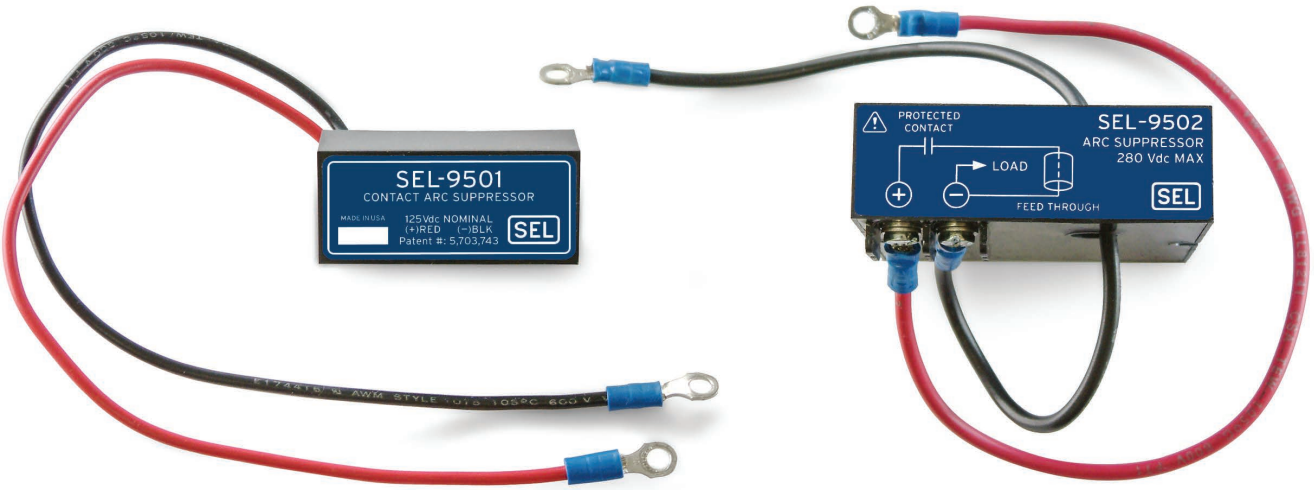
SEL-9501 AND SEL-9502

CONTACT ARC SUPPRESSORS



KEY FEATURES

IMPROVE RELIABILITY WHILE PREVENTING CONTACT DAMAGE

Eliminate Contact Arcing in DC Circuits

Reduce contact wear to lower the need for service and maintenance.

Remove Unnecessary Contacts

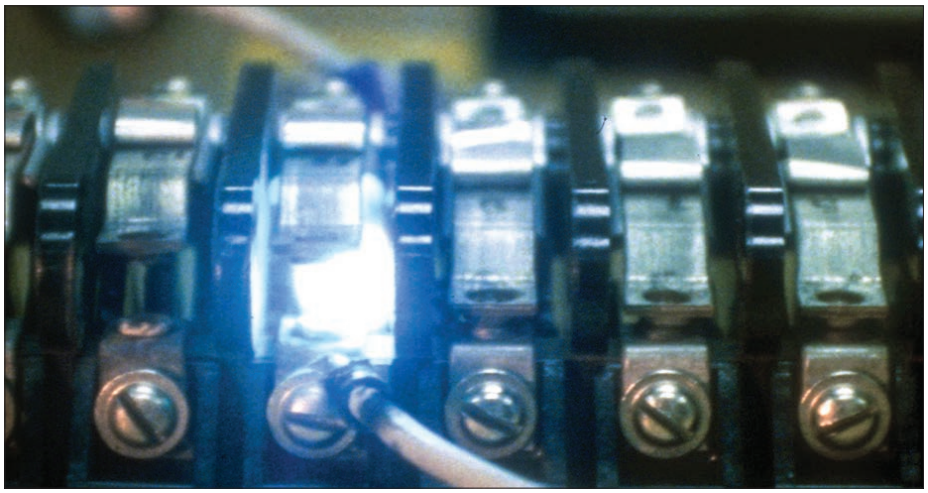
Place an SEL Contact Arc Suppressor over a contact to increase its interrupt rating and to remove redundant series connections of several contacts.

Protect Multiple Contacts With a Single Unit

Place an SEL Contact Arc Suppressor across multiple contacts in parallel, and improve their effectiveness.

Reduce Circuit Noise

Minimize false indications or inadvertent control actions by reducing electrical noise.



PROTECT EQUIPMENT FROM DAMAGING ARCS WITH SEL CONTACT ARC SUPPRESSORS

SEL-9501

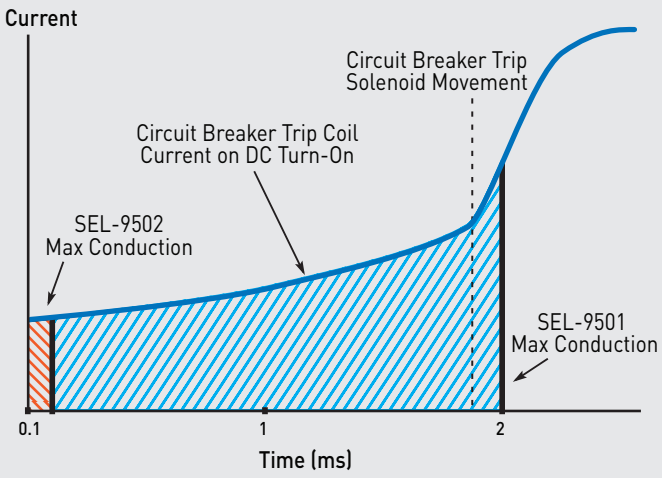
- Protects nearly any dc contact up to 160 Vdc.
- Provides affordable contact protection where high-speed trip or close is not required.

SEL-9502

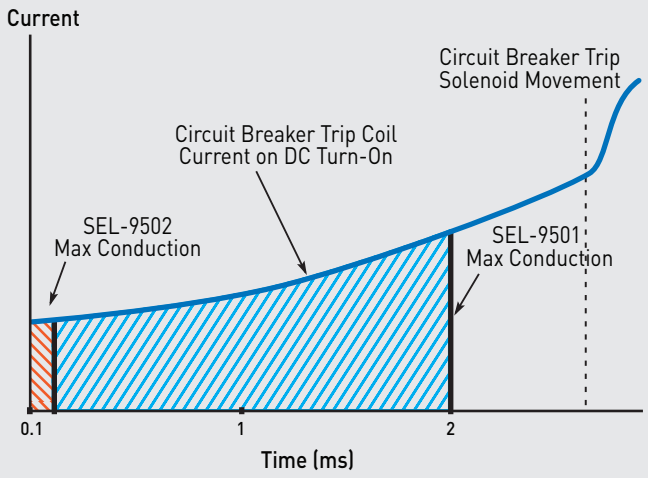
- Eliminates faulty circuit breaker tripping from let-through current on dc energization.
- Protects contacts in dc circuits up to 280 Vdc.
- Protects high-speed trip and close contacts from damage when they interrupt or close due to a failed circuit breaker or malfunctioning auxiliary switch.

SEL-9501 AND SEL-9502 MAXIMUM LET-THROUGH CURRENT DURATION AND CIRCUIT BREAKER TRIP COIL CURRENT

Apply SEL-9502 if a 2 ms Trip Pulse Causes the Breaker to Open



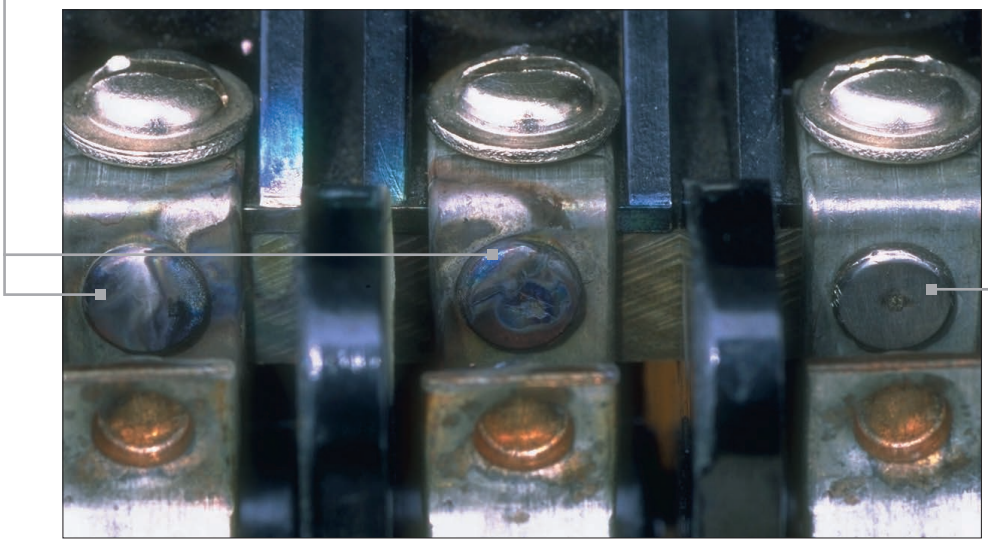
Apply SEL-9501 or SEL-9502 if a 2 ms Trip Pulse Will Not Open the Breaker



These graphs show a circuit breaker's trip point compared to the current let-through time on dc turn-on for the SEL-9501 and SEL-9502. The SEL-9502 prevents unintentional trips by providing minimal current let-through.

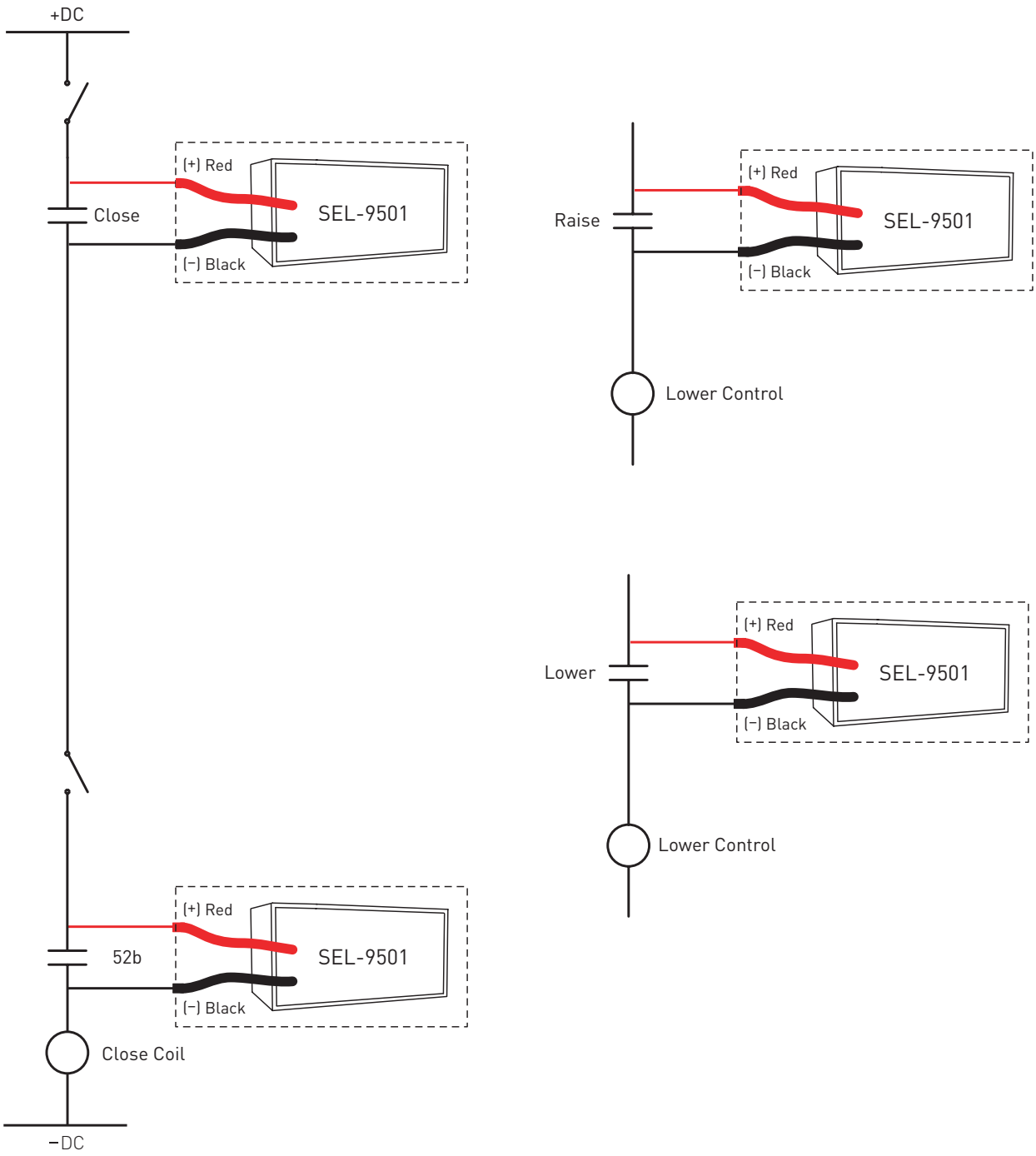
The two contacts on the left side were connected in series to interrupt current.

The single right contact was protected by the SEL-9501 under the same test conditions.

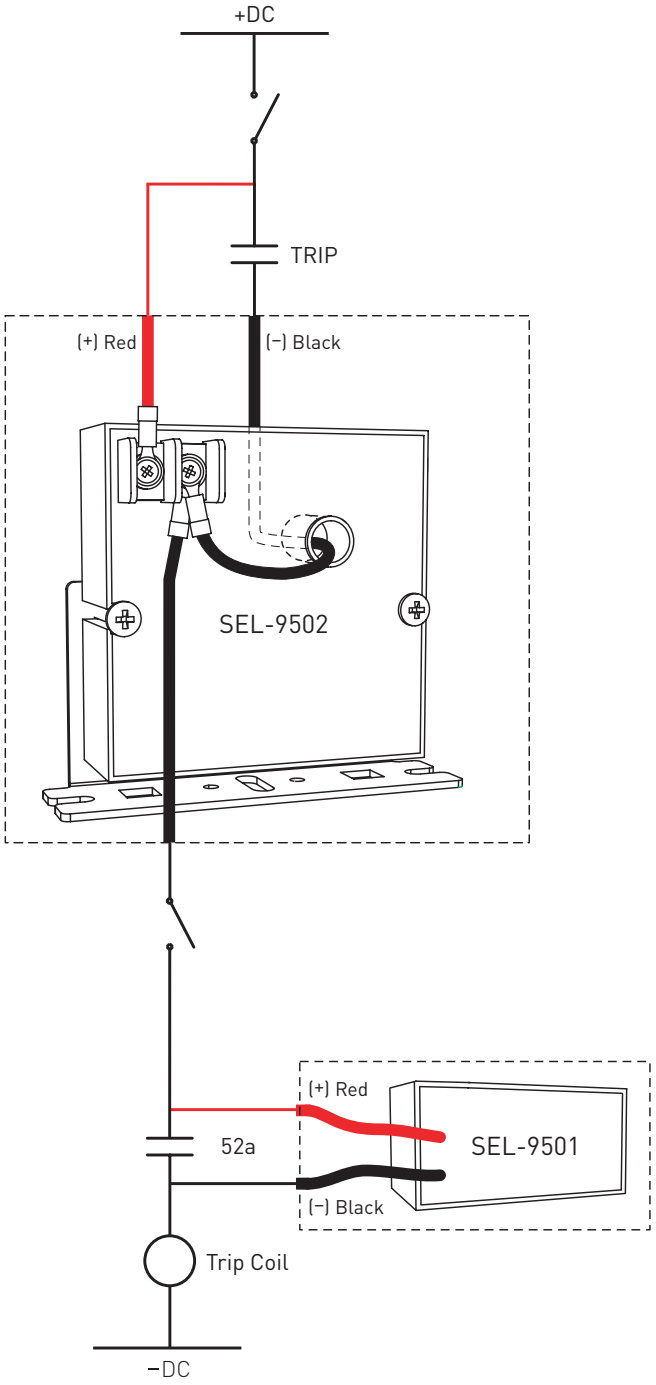


The unprotected contacts show burning, pitting, and discolorization, while the contact protected by the SEL-9501 remains undamaged.

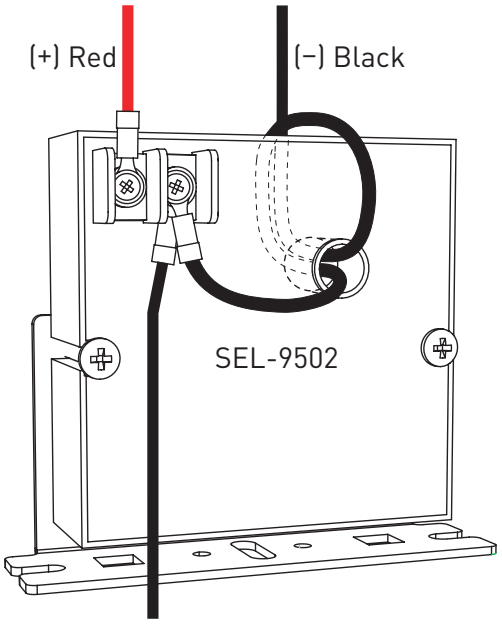
TYPICAL CONTACT ARC SUPPRESSOR APPLICATIONS



Typical SEL-9501 Contact Arc Suppressor Application
(160 Vdc maximum)



Typical SEL-9502 Contact Arc Suppressor Application (280 Vdc maximum)



To apply the SEL-9502 to circuits with load current less than 1 A, wrap the negative terminal lead through the hole in the SEL-9502 twice, as shown. Placing two turns through the current sense circuit of the SEL-9502 allows it to reliably sense currents as low as 0.4 A.

APPLICATION SUMMARY

EXTEND THE LIFE OF YOUR CONTACTS

- Increase contact reliability and dependability.
- Reduce destructive dc circuit overvoltages.
- Smoothly interrupt the current, and let the SEL Contact Arc Suppressors dissipate the inductive energy as heat, instead of welding or vaporizing the metal of the contacts.
- Increase contact ratings economically.

CHOOSE THE APPROPRIATE SEL CONTACT ARC SUPPRESSOR FOR YOUR APPLICATION

- The SEL-9502 has a lower current let-through time to ensure you won't accidentally trip a circuit breaker on dc energization.
- Use the SEL-9502 in higher-voltage operations.
- The SEL-9501 can be installed in parallel with most dc contacts.

INSTALLATION SUMMARY

Observe the proper polarity when connecting the SEL-9501 or SEL-9502. Failure to do so may cause equipment misoperation or damage the contact arc suppressor.

SEL-9501

Easily connect the red lead terminal to contact +Vdc and the black lead terminal to contact –Vdc.

SEL-9502

1. Use the supplied bracket to mount the SEL-9502 to any available surface close to the protected contact, keeping the leads as short as possible.
2. Connect the SEL-9502 across the contact, routing the connection to the negative terminal of the contact through the hole in the SEL-9502 (in either direction).
3. Connect the load to the negative terminal of the SEL-9502.

SPECIFICATION SUMMARY

SEL-9501

- Voltage rating: 160 Vdc
- Circuit clamping voltage: <400 V
- Let-through current time at dc turn-on: 2000 µs
- Leakage current: <150 µA at 125 Vdc
- Not for use with reed contacts

SEL-9502

- Voltage rating: 280 Vdc
- Circuit clamping voltage: <500 V
- Let-through current time at dc turn-on: 100 µs
- Leakage current: <150 µA at 125 Vdc
- Not for use with reed contacts

**MAKING ELECTRIC POWER SAFER,
MORE RELIABLE, AND MORE ECONOMICAL**

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