

THE RISK BEHIND DC CROSS-CONNECTIONS

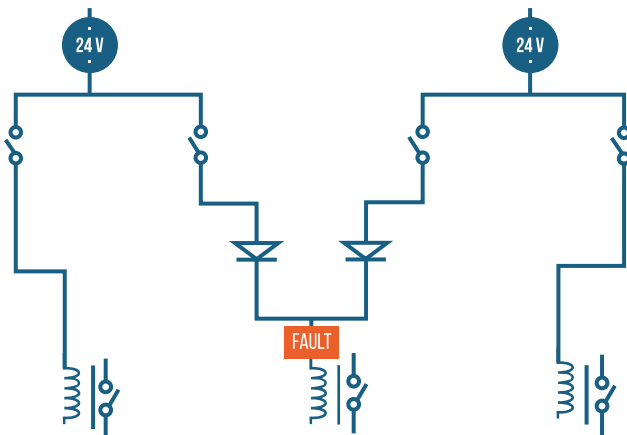
24V DC cross-connections have been identified by industry stakeholders as a significant threat to the redundancy of dynamically positioned vessels.

A fault that starts downstream of a cross-connected power supply can propagate back through the system, putting both redundancy groups at risk. If it propagates, it can affect other equipment connected to that same supply. In this setup, one fault could impact multiple parts of the vessel.

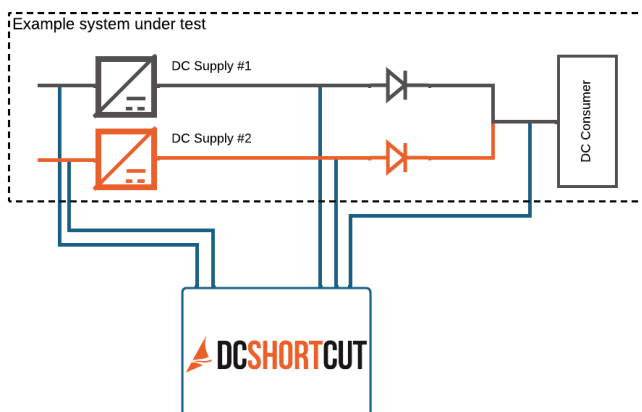
Reliable power supplies and modern protection devices have improved safety, but design alone doesn't prove that a fault will be contained. Vessel owners still need to demonstrate that their setup can prevent a fault from spreading.

A SAFER WAY TO TEST A KNOWN RISK

OneStep Power has developed the DC Cross-Connection Short Circuit Under Test, or DCShortCUT.



DCShortCUT verifies whether a vessel's 24V DC cross-connections can contain a fault. It's the only test package that checks this fully, using real conditions in a controlled environment.



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The system is temporarily installed on both sides of the diode protection modules. It lets vessel teams see how their system responds to an actual fault without making permanent changes or taking unnecessary risks.

	DOWNSTREAM OF PSU1	DOWNSTREAM OF PSU2	DOWNSTREAM OF PSU1 & PSU2 SIMULTANEOUSLY	BETWEEN PROTECTIONS & LOAD
Load Increase	✓	✓		✓
Overload	✓	✓		✓
Short Circuit	✓	✓	✓	✓
Short to Ground / Earth Fault	✓	✓	✓	✓
Variable over-voltage (max 120%)	✓	✓		✓
Loss of Power Supply	✓	✓		

BENEFITS

The key benefits of DCShortCUT testing include:

- No changes to protection settings
- No permanent changes to the system
- Tests how the system responds to a real fault
- Clear pass/fail results that can be repeated
- Controlled remotely to keep the crew clear of the test zones
- Fast to install and remove

ONESTEP POWER DCSHORTCUT PROCESS

- A test plan specific to your vessel is created and approved by stakeholders
- Our team performs the test on board
- Pass/fail feedback is provided in real time
- An evidence-backed report follows, with visuals