ARCSAFE® Insulation Fault Probe

Fault location

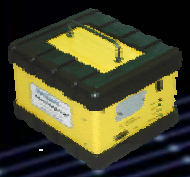
- Uses an ultra low-power high-voltage discharge to locate insulation breaches
- Used with the Micro-Energy Tool or standalone
- Test single or bundled wiring
- Identifies exact location of a fault
- Will not damage wiring or connectors

Self Contained Unit

- Probe
- Test Unit and Controller
- Helium source

How does **ARCSAFE®** work?

- The tools use micro-energy high voltage (MEHV)
  - Similar to static electricity
  - Energy is typically in the micro-joules range
- MET



  - Voltage is programmable from $0V_{DC}$ to $4500V_{DC}$
  - Charge energy can be limited as well
  - Charges the wire under test to the programmed level
  - If there is a breach, a small discharge occurs
  - The discharge signal is used to calculate the distance to the fault
- IFP

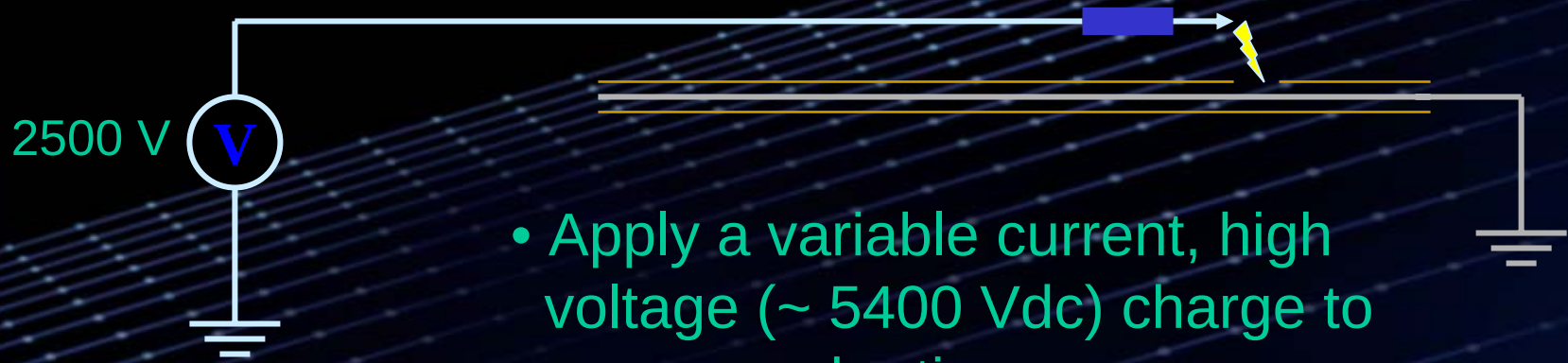
  - MEHV is used to probe for breaches in wire insulation
  - Helium gas enhances the sensitivity
  - No connection to the wiring is required

Applying MEHV: Direct (MET)

- Apply a constant current to two conductors
- High voltage charge develops using parasitic capacitance*
- Discharge occurs at insulation breach

* Maximum charge voltage between conductors can be limited from $0V_{DC}$ to $4500V_{DC}$

Applying MEHV: Indirect (IFP)



- Apply a variable current, high voltage (~ 5400 Vdc) charge to a probe tip
- Ionic stream will seek a low impedance path to ground
- Helium gas is used to increase the effectiveness

The MET and IFP tools can be used independently, with each other, or in conjunction with other fault locating tools:

- TDR Fault locating tools
- Wire harness testers
- others

ArcSafe®

Using the MET and IFP tools with each other:

- Use the MET to discover and roughly locate faults
- Use the IFP to precisely locate a fault indicated by the MET