



### DESCRIPTION

The SP400/VP400 Proving Units provide a safe and reliable means of checking the correct functioning of Multimeters and two pole Voltage Indicators (VIs) before and after use as advised in the Working Practice for electricians. Additionally they have the capability of checking the operation of Non-contact voltage detectors.

SP400 is a battery powered proving unit. VP400 is designed to be permanently mounted and powered from a 12V vehicle supply

The SP400/VP400 will also test two-pole VIs that use small incandescent lamps to indicate that voltage is present. Both SP400/VP400 have a unique and logical safety function - the test voltage generated is at 50Hz to synthesise a genuine test at AC mains supply frequency - so it will always read correct using the AC range of your Tester or Multimeter.

### FEATURES

- Intelligent voltage ramp for testing multimeters and Voltage Indicators
- Generates from 50-690V with a true AC waveform output
- Non-contact voltage indicator test feature
- Powerful enough to light old filament style test lamps
- Automatic operation and turn-off.

## HOW TO USE

1. Prove your VI is working by placing a probe in each hole. Contact the bottom with the right hand hole then apply gentle downward pressure on the (red) left hand probe - this will activate a switch - the Power LED will illuminate and the proving unit will launch into Auto Prove Mode.
2. The Proving Unit output voltage will automatically step up to 690V (note the 400V LED is used to indicate all voltages greater than 400V) and then step back down 690V→ 400V→ 230V→ 100V→ 50V→ OFF (to re-prove slightly lift the left-hand probe and re-apply the downward pressure).

The advantages of the Auto Prove Mode are:

- a) individual voltages are applied at key voltage test points
  - b) If the Two Pole Voltage Indicator draws a high current from the proving unit the Auto Prove mode will pause. This is a useful feature for testing certain types of Two Pole Voltage Indicators including those with filament lamps. Eg Drummond and Cyclim.
  - c) significant battery savings as power is automatically switched off when the Proving Test is completed
3. In addition your proving unit can also test non-contact type voltage detectors. If necessary activate the Voltage Detector (switch on) - apply the detecting tip to the area indicated on the front panel and press the Push to Test switch to check for correct operation.
  4. Having established that the VI is working correctly carry out the testing required - if in doubt at any time use the Proving Unit to reprove the correct functioning of the VI.
  5. Having completed your test session always re-prove the VI used to ensure that the VI is still functioning correctly.

## VP400 – Vehicle Powered Proving Unit

This product is designed to be wired in to the 12V supply of a vehicle. RED (+12V) and BLACK (0V) and should be taken from a fused outlet.

There is no difference in operation to the standard Proving Unit. An extra isolating circuit within the proving unit maintains safety even in single fault conditions.

## SPECIFICATION

- Output voltage: 50-690V in five steps of 50V, 100V, 230V, 400V and 690V
- Power supply: 6x AA alkaline batteries (SP400), 12V Vehicle supply (VP400)
- Operating conditions: -10 to +35°C at 95% RH, non-condensing
- Output frequency: 50Hz pseudo sine wave
- Maximum Output power: 10W
- Battery Life: 10 hours with average use when testing high and low power testers (SP400)
- Weight: 346g
- Dimensions: 130mm(W) x 68mm(H) x 48mm(D)
- LVD: BSEN 61010-1 (2010)
- EMC: 61326-1 (2006)



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