

SOCKET & SEE™

SP200, SP400 & VP400 Proving Units

Instruction Manual & Specification



VP400



SS0019V2

SP200







SP400



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1. Safety

1.1 Equipment Markings

	Caution - refer to the instruction manual
	Construction is double insulated
	Product should be recycled as electronic waste
	Conforms to EU standards

1.2 Operational Safety

Warning - Risk of Electric Shock !

The proving unit generates up to 690V.

The Socket and See SP200, SP400 and VP400 proving units are designed to be used by skilled persons in accordance with safe methods of work. If the proving unit is used in a manner not specified by Socket and See, the protection provided by it may be impaired.

Inspect the proving unit before using. If any damage is visible such as cracks in the casing the unit should not be used.

Before use ensure the proving unit is free from moisture, grease and dust. If the unit requires cleaning use a soft dry cloth only.

2. Description

The UK designed SP200, SP400 and VP400 Proving Units provide a safe and reliable means of checking the correct operation of Multimeters and two pole voltage Indicators (VI).

The SP200 and SP400 are powered by 6 x AA alkaline batteries whereas the VP400 is designed to be permanently mounted in a vehicle and operated from its 12V supply.

2.1 Features

- Intelligent voltage ramp for testing multimeters and VI's.
- Generates outputs from 50 - 690V with a true AC waveform at 50Hz. This means it will always read correctly using the AC range of your tester or multimeter.
- The SP400 and VP400 proving units both have a non-contact voltage detector facility.
- Powerful enough to light old filament style lamps.
- Automatic operation and turn-off for ease of use and battery conservation.

2.2 Indication

The voltage ramp indication on all proving units is displayed clearly using red LEDs.

The SP400 and VP400 indicate at 50-110-230-400 V

The SP200 indicates at 50-100-230-400-690 V

All proving units have a blue LED Power indicator that will flash to indicate when batteries need to be changed.

**SP400 Proving a Socket and See
VIP ESI Voltage Indicator**



3. Usage

3.1 Battery Installation and Status

The SP200 and SP400 use 6 x LR6 AA alkaline batteries.

Do Not use rechargeable batteries.

The batteries are accessible by removing two screws on the rear of the units case.

Ensure all testers are disconnected before accessing batteries.

Do not mix old and new batteries.

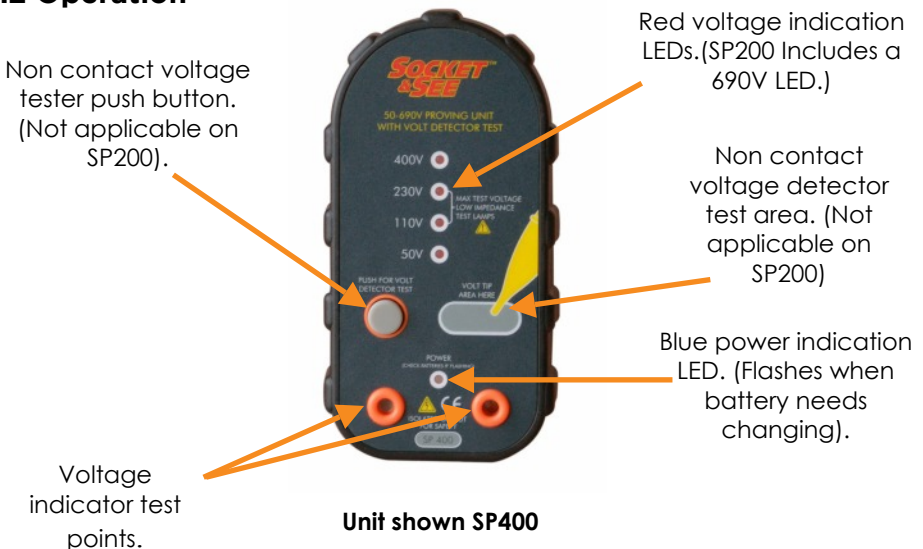
For maximum life use only good quality batteries.

Dispose of batteries as required by local regulations.

The Blue power LED will flash when in operation if the batteries need to be changed.

The VP400 is designed to be hard wired into the 12V supply of a vehicle. The supply should be taken from a fused outlet. RED (12V) and BLACK (0v). An extra Isolating circuit within the proving unit maintains safety even in single fault conditions.

3.2 Operation



3.3 How to Use

- 1) Prove your voltage indicator (VI) is working by placing a probe in each test point. Contact the bottom with the right hand probe then apply gentle downward pressure on the left hand probe. This will activate a micro switch, the blue power LED will illuminate and the proving unit will launch into Auto Prove Mode.
- 2) The Proving Unit will automatically step up to 690V. (On the SP400 and VP400 the 400V LED is used to indicate all voltages greater than 400V). The unit then steps the voltage back down, (690V - 400V - 230V - 100V - 50V - OFF). To reprove the VI again, simply raise and then depress the left hand probe and the Auto Prove Mode will cycle again.

Advantages of the Auto Prove Mode

- Individual voltages are applied at key voltage test points.
 - If the two pole VI draws a high current from the proving unit the Auto Prove mode will pause. This is useful if testing certain types of two pole voltage testers, including those with filament lamps.
 - Significant battery savings as the power is automatically switched off when the proving test is complete.
 - After completion of the auto prove there is a closed circuit between the voltage indicator test points. This means that if your VI has a continuity tester it will prove its operation and sound to confirm completion of the process.
- 3) Having established that your VI is working correctly carry out the testing required. If you are in doubt at any time use the proving unit to reprove the correct functioning of the VI.
 - 4) Having completed your testing with the VI use the proving unit to ensure that it is still functioning correctly.
 - 5) In addition to two pole VI proving the SP400 and VP400 can test non contact voltage detectors (NCVD). To do this depress the Volt Detector Test button and the red indication LED's and blue power LED should illuminate, as the button is being pressed apply the tip on the NCVD to the Volt Tip Area . Check for correct operation of the NCVD.

4. Maintenance and Service

If required, clean with a soft, dry cloth. Do not use abrasives or solvents.

SP200 & SP400. The only user replaceable parts are the 6 x AA alkaline batteries.

VP400. There are no user serviceable parts.

Contact Socket and See for parts and technical assistance.

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Specification	
Output Voltage	50 - 690V in five steps (50V,100V,230V,400V,690V)
Safety Compliance	BS EN 61010-1:2010
EMC Compliance	61326-1:2006
Operating Conditions	-10 to +35°C at 95% RH
Output Frequency	50Hz Pseudo sine wave
Maximum Output power	10W
Batteries	(SP200 & SP400) 6 x LR6 AA alkaline batteries (VP400) Hard wired into vehicle 12V supply
Battery Life	(SP200 & SP400) 10 hours with average use when testing high and low power testers. (VP400) N/A
Dimensions	68H x 130W x 48D (mm)
Weight	(SP200 & SP400) with batteries 350g (VP400) 200g

Ordering Information

Item	Supplier Code
Socket and See SP200	SOC/SP200
Socket and See SP400	SOC/SP400
Socket and See VP400	SOC/VP400

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