

# Atlas SCR Thyristor & Triac Analyser



**This latest in-your-palm tester from Peak will reliably check all thyristors and Triacs that you are likely to encounter. Just connect the mini-hook leads (in any order) and press “test”!**

You might be surprised to learn that hand-held semiconductor testers often do not have the capability to accurately test “sensitive gate” thyristors and Triacs. Typically, these instruments provide only one gate current level regardless of device. Although a higher than specified current would fire a sensitive gate device, there’s no guarantee that it will operate normally when in circuit.

Paradoxically, many testers do not provide high enough gate current to reliably trigger some larger devices. The test current used (anode to cathode or MT1 to MT2) may also be too low, particularly as the instrument’s battery voltage declines.

## Reliable testing

Peak has addressed these issues and eliminated the guesswork with the Atlas SCR. Devices are tested with

up to eight discrete gate current levels (100µA, 500µA, 2.5mA, 10mA, 25mA, 50mA, 75mA & 90mA). Naturally, testing starts at the lowest level and progress towards the higher levels, ensuring that the minimum necessary trigger current is used.

Note: Triacs are tested in both quadrants 1 and 3 but only the gate current for quadrant 1 is displayed.

To ensure consistent results, test current is fixed at 100mA (nominal) regardless of battery condition and is applied as 100µs pulses. This eliminates the possibility of damage to sensitive devices.

## Rocket science?

The Atlas SCR works the way all test instruments should (we think). Just connect the three mini-hook leads in any order and press “test”. The tester then automatically determines

device type and pin-out and displays the results on its 16-character x 2-line LCD.

The device type (thyristor or Triac) is displayed first up. Alternatively, if the device has an internal short or open circuit or fails to trigger, an appropriate message is displayed instead.

Three more informative screens are accessible by pressing the “scroll” button. The first of these displays the pin-out details. Another press brings up the trigger current, with a third displaying the test current. As this value is fixed at 100mA, it serves only as a reminder.

After a short delay, the instrument switches itself off or you can press and hold the “scroll” button to save even more battery power.

There’s little more to tell you about this useful little device. If you’re in market for a hand-held “go/no-go” thyristor and Triac tester, you won’t find a better deal anywhere!

## Where to get yours

As well as the Atlas SCR Thyristor and Triac Analyser, Peak offers a number of other useful test instruments in the same handy form-factor – eg, the Atlas LCR Passive Component Analyser (see Circuit Notebook).

Peak Electronic Design is situated in Derbyshire, UK. You can purchase their products on-line at this site: [www.peakelec.co.uk](http://www.peakelec.co.uk). Current price for the Atlas SCR including airmail delivery is \$227.20, subject to exchange rate variations.

Their products are also available locally through Farnell, although the Atlas SCR is not currently listed. See [www.farnellinone.com.au](http://www.farnellinone.com.au) or phone 1300 361 005 for availability. **SC**

## Main Features

- Automatic identification of component type (thyristor or Triac)
- Automatic lead identification (just connect any way around!)
- Categorisation of gate sensitivity (100µA, 500µA, 2.5mA, 10mA, 50mA, 75mA or 90mA)
- Load test conditions of 12V @ 100mA (regardless of battery condition)
- Test pulse durations less than 200µs minimises possibility of damage
- Fault identification (shorted junctions, faulty operation)
- Clear and user-friendly scrollable display
- Supplied with detachable micro-hook probes