



# Model 933A Life Cycle Test System

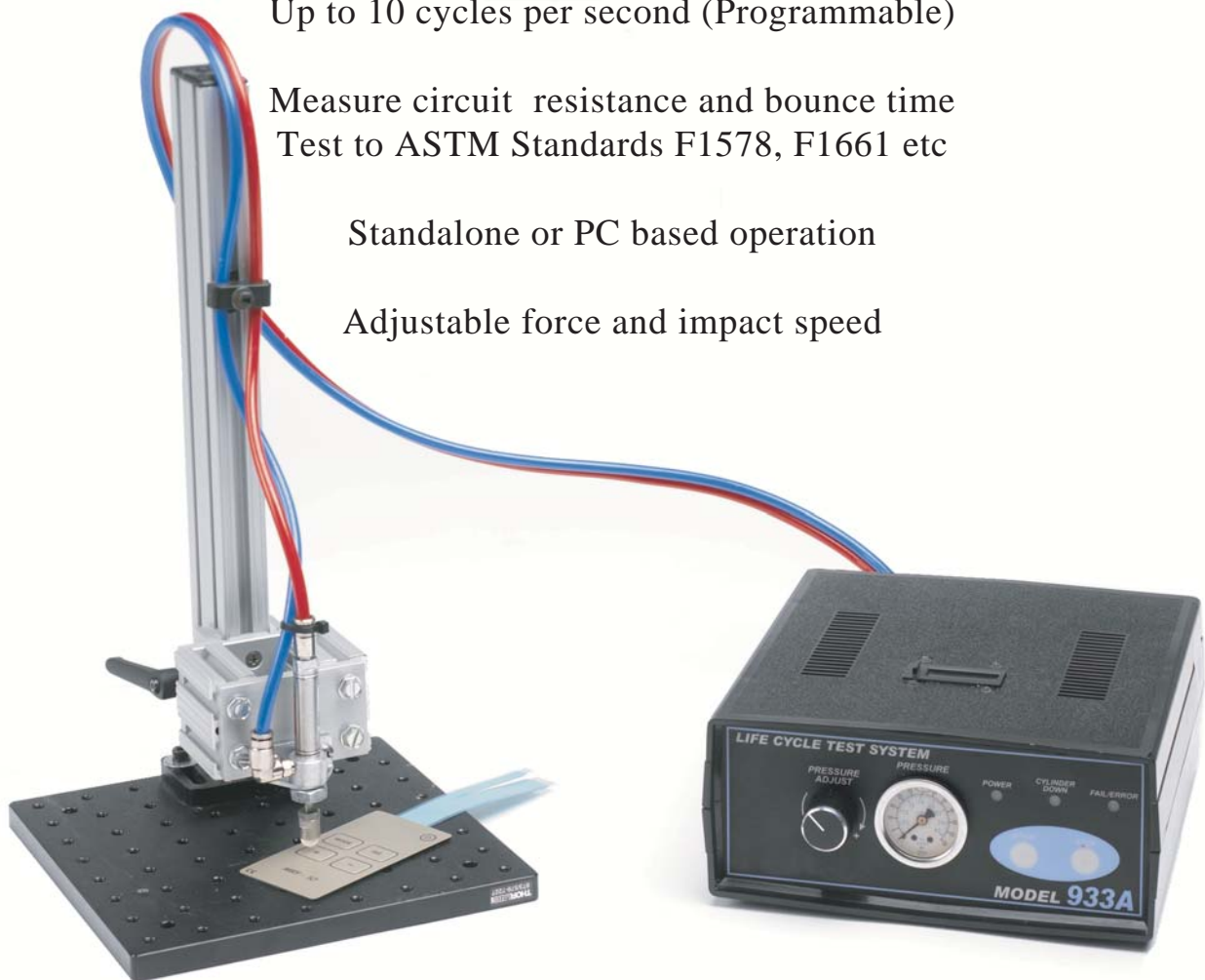
Tests keyboards, keypads, membranes, snap-action switches, microswitches, general purpose switches and any product requiring fatigue testing

Up to 10 cycles per second (Programmable)

Measure circuit resistance and bounce time  
Test to ASTM Standards F1578, F1661 etc

Standalone or PC based operation

Adjustable force and impact speed



## Options:

- Multiple Contacts
- Environmentally sealed Cylinders
- Multiple Cylinder Holding Fixture
- External Counter

## Customer Requirements:

- Personal Computer (Win98/ME/2000/NT/XP),  
one serial port
- Shop Air (1/2" fitting) - 40-125 psi

## System Components:

- Control Unit (1 Analogue Channel)
- RS 232 Cable
- Power Supply
- Cylinder & Hoses
- Operating Instructions
- Application Software

The Model 933A Life Cycle Test System is a low cost, generic test platform used to perform cycling of keypads, keyboards, membranes, switches or any product requiring fatigue testing.

The 933A consists of control box, air cylinder with test stand and software installed by the user in a standard computer. It features a single analogue channel used to measure contact resistance and bounce (expandable to four) and an air cylinder with a silicone rubber tip to simulate activation of a finger. The air cylinder may be supplied in various throw lengths, diameters even environmentally sealed. The control box allows for adjusting the velocity, force and acceleration of the cylinder.

User friendly Windows™ software environment allows the user to create test parameters for the unit under test (UUT) ie specified resistance, bounce time, number of cycles, allowed fails, cycles/second, etc. The configuration is then transferred to the control box for standalone or PC based operation.

Testing of the UUT is as simple as operating to a predefined number of cycles. During cycling the 933A may test for: resistance, contact bounce, total number of fails and total consecutive fails and then compare test results to the user specified parameters. The system may stop testing if a specified number or consecutive number of failures of test parameters have occurred.

The 933A is a cost effective, fast acting tool which is easily operated and modified to test a variety of parameters and products.

**Contact Resistance Range**

- 0- 1,000
- 0- 10,000
- 0-100,000

**Contact Bounce Time (per ASTM 1661)**

25 msec - 65 msec

**Power Requirements**

12 Vdc (Power supply supplied) 115/220 Vac

**Counters**

1-65,000,000

**Maximum Test Cycles**

Cycles per second

**Maximum Test Failures**

Maximum Sequential Failures

Maximum and Minimum Resistance

Maximum Contact Bounce Time

