

PowerScope

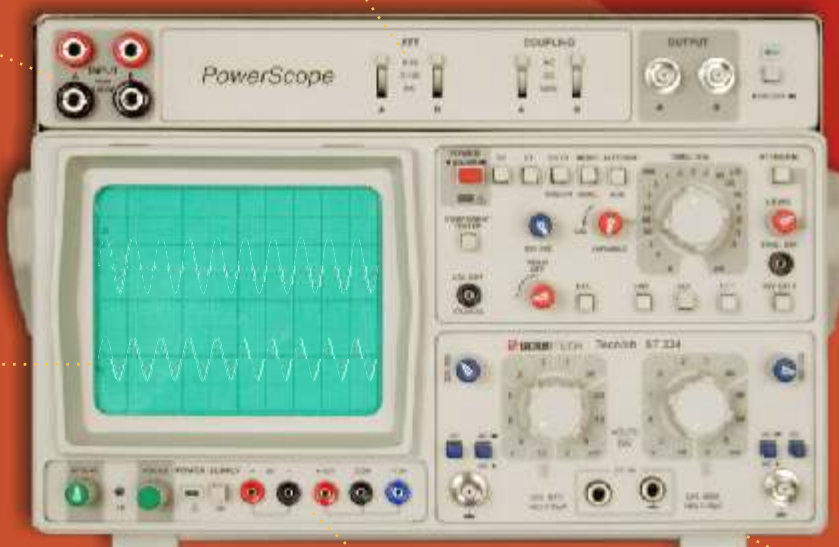
ST 224 TechLab

PowerScope with 20 MHz Oscilloscope and one of the Built-in Options

Isolated
Inputs

High Voltage
Attenuation

20 MHz
Oscilloscope



2 Year
Warranty

Built-in
Options

Floating measurements coupled with high voltages are very common in industrial electronics and electrical testing. Single phase and three phase measurements also need completely isolated inputs.

New ST 224 Techlab PowerScope provides a very convenient way for such measurements. With X100 attenuation signals up to 1500V can be measured and analysed without distortion.

ST 224 Techlab PowerScope is an ideal choice for testing UPS, induction furnace, electric control systems, motors, transformers etc in electronic & electrical laboratories.

Features

- Floating measurements with completely isolated inputs
- X100 & X10 attenuation
- 1500 V max input
- 20 MHz-2mV Dual Trace Oscilloscope
- Stable Triggering up to 40 MHz
- Algebraic sum & difference of both channels
- Alternate Triggering
- Line Trigger & Variable Hold-Off
- Component and Continuity Tester
- Internal Graticule CRT
- Choice of any one built-in option
- Economical & Space Saving
- Multi-utility Instrument for all labs

Smart
Slick
Sturdy
ST224 PowerScope
Powering Your Measurements

PowerScope

ST 224 TechLab

Technical Specifications

PowerScope

Input Channels: 2 Nos (Isolated Inputs)
Attenuation : X100 & X 10
Coupling : AC - DC & GND
Max. Input Voltage: 1500 V
 (DC + Peak AC)
Display : On oscilloscope

Oscilloscope

Operating Modes

Channel I, Channel II, Channel I & II
 Alternate or chopped (approx. 120 KHz),
 X-Y Operation (Ratio 1:1 Input via CH
 II), Add/ Sub CH I \pm CH II, Invert CH II.

Vertical deflection (Y)

(Identical channels)
Bandwidth : DC-20 MHz(-3dB)
 DC-28MHz(-6dB)

Risetime : 17.5 ns (approx.)
Deflection coefficients : 12 calibrated
 steps 2mV/cm - 10V/cm (1-2-5 sequence)
Accuracy : \pm 3%
Hold-Off : Variable Control for stable
 triggering
Input Impedance : 1 M Ω || 25 pF
Input coupling : DC-AC-GND
Input voltage : Max. 400 V
 (DC + Peak AC)

Timebase

Time coefficients : 18 calibrated steps,
 0.5 μ s/cm - 0.2s/cm (1-2-5 sequence) with
 magnifier x 5 to 100 ns/cm, with variable
 control to 40 ns/cm.
Accuracy : \pm 3% (in Cal position)
Ramp output : 5 V_{pp} (approx.)

Trigger System

Modes : Automatic or Variable Trigger
 level
Source : CH I, CH II, ALT CH I/CH II,
 Line, Ext.
Slope : Positive or Negative
Coupling : AC, Line Trigger

Sensitivity: Int 5mm., Ext 0.8V (approx.)
Trigger Bandwidth : 40 MHz

Horizontal Deflection (x)

Bandwidth : DC-2.3 MHz (-3 dB)
X-Y mode : Phase Shift < 3° at 60 KHz
Deflection coefficients : 12 calibrated
 steps 2mV/cm-10 V/cm (1-2-5 sequence)
Input Impedance : 1 M Ω || 25 pF.

Component Tester

Test Voltage : Max 8.6 V_{rms} (Open)
Test Current : Max 8 mA_{rms} (Shorted)
Test Frequency : 50Hz, Test circuit
 grounded to chassis
Continuity Tester :
 Beeper sounds < 75 approx.

General Information

Cathode Ray Tube : 140 mm Rectangular
 tube with internal graticule, P31 Phosphor
Accelerating potential : 2000 V
Display : 8 x 10 cm
Trace rotation : Adjustable on front
 panel
Calibrator : Squarewave generator
 1 KHz(approx.), 0.2 V \pm 1% for probe
 compensation.
Z Modulation : TTL level
Stabilized Power Supply :
 All operating voltages including the EHT.
Mains voltage : 220 V-240V \pm 10%,
 50Hz. (Switch at back)
Power Consumption : 33 VA (Approx.)
Weight (approx) : 11 Kg.
Dimensions (mm) : W285-H185-D380
Operating Temp. : 0-40°C, 95% RH
Finish : Off white with handle & tilt
 stand.

Included Accessories

- | | |
|---------------------------|--------|
| 1. Manual | 1 No. |
| 2. BNC-Test Prod | 1 No. |
| 3. BNC - Crocodile Cable | 1 No. |
| 4. Test Prods | 1 pair |
| 5. Short length BNC Cable | 2 Nos |

Available Options

Power Supply



Fixed Output Voltage : 5V/500 mA
 +12V/200mA
 - 12/ 200mA

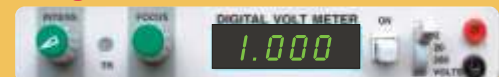
Ripple: \leq 8 mV_{rms}
Tolerance : \pm 0.2 V
Line Regulation : 2%
 +5V is floating & \pm 12V has common
 ground but floating from scope chassis.

Curve Tracer



Vce Scan Voltage : 0 - 35V adjustable
Step Base current : 20 μ A each Step
Step Amplitude : 0.5 Volts
No. of steps : Adjustable 0 to 7
Step Polarity : Automatically selected with
 PNP/NPN selection
Display : On 201 Via Y input - Ch I
 X Input - Ch II

Digital Voltmeter



Range : 2 V, 20 V and 200V
Resolution: 1mV, 10mV, 0.1V
Accuracy: \pm (1% + 1D) of rdg
Maximum Input : 500 V_{pk} for 20 V & 200
 V 100 V_{pk} for 2 V
Input Impedance: 10 M

LogicScope



Logic Inputs : 8 No.s
Output : to Oscilloscope for display

(Subject to change)



94-101, Electronic Complex, Pardesipura
 Indore - 452 010 INDIA.
 Ph. 91-731-576472, 232286, 556638
 Fax : 91-731-555643
 E-mail: info@scienteCH-india.com
 Web : www.scienteCH-india.com



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