

10 MHz, CRT STORAGE OSCILLOSCOPE 5 MHz, ANALOG OSCILLOSCOPE/DMM

314/305

SONY/TEKTRONIX 314

The SONY/TEKTRONIX 314 weighs only 10.5 pounds and provides four-hour stored viewing time. This long-term storage is useful for monitoring signal lines for suspected undesired transients. The compact size and ac or external dc operation allows the 314 to easily go when and where you need a storage scope.

CHARACTERISTICS

VERTICAL SYSTEM

Bandwidth and Rise Time – 10 MHz and 35 ns.

Deflection Factor – 1 mV/div to 10 V/div $\pm 3\%$.

Operating Modes – CH 1, CH 2, CH 2 Invert, chop, alternate, add, and X-Y.

Input R and C – 1 M Ω , 47 pF.

Max Input Voltage – 300 V (dc + peak ac).

HORIZONTAL SYSTEM

Sweep Speeds – 1 μ s/div to 5 s/div. X10 magnifier extends sweep rate to 100 ns/div.

Accuracy – X1: $\pm 3\%$ (1 μ s/div to 0.2 s/div); $\pm 4\%$ (0.5 s/div to 5 s/div). X10: $\pm 5\%$ (0.1 μ s/div and 0.2 μ s/div); $\pm 4\%$ (0.5 μ s/div to 20 ms/div); $\pm 5\%$ (50 ms/div to 0.5 s/div).

TRIGGER SYSTEM

Sensitivity – Internal: 0.3 div at 1 MHz, 1.0 div at 10 MHz. External: 150 mV at 1 MHz, 500 mV at 10 MHz.

Modes – Normal, Auto, Single sweep.

Sources – Internal: CH 1, CH 2, or composite; external.

X-Y OPERATION

Input – X-axis input is via the external horizontal input connection. Both CH 1 and CH 2 provide vertical inputs. Using chopped mode, two simultaneous X-Y displays can be obtained.

X-Axis Deflection Factors – Continuously variable from 20 mV/div to 2 V/div.

Bandwidth – 200 kHz.

CRT SYSTEM

CRT – 8 x 10-div (0.6 cm/div) display. Accelerating potential is 2 kV.

Z-Axis Input Range – 5 to 20 V (dc coupled) with a 100 kHz or greater usable frequency range.

Maximum Input Voltage – 50 V (dc + peak ac).

STORAGE FEATURES

Display Modes – Direct view, bistable storage, and nonstore modes. Autoerase mode to erase stored display after each sweep.

Stored Writing Speed – Normal, at least 80 div/ms. Enhanced, increases to at least 400 div/ms (250 cm/ms).

POWER REQUIREMENTS

Line-Voltage Range – 90 to 130 VAC or 180 to 264 VAC.

Line Frequency – 48 to 440 Hz.

Power Consumption – 29 W max. at 115 VAC.

External DC Source – 11-14 VDC or 22-28 VDC.

DC Current Drain – 1.6A at +12 V or 0.8 A at 24 V.

SONY/TEKTRONIX 305

The 305 Oscilloscope/DMM is the ideal oscilloscope for those who demand portability and multifunction versatility in their test instrumentation.

CHARACTERISTICS

VERTICAL SYSTEM

Bandwidth (-3 dB) – 5 MHz.

Deflection Factor and Accuracy – 5 mV/div to 10 V/div $\pm 3\%$ (0°C to + 40°C).

Operating Modes – CH 1, CH 2, Chopped, Alternate, Add, Invert CH 2, and X-Y.

Input R & C – 1 M Ω , 47 pF.

Max Input Voltage – 250 V (dc + pk ac), 250 V p-p.

HORIZONTAL SYSTEM

Sweep Speeds – 500 ms/div to 1 s/div.

Accuracy – X1: $\pm 3\%$; X10: $\pm 5\%$ (0°C to + 40°C). X1: $\pm 4\%$; X10: $\pm 6\%$ (–15°C to + 55°C).

TRIGGER SYSTEM

Sensitivity – Internal: 0.3 div at 0.5 MHz, 0.75 div at 5 MHz. External: 15 mV at 0.5 MHz, 50 mV at 5 MHz.

Modes – Normal and Auto (p-p).

Trigger Source – CH 1, CH 2, external.

X-Y OPERATION

Deflection Factors – Same as vertical system.

X-Axis Bandwidth – 150 kHz.

ADVANCED FUNCTIONS

AC Voltmeter – Ranges: 2, 20, 200, and 700 V (autoranging). Accuracy: $\pm 0.5\%$ of reading, + 10 counts, 40 to 500 Hz. Max input Voltage: 700 Vrms.

Ohmmeter – Ranges: 2, 20, 200, and 2000 Ω . Accuracy: ± 0.6 of reading, + 3 counts.

POWER REQUIREMENTS

Line-Voltage Range – 90-132 V or 180-250 VAC.

Line Frequency – 48 Hz to 440 Hz.

Maximum Power Consumption – 17 W.

External DC Source – 9 to 32 V.

Charge Time – At least 16 hours for full charge.

Operating Time – 2 hrs (scope), 10 hrs (DMM), 1.6 hours (combined).

ENVIRONMENTAL

Ambient Temperature – Operating: –15°C to + 55°C (Oscilloscope), 0°C to + 55°C (DMM). Nonoperating: –25°C to + 75°C.

Altitude – Same as 336A.

Vibration – Same as 336A.

Humidity – Same as 336A.

Shock – Same as 336A.

314

- Industrial Control Systems
- Biophysical Instrumentation
- Communication Equipment Service

305

- Electromechanical Measurements
- Medical Electronics Maintenance
- Automotive/Motor Vehicle
- Plant Maintenance
- Field Service

ORDERING INFORMATION

314 CRT Storage Oscilloscope \$5,700

Includes:

2 ea P6149A X10 Probes, Carrying Case and Pouch (016-0612-00), Carrying Strap (346-0131-02), External DC Current Assembly (012-0406-00), 2 1.6A fuses (159-0098-00), 2 0.8A fuses (159-0132-00), 2 0.15A fuses (159-0130-01), 3 0.16A fuses, (159-0131-00), Service Manual (070-1824-00), Operators Manual (070-1823-00).

305 Oscilloscope/DMM \$3,610

Includes:

Two P6149A 10X Probes, Carrying Case (016-0401-00), Carrying Case Cover (200-2260-00), Carrying Strap (346-0131-02), DMM Probe Package, Clear crt Filter (331-0394 01), Blue crt Filter (378-2016-01), External dc Cable Assembly (012-0406-00), Service Manual (070-2423-01), Operators Manual (070-2424-00).

OPTIONAL ACCESSORIES

Viewing Hood – Order 016-0297-00 \$7.50
Adapter Connector BNC to Binding Post – Order 103-0033-00 \$7.00

RECOMMENDED CAMERAS

C30BP Opt. 01 \$2,135
Camera Adapter – Order 016-0327-01 \$220

PHYSICAL CHARACTERISTICS

Dimensions	mm	in.
Width, w/handle	237	9.3
Height, w/o pouch	112	4.4
Depth, handle not extended	347	13.6
Net Weight	kg	lb
w/o accessories	4.7	10.5
Shipping	7.6	17.0