OSCILLOSCOPES
OX 9000 SERIES

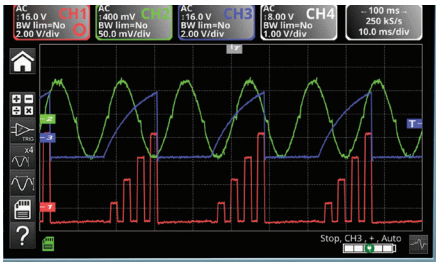
MODELS OX 9062, OX 9102, OX 9104 & OX 9304

Ergonomic, hand-held oscilloscope with 100MHz bandwidth and 4 models: oscilloscope, multimeter, analyzer and recorder

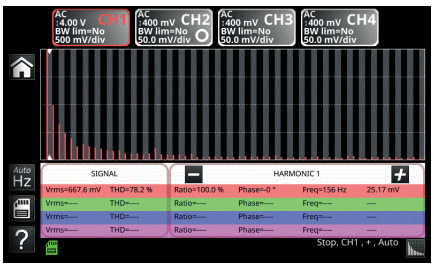
OX 9104

OX 9062

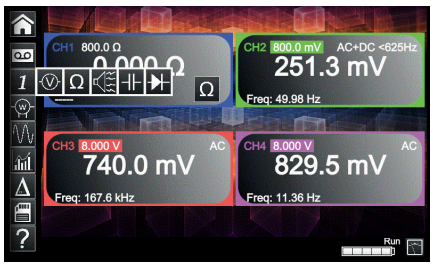
OSCILLOSCOPE



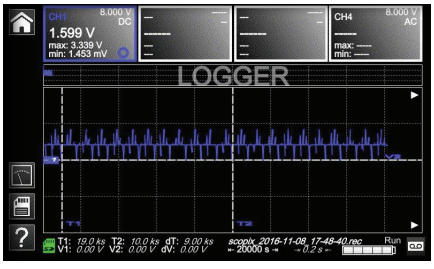
HARMONICS



MULTIMETER - DISPLAYS UP TO 4 CHANNELS SIMULTANEOUSLY



MEASUREMENT BETWEEN H AND V CURSORS: T1, T2, DT, 1/DT, V1, V2, DV, PH



FEATURES

- Wider bandwidth up to 300 MHz (model dependent)
- Advanced triggering and recording options
- Increased storage capacity, and more!
- 12-bit resolution
- 2.5 GS/sec

PRODUCT INCLUDES

Scope in carrying case with shoulder strap, set of (2) 5 ft color-coded leads, alligator clips and test probes (4mm diameter), 10 ft USB cable, µSD memory card, 1-PROBIX Banana Plug (4mm) adapter, (1) stylus pen, LI-ION 5.8Ah battery pack, PA40W-2 power adapter with 110V power cord. Additional accessories (model dependent).

ACCESSORIES/REPLACEMENTS

2124.77
PROBIX Current Probe, 20mA-20A 1MHz-3dB

5000.17
Set of 5 stylus pens

CATALOG NO.	DESCRIPTION
2150.31	Hand-held Portable Oscilloscope Model OX 9062 IV 60MHz (2-Channel, 60 MHz) — **SPECIAL ORDER ONLY**
2150.32	Hand-held Portable Oscilloscope Model OX 9102 IV 100MHz (2-Channel, 100MHz) — **SPECIAL ORDER ONLY**
2150.33	Hand-held Portable Oscilloscope Model OX 9104 IV 100MHz (4-Channel, 100MHz)
2150.34	Hand-held Portable Oscilloscope Model OX 9304 IV 300MHz (4-Channel, 300MHz)

ERGONOMICS

Designed to simplify use with one button access to most functions

In a housing tailor-made to be as compact as possible, the mechanical design makes it possible to integrate the hardware components in a small size with the keypad benefits from new technology developed in the automotive industry.

ISOLATED CHANNELS

Each channel is isolated from each other and from ground (earth) rated at 600V CAT III.

CHANNEL AND PARAMETER IDENTIFICATION

Each channel and related parameters are identified with identical color against a black background for simpler, quicker viewing.

EASY ACCESS VIA TOUCH SCREEN

Intuitive icons are provided to facilitate their use, even with gloves on.

ADJUSTABLE STRAP

This helps to optimize operation of the oscilloscope in your hand or on your shoulder when working in the field.

A stand is also available to vary the orientation of the oscilloscope when it is placed on a bench. The oscilloscope can be safely left unattended using the Kensington locking system.

NEW KEYPAD DESIGN FOR OPTIMUM USER COMFORT

Configuration and measurement displays are simple to access from the front panel in one of these 5 specific areas: Utilities (brightness, full screen, screenshot), Measurements, Vertical, Horizontal, Trigger.

LINE POWER AND LI-ION BATTERY CHARGING PORT

Port on left side.

APPLICATIONS
Ideal for electronic and industrial maintenance

IP54

Housing protected against dust and water spray.

7" WVGA WIDE COLOR TFT TOUCH SCREEN

Makes it easy to view and read the measurements clearly. It also provides a screen resolution of 800 x 480 dpi with manual or automatic brightness.

TOUCH-SCREEN STYLUS STORAGE

Among the essential tools available, the sylus is equipped with a hook for the addition of a cord to make it captive, as required. One end is slightly flattened to prevent rolling when placed on a table or bench.

AUTOSET BUTTON

Quickly and effortlessly adjusts the horizontal and vertical; sensitivity and scales to provide the best resolution.

DIRECT SETTING AND SET-UP BUTTONS

COMMUNICATION INTERFACES

These are isolated from one another and from the measurement channels. A dedicated compartment on the right side protected by a flexible cover contains all the different communication interface ports:

- USB host for communication with a PC
- Wired RJ45 or WiFi for communication with a PC or printing via a network printer
- µSD card for data storage with quick transfer and for upgrading of the instrument's firmware

DIRECT ACCESS ZOOM BUTTON

Activates/deactivates the horizontal Zoom function

ELECTRONIC MAINTENANCE
The OX 9304 model is ideal for electronics with its 300 MHz bandwidth, 4 x 600V CAT III isolated channels, advanced trigger functions, integrated FFT function, complex mathematical calculations on the curves, automatic measurements on 4 channels and the built-in WEB server.

INDUSTRIAL MAINTENANCE
The OX 9304's large 7-inch screen, 300 MHz bandwidth, 4 x 600V CAT III isolated channels and Harmonic Analyzer and Multimeter modes make it ideal for industrial maintenance applications.

OSCILLOSCOPES
OX 9000 SERIES

TECHNICAL SPECIFICATIONS	OX 9062	OX 9102	OX 9104	OX 9304
HUMAN-MACHINE INTERFACE				
Type of Display	7" WVGA color TFT LCD touch screen, 800x480 – LED backlighting (adjustable standby mode)			
Different Display Mode	2,500 real acquisition points on screen - vectors with interpolation			
Display of Curves on Screen	4 curves + 4 references – split screen & full screen modes			
Screen Commands	Touch screen – icons and graphical commands – customizable channel colors			
Choice of Language	15 complete languages, menus and online help			
OSCILLOSCOPE MODE				
Vertical Deflection				
Bandwidth	60 MHz	100 MHz	100 MHz	300 MHz
	15 MHz, 1.5 MHz or 5 kHz bandwidth limiter			
Number of Channels	2 isolated channels		4 isolated channels	
Input Impedance	1 MΩ ± 0.5%, approx. 12 pF			
Maximum Input Voltage	600 V / CAT III (1,000V per Probix) – from 50 to 400 Hz – Probix safety connectors			
Vertical Sensitivity	16 ranges from 2.5 mV to 200 V/div and up to 156 µV/div in vertical zoom mode (12-bit converter) – Accuracy ± 2%			
Vertical Zoom	"One click Winzoom" mode (12-bit converter and direct graphical zoom on screen) – x 16 max.			
Probe Factor (non-Probix)	1 / 10 / 100 / 1,000 or any scaling – definition of measurement unit			
Horizontal Deflection				
Sweep Speed	35 ranges from 1 ns/div to 200 s/div., accuracy ± [50 ppm + 500 ps] – Roll mode from 100 ms to 200 s/div			
Horizontal Zoom	"One click Winzoom" system (direct graphical zoom on screen) x 1 to x 5 or x 100 – storage 100 kpts/channel			
Triggering				
Mode	On all the channels: automatic, triggered, one-shot, auto level 50%			
Type	Edge, pulse width (16 ns-20 s), Delay (48 ns to 20 s), Counting (3 to 16,384 events). Continuous adjustment of trigger position.			
Coupling	AC, DC GND, HFR, LFR, noise – Level and Hold-off adjustable from 64 ns to 15 s			
Sensitivity	≤ 1.2 division p-p up to 300 MHz			
Digital Storage				
Maximum Sampling Rate	2.5 GS/s in one-shot mode on each channel (100 GS/s max. in ETS mode)			
Vertical Resolution	12 bits (vertical resolution 0.025 %)			
Memory Depth	100 kpts per channel and file viewer in the manager			
User Storage / File Management	Internal = 1 GB to store the files: trace, text, configuration, math functions, system memory / PDF print files, PNG image files + high-capacity removable µSD card: SD 2 GB, SDHC 4-32 GB and SDXC > 32 GB			
GLITCH Mode	Duration ≤ 2 ns – 500,000 min/max pairs			
Display Modes	Envelope, vector, accumulation-, averaging (factors 2 to 64) – XY (vector) and Y(f)=FFT			
Other Functions				
AUTOSET	Complete in under 5 s, with recognition of the channels – Frequency > 30 Hz			
FFT Analyzer & MATH Functions	2,500-point FFT (Lin or Log) with measurement cursors – Functions +, -, x / and mathematical function editor			
Cursors	2 or 3 cursors: simultaneous V and T with AUTO measurement: T1, T2, Dt, 1/Dt, dBV, Ph			
Automatic Measurements	Simultaneously with waveform, 20 automatic measurements per channel and on the 4 channels simultaneously with scroll			
MULTIMETER MODE				
General Specifications	2 or 4 channels – 8,000 cts min/max/frequency/relative – TRMS – Time/date-stamped graphical recording in logger mode			
AC, DC and AC + DC Voltages	600 mV to 600 VRMS, 800 mV to 800 VDC – VDC accuracy +/- (0.5 % + 25 D) – 200 kHz bandwidth			
Resistance	80 Ω to 32 MΩ – accuracy 0.5%R+ 25D – quick continuity test < 10 ms			
Other Measurements	Temperature (HX0035 = KTC, HX0036 = Pt100) / Capacitance 5nF to 5mF / Frequency 200 kHz / Diode test 3.3 V			
Single and Three-Phase Power	Active, Reactive and Apparent power values plus Power Factor simultaneously with the U & I measurements			
Harmonic Analyzer Mode				
Multi-channel Analysis	2 or 4 (depending on model), 63 orders, fundamental frequency 40 to 450 Hz in auto or manual mode			
Simultaneous Measurements	Total Vrms, THD and selected order (% fundamental, phase, frequency, Vrms)			
Logger Mode				
Acquisition	Duration: 20,000 s – Interval: 0.2 s – Files: 100,000 measurements			
GENERAL				
Configuration Memories	Not limited according to device - variable file sizes			
Printing	Network printing via Ethernet/Wifi in .png format			
PC Communication – Software	Ethernet (100 baseT), WiFi-USB (device, 12 Mbs) – "ScopeNet" application software for PC			
Software	PC: Ethernet and USB, ScopeNet (remote control, data recovery, cursors and automatic measurements) Android tablet – ScopeAdmin Fleet Administration utility			
Mains Power Supply	Li-Ion rechargeable battery (6,900mAh-40 Wh) – Battery life of up to 8 hrs – Adjustable standby mode Adapter / 2-hour fast charger, universal 98-264 V / 50/60 Hz)			
Safety / EMC / IP Protection	Safety as per IEC 61010-2-30, 600V CAT III, 1000V CAT II / EMC as per EN61326-1 / IP54 protection			
Mechanical Specifications	292.5 x 210.6 x 66.2 mm – 2.1 kg with batteries			