

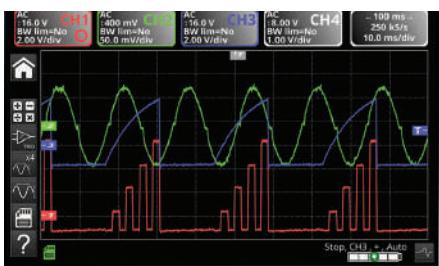
# OSCILLOSCOPES

## OX 9000 SERIES

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

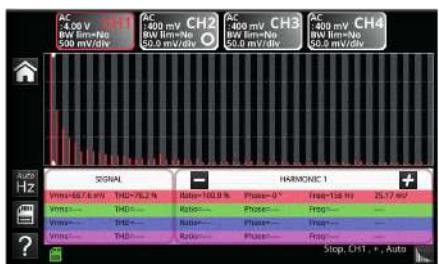
*Ergonomic, hand-held oscilloscope with 100 MHz bandwidth and 4 models: oscilloscope, multimeter, analyzer and recorder*

#### OSCILLOSCOPE



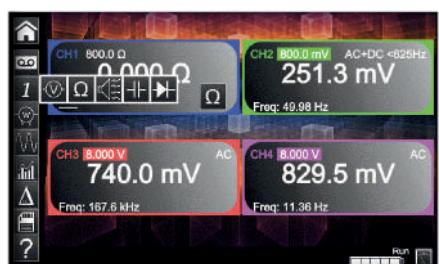
OX 9104

#### HARMONICS



OX 9062

#### 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/s

#### PRODUCT INCLUDES

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



#### ACCESSORIES/REPLACEMENTS

5000.17 Set of 5 stylus pens



#### CATALOG NO. DESCRIPTION

2150.31	Handheld Portable Oscilloscope Model OX 9062 IV 60 MHz (2-Channel, 60 MHz) — <b>SPECIAL ORDER ONLY</b>
2150.32	Handheld Portable Oscilloscope Model OX 9102 IV 100 MHz (2-Channel, 100 MHz) — <b>SPECIAL ORDER ONLY</b>
2150.33	Handheld Portable Oscilloscope Model OX 9104 IV 100 MHz (4-Channel, 100 MHz)
2150.34	Handheld Portable Oscilloscope Model OX 9304 IV 300 MHz (4-Channel, 300 MHz)



# OSCILLOSCOPES

## OX 9000 SERIES

### 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 600 V 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.



# OSCILLOSCOPES

## OX 9000 SERIES

### APPLICATIONS

#### *Ideal for electronic and industrial maintenance*

##### IP54

Housing protected against dust and water spray.

##### 7-INCH 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 stylus 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 SETUP 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

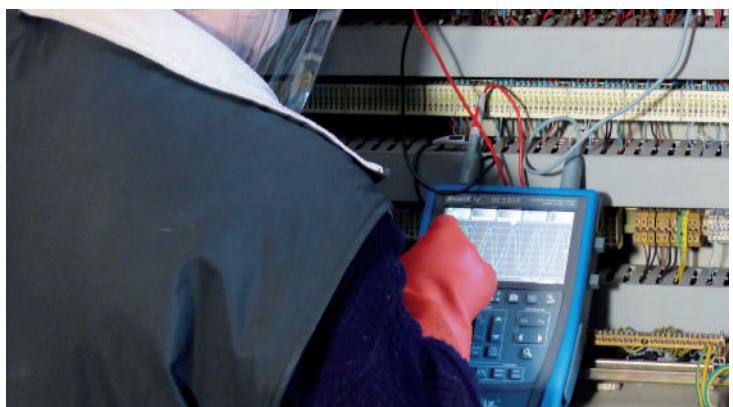
### ELECTRONIC MAINTENANCE

The OX 9304 model is ideal for electronics with its 300 MHz bandwidth, (4) 600 V 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) 600 V 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
<b>HUMAN-MACHINE INTERFACE</b>				
Type of Display	7 in WVGA color TFT LCD touch screen, (800 x 480) dpi – 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		
<b>OSCILLOSCOPE MODE</b>				
<b>Vertical Deflection</b>				
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 (1,000 V 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 to 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		
<b>MULTIMETER MODE</b>				
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+ 25 D – quick continuity test < 10 ms		
Other Measurements		Temperature (HX0035 = KTC, HX0036 = Pt100) / Capacitance 5 nF to 5 mF / 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		
<b>GENERAL</b>				
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), Wi-Fi-USB (device, 12 Mbps) – 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 (6,900 mA·h-40 W·h) – Battery life of up to 8 h – Adjustable standby mode Adapter / 2-hour fast charger, universal (98 to 264) V / (50/60) Hz		
Safety / EMC / IP Protection		Safety as per IEC 61010-2-30, 600 V CAT III, 1000 V CAT II / EMC as per EN61326-1 / IP54 protection		
Mechanical Specifications		(11.52 x 8.29 x 2.60) in (293 x 211 x 66) mm / 4.6 lbs (2.1 kg) with batteries		

