metrix®

OX 6062B - OX 6202B

ANALYSER-OSCILLOSCOPES

And Recorders 60 and 200 MHz

GENERATION 2
even more functions

LIFETIME WARRANTY

Ultra-compact multi-function oscilloscopes with 5.7" touch screen!

- **50-kpoint** extended memory
- 4 complementary tools in one for unprecedented efficiency and compact design:
  OSCILLOSCOPE-MULTIMETER-RECORDER-FFT and HARMONIC ANALYSER
- Sampling rate: 1 GS/s in one-shot mode and 50 GS/s in ETS mode
- 2 x 300 V Cat. II measurement channels, 10-bit resolution
- Standard "real-time" FFT analysis and both simple and complex calculation functions on the channels
- 2 digital multimeters, TRMS, 4,000 counts, 200 kHz with time/date-stamped graphic recording
- 28 direct command keys, "Windows-like" menus and graphic commands (touch screen)
- Multi-interface communication: RS232, USB and Ethernet with built-in SCOPENET web server
- Removable micro-SD card for data storage up to 2 GB
- 2 harmonic analysers: THD up to the 61st order on a fundamental from 40 to 450 Hz
- 2 recorders with variable duration and sampling frequency

metrix® A Brand of
CHAUVIN ARNOUX GROUP

UNRIVALLED SIMPLICITY

Simple to handle, compact and lightweight, the OX 6000 II models combine the functions of a digital oscilloscope, a multimeter, a recorder and an FFT/harmonic analyser.

Applications

OX 6000 oscilloscopes measure and analyse signals in many different situations. Engineers and lab technicians, engineering technicians, teachers, electronic equipment manufacturers: there are applications for everyone!

Electricity & Electronics

- Display and analysis of the electrical signals on a network or installation (voltage, duration, THD, etc.)
- Testing and verification of printed circuits or electronic assemblies

Technical maintenance and repair teams

- Troubleshooting on electronic or electrical equipment (hospitals, research centres, local government)

Manufacturers or users of audio and video equipment

- Parameterization of audio boards or mixing desks
- Verification of line amplifiers (theatre, reception hall, etc.)
- Maintenance of video equipment, TV trigger measurement, etc

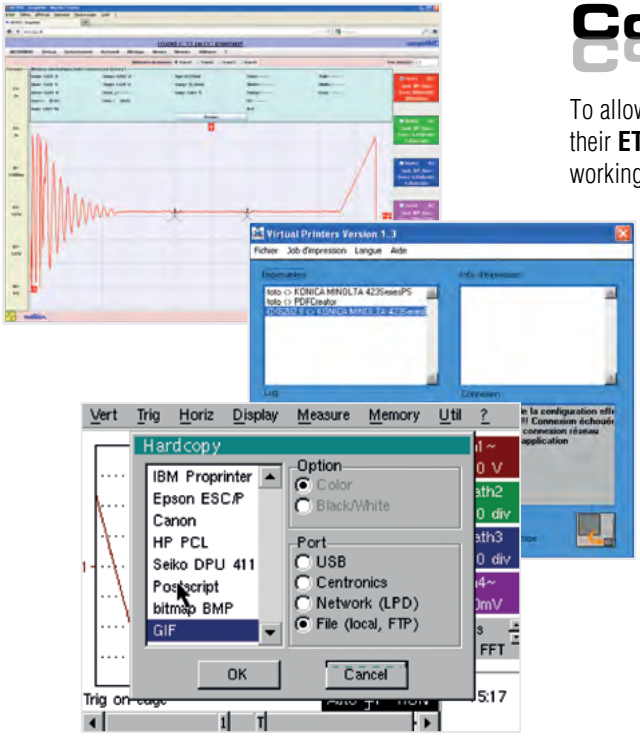
Ergonomics

Direct access and intuitive navigation

With only 32 keys for direct access to the different modes and parameters, universal "Windows-like" menus available in 5 languages, the oscilloscope is extremely simple to use. The keyboard on the front panel can be used for selection or immediate adjustments (time base, printing, etc.).

Graphic settings

The touch screen and magnetic stylus allow you to modify your settings directly on the screen, using graphic elements that you can move around, such as the position of the traces, the trigger level, the cursors or the zoom.
A display area in the bottom right-hand corner of the screen constantly reminds you of the current parameter setting, such as the value of cursor 2, for example.



Communications expert

To allow users to keep up with the very latest developments, the OX6000 II models with their **ETHERNET** interface (10 MB transfers) and their **SCOPENET web server** offer new working methods at affordable prices.

- Printing on **network printer or VIRTUAL PRINTER print server**
- Remote management with SCOPEADMIN
- File exchange on FTP server directly in Windows

The OX 6000 can be upgraded at any time by downloading new functions free-of-charge from the support site.

Extension of storage capacity

The micro-SD card provided enables users to store all the data (reference curves, instrument settings, screenshots) up to 2 GB.
Thanks to the USB/SD-card reader, data transfer is simpler and quicker.

AFFORDABLE PERFORMANCE

In performance terms, the OX 6000 II models offer fast sampling and high resolution with their **10-bit / 1 GS/s converter**, 50 GS/s sampling on periodic signals and 2 ns transient capture function to avoid undersampling.

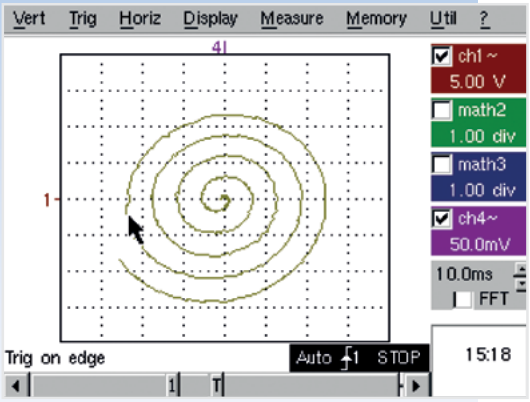
Oscilloscope

In oscilloscope mode, the OX 6000 II models offer a wide range of **triggering possibilities**: edge, pulse width, delay, count, etc.

- **delay mode** for observing any event with the maximum resolution
- **count mode** allows you to count events before triggering, in particular to check the content of the digital frames.

For greater accuracy; the **automatic measurements window** can be displayed simply by pressing a key to show all **20 parameters of the signal**.

A specific measurement area can be selected by outlining it with the manual cursors accessible by means of the dedicated key or the stylus on the touch screen, for greater reliability and accuracy.



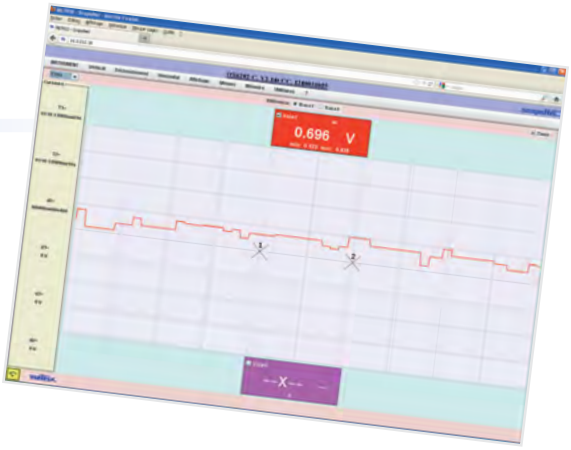
The graphic "Winzoom" function takes full advantage of the vertical resolution of the **10-bit** converter, **4 times greater than with a traditional 8-bit converter**. For even greater accuracy, it offers 4-digit resolution on both the automatic and cursor measurements.

The **standard and advanced MATH functions,** also available in this mode, can be used to cover new specific applications, including the simulation of a trace on the basis of its mathematical equation, allowing users to model expected results.

Multimeter

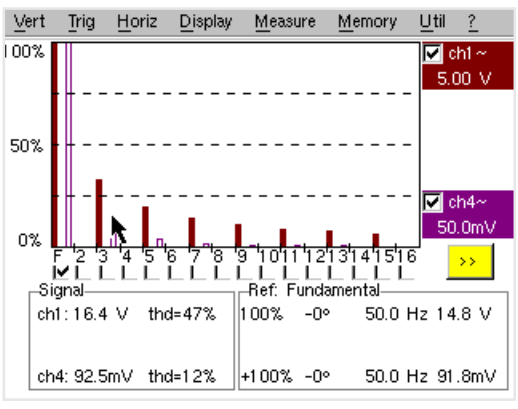
Equipped with two 4,000-count TRMS multimeters, the OX 6000 II models can be used for traditional voltage, resistance, continuity, capacitance and frequency measurements, as well as for diode tests. In this mode, the bandwidth is 200 kHz.

In multimeter mode, **triggering on measurement thresholds** is available on both channels. The time/date-stamped recording function covers all the active channels over a period of 5 minutes to 1 month. It is possible to store up to 200 time/date-stamped faults as ".txt" files.



FFT & Harmonic Analyser

Calculated on **2,500 points**, the **FFT analysis** can be set automatically using the Autoset key. The 10-bit conversion provides an improved dynamic range of 60 dB and ensures optimum accuracy for the frequency and amplitude measurements.
Odd and even **harmonics can be analysed up to the 61st order** to meet the requirements of the EN 50160 standard (THD on 50 orders minimum), with a **fundamental frequency** between **40 and 450 Hz**.



Recorder

The OX 6000 II models can record very slow signals with a recording rate in pt/s, min. or h over long periods. Their **acquisition interval** can be as little as **40 µs** between 2 measurements.
Recordings can cover periods from 2 seconds to one month. Up to 200 faults can be captured as files. Other features include searching for triggers by analysing the samples and triggering on thresholds.

Technical specifications	OX 6062B	OX 6202B
MAN-MACHINE INTERFACE		
Type of display	5.7" colour LCD screen (1/4 VGA) - 320 x 240 – CCFL backlighting (adjustable standby mode)	
Display mode	500 real acquisition points on screen – Vectors with interpolation, envelope and averaging (2, 4, 16, 64)	
Display of curves on-screen	2 curves + 2 references – Totalization modes (recent acquisition are brighter coloured)	
Screen commands	Touch screen – "Windows-like" menus and graphic commands	
Choice of language	5 complete languages, menus & online help (French, English, German, Spanish, Italian)	
OSCILLOSCOPE MODE		
Vertical deflection		
Bandwidth	60 MHz	200 MHz
	15 MHz bandwidth limiter, 1.5 MHz or 5 kHz	
Number of channels	2 metal BNC channels connected to the earth	
Input impedance	1 MΩ ± 0.5 %, approx. 15 pF	
Maximum input voltage	300 V / CAT II - 420 Vpk (DC +peak AC at 1 kHz) without 1/10 probe – Derating of -20 dB per decade from 100 kHz	
Vertical sensitivity	Calibres from 2.5 mV to 100 V/div – Accuracy ± 2 %	
Vertical zoom	"One Click Winzoom" system (10-bit converter and direct on-screen graphic zoom) – x 16 max	
Probe factors	1 / 10 / 100 / 1,000 – definition of measurement unit	
Horizontal deflection		
Sweep speed	Calibres from 1 ns/div to 200 s/div., accuracy ± [50 ppm +500 ps]	
Horizontal zoom	"One Click Winzoom" system (direct on-screen graphic zoom), x 1 to x 5 or x 100 with "50-kpoint memory" option	
Triggering		
Mode	On both channels CH1 and CH4: automatic, triggered, one-shot, auto level 50 %	
Type	Edge, pulse width (16 ns - 20 s), delay (120 ns to 20 s), count (3 to 16,384 events), TV frame or line number (525 = NTSC or 625 = PAL/SECAM) – Continuous adjustment of Trigger position	
Coupling	AC, DC, HFR, LFR – Hold-Off adjustable from 160 ns to 30 s	
Digital storage		
Maximum sampling rate	50 GS/s in ETS mode – 1 GS/s in one-shot mode on each channel	
Vertical resolution	10 bits	
Memory depth	2,500 points/channel and up to 50,000 points/channel with the "Extended Acquisition Memory" option	
User memory	2 MB for storing files: trace, text, configuration, math functions, print files, image files, etc.	
"Windows-like" file management	+ large-capacity removable SD-Card (512 MB to 2 GB)	
GLITCH mode	Duration ≥ 2 ns – 1,250 Min/Max pairs (up to 25,000 pairs with the "Extended Acquisition Memory" option)	
Display modes	Envelope, averaging (factors 2 to 64), totalization and XY (vector)	
Other functions		
AUTOSET	Complete in less than 5 s, with recognition of the channels – Frequency > 30 Hz, 25 mVpp to 400 Vpp	
FFT analyser & MATH functions	FFT (Lin or Log) with measurement cursors - + , - , x and / functions and mathematical function editor	
Cursors	2 cursors: simultaneous V and T or Phase – 10-bit resolution, 4-digit display	
Automatic measurements	20 time or level measurements – 10-bit resolution, 4-digit display	
MULTIMETER MODE		
Basic features	2 channels – 4000 cts max. + min/max bargraph – TRMS – Time/date-stamped graphic recording (5 min to 1 month)	
AC, DC and AC + DC voltages	300.0 mV to 300.0 VRMS, 400.0 mV to 400.0 VDC – VDC accuracy 0.5 %R +15 D – 200 kHz bandwidth	
Resistance	80.00 Ω to 32.00 MΩ – accuracy 0.5 %R + 25 D – 10 ms quick continuity test	
Other measurements	Capacitance: 5 nF to 5 mF / Frequency: 200.0 kHz / Diode test: 3.3 V	
Triggering on measurement window	2 monitored channels, adjustable fault duration – Up to 200 time/date-stamped faults stored in ".txt" file	
HARMONIC ANALYSER MODE		
Multi-channel analysis	2 channels, 61 orders, fundamental frequency from 40 Hz to 450 Hz in automatic or manual mode	
Simultaneous measurements	Total Vrms, THD and selected order (% fundamental, phase, frequency, Vrms)	
RECORDER MODE (option)		
Duration / Sampling interval	2 s to 1 month / 800 µs to 18 min (40 µs to 53 s with the "Extended Memory Acquisition" option)	
Recording conditions	On thresholds or window, simultaneous conditions on several channels, with adjustable duration starting at 160 µs	
Analysis of recordings	Scale and physical units, automatic or cursor measurements, search for time/date-stamped faults, zoom, etc.	

General specifications	
Configuration memory	Not limited – ".CFG " file size: approx. 1 kB
Printing	Network printer via 10 Mb Ethernet, RS232 or Centronics (option) or VIRTUAL PRINTER print server
PC communication	10 Mb Ethernet, RS232 (option) or USB – "SX-Metro" PC application software (option)
Network	10 Mb remote Ethernet, Web server (remote control, "real-time" trace, cursors and automatic measurements) FTP server (for exchanging files with a PC), FTP client (storage on PC hard disk), administration utility
Mains power supply	Universal 100-240 V / 47-63 Hz / 20 VA max with removable cable
Safety / EMC	Safety according to IEC 61010-1, 2001 - 300 V CAT II – EMC as per EN61326-1, 2006
Mechanical specifications	225 (h) x 190 (w) x 215 (d) mm – 1.9 kg
Warranty / origin	Lifetime warranty / FRANCE

State at delivery: 1 oscilloscope, 1 stylus, 1 operating manual and 1 programming manual on CD-ROM, 1 µSD-Card (1 GB minimum capacity) and SD-Card adapter, 2 x 1/10 probes, 1 crossed Ethernet cable and 1 USB/RS232 cable.

To order:

OX6062B-CSDO: 60 MHz digital oscilloscope with all the modes installed plus 50-kpoint memory extension
OX6062B-CFG: 60 MHz digital oscilloscope with recorder mode or harmonics mode or 50-kpoint memory extension installed, as required (one choice only)
OX6062B-CSD: 60 MHz digital oscilloscope without recorder mode, harmonics mode or 50-kpoint memory extension

OX6202B-CSDO: 200 MHz digital oscilloscope with all the modes installed plus 50-kpoint memory extension
OX6202B-CFG: 200 MHz digital oscilloscope with recorder mode or harmonics mode or 50-kpoint memory extension installed, as required (one choice only)
OX6202B-CSD: 200 MHz digital oscilloscope without recorder mode, harmonics mode or 50-kpoint memory extension

Optional accessories:

HX0003: 1/10 safety probe, 150 MHz, 400 V
HX0004: 1/10 safety probe, 250 MHz, 1000 V
HX0210: standard 1/1 and 1/10 probe, 100 MHz, 300 V, CAT II
HX0220: standard 1/1 and 1/10 probe, 200 MHz, 300 V, CAT II
HX0028: HARMONICS mode
HX0029: RECORDER mode
HX0077: 50 k-point memory extension
SX-METRO/P: SX-METRO kit

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