

Models OX7202<sup>III</sup> & OX7204<sup>III</sup>

**Rugged, self-contained,  
handheld oscilloscope with  
200MHz bandwidth**



## ► SPECIFICATIONS

| MODELS                       | OX7202 <sup>III</sup>                                                                                                                    |                        | OX7204 <sup>III</sup> |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------|
| <b>INTERFACE</b>             |                                                                                                                                          |                        |                       |
| Screen Specifications        | Color LCD 5.7" (115 x 86mm) 320 x 240 – CCFL backlighting                                                                                |                        |                       |
| Display Mode                 | Vectors with interpolation                                                                                                               |                        |                       |
| No. of Traces on Screen      | Four traces and four references – split screen and full screen modes (tracing zone 110 x 74)                                             |                        |                       |
| Front Panel Control          | 32 direct shortcuts                                                                                                                      |                        |                       |
| Screen Control               | Touch screen – Windows-like menus and graphic commands                                                                                   |                        |                       |
| <b>VERTICAL</b>              |                                                                                                                                          |                        |                       |
| Vertical Sensitivity         | 16 ranges from 2.5mV – 200V/div and up to 156μV/div in verticle zoom mode (12-bit converter) – Accuracy ± 1% of Reading                  |                        |                       |
| Bandwidth                    | 200MHz                                                                                                                                   |                        |                       |
| Channels                     | Two isolated channels                                                                                                                    | Four isolated channels |                       |
| Accuracy                     | ±0.1% of Reading                                                                                                                         |                        |                       |
| Input Impedance              | 1MΩ ± 0.5%                                                                                                                               |                        |                       |
| Max Input Voltage            | 600Vdc, 600Vrms, 850Vpk (DC + peak AC at 1kHz) without 10/1 probe, 1000Vrms with 10/1 probe derating -20 dB/decade from 100kHz to 200MHz |                        |                       |
| Vertical Zoom                | x5 maximum                                                                                                                               |                        |                       |
| <b>HORIZONTAL</b>            |                                                                                                                                          |                        |                       |
| Time Base Speed              | 35 ranges from 1ns/div to 200s/div                                                                                                       |                        |                       |
| Accuracy                     | ± 0.1% - Roll mode from 100ms to 200s/div                                                                                                |                        |                       |
| Horizontal Zoom              | x100 maximum                                                                                                                             |                        |                       |
| <b>DIGITAL MEMORY</b>        |                                                                                                                                          |                        |                       |
| Max. Sampling Speed          | 100GS/s in ETS – 2.5GS/s in Single Shot Mode on each channel                                                                             |                        |                       |
| Vertical Resolution          | 12 bits                                                                                                                                  |                        |                       |
| Memory Capacity per Channel  | “TRC” approx. 10kB, “TXT” approx. 20kB                                                                                                   |                        |                       |
| User Memory                  | 2MB                                                                                                                                      |                        |                       |
| Other Modes                  | Envelope mode (Factors from 2 to 64)                                                                                                     |                        |                       |
| XY Mode                      | Between two from the four traces – math functions and cursors                                                                            |                        |                       |
| <b>OTHER FUNCTIONS</b>       |                                                                                                                                          |                        |                       |
| Autoset                      | Complete autoset < 3s with recognition of channels, Frequency >30Hz                                                                      |                        |                       |
| Trigger Mode                 | Automatic Triggered, Single shot, Auto Level 50%                                                                                         |                        |                       |
| FT Analyzer & Math Functions | FT, +, -, x, / – Editor of mathematical functions                                                                                        |                        |                       |
| Cursors                      | Two or three cursors: V and T simultaneous or Phase Resolution 12 bits, display four digits                                              |                        |                       |
| Power Source                 | Rechargeable 9V 3.8Ah battery (included)                                                                                                 |                        |                       |
| Battery Life                 | Four hour operation when fully charged                                                                                                   |                        |                       |
| Communication                | Ethernet, RS-232, Web Server                                                                                                             |                        |                       |

## ► PRODUCT INCLUDES

OX7202<sup>III</sup> & OX7204<sup>III</sup> Kit

Aluminum carrying case, two PROBIX PRHX1 1/10 Probes 250MHz (600V CAT III), two red and black 1.5m color-coded leads with needle probe tips, two red and black grip probes, two stylus, two Ethernet cables (one straight/one crossover), two for OX7202 & four for OX7204 PROBIX 4mm banana plug adapters, one US power adapter (115/230V), one 110V US power cord, one NiMH 9.6V battery pack, one 512MB SD memory card, SX-METRO software on CD-ROM, Recorder/Harmonic/Power/50K memory option (installed) and user manual on CD-ROM.



## ► FEATURES

- 5 complementary tools in a single instrument: oscilloscope, FFT analyzer, multimeter/wattmeter, harmonic analyzer on voltage/current/power and recorder
- Sampling rate 2.5GS/s in one-shot mode and 100GS/s in ETS mode (repetitive signals)
- 2 or 4 isolated measurement channels (600V CAT III) and up to 8 traces on screen
- 2 or 4 independent TRMS digital multimeters (8000 counts, 200kHz)
- LCD touch screen and Windows-like menus on screen
- ProbiX "plug & play" input terminals and smart sensors
- Standard "real-time" FFT analysis and calculation functions on channels
- Multi-interface communication connectors: USB, Centronics and Ethernet
- Memory depth of up to 50,000 points per channel (oscilloscope and recorder modes)
- Triggering on measurement thresholds in oscilloscope and multimeter modes
- Adapter for measuring up to 700Vac RMS 1000Vdc in meter mode
- Web Server (FTP server/client) with cursors and automatic measurements
- MiniFlex<sup>®</sup> sensors, powered by the instrument (sold as accessory)
- Power measurement option included for power measurements



### Models OX7102<sup>III</sup> & OX7104<sup>III</sup>

**Rugged, self-contained,  
handheld oscilloscope with  
100MHz bandwidth**



### SPECIFICATIONS

| MODELS                       | OX7102 <sup>III</sup>                                                                                                                   |                        | OX7104 <sup>III</sup> |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------|
| INTERFACE                    |                                                                                                                                         |                        |                       |
| Screen Specifications        | Color LCD 5.7" (115 x 86mm) 320 x 240 – CCFL backlighting                                                                               |                        |                       |
| Display Mode                 | Vectors with interpolation                                                                                                              |                        |                       |
| No. of Traces on Screen      | Four traces and four references – split screen and full screen modes (tracing zone 110 x 74)                                            |                        |                       |
| Front Panel Control          | 32 direct shortcuts                                                                                                                     |                        |                       |
| Screen Control               | Touch screen – Windows-like menus and graphic commands                                                                                  |                        |                       |
| VERTICAL                     |                                                                                                                                         |                        |                       |
| Vertical Sensitivity         | 16 ranges from 2.5mV – 200V/div and up to 156µV/div in verticle zoom mode (12-bit converter) – Accuracy ± 1% of Reading                 |                        |                       |
| Bandwidth                    | 100MHz                                                                                                                                  |                        |                       |
| Channels                     | Two isolated channels                                                                                                                   | Four isolated channels |                       |
| Accuracy                     | ±0.1% of Reading                                                                                                                        |                        |                       |
| Input Impedance              | 1MΩ ± 0.5%                                                                                                                              |                        |                       |
| Max Input Voltage            | 600Vdc, 600Vrms, 850Vpk (DC + peak AC at 1kHz) without 10/1 probe 1000Vrms with 10/1 probe derating -20 dB/decade from 100kHz to 100MHz |                        |                       |
| Vertical Zoom                | Zoom factor: from 1 to x 100                                                                                                            |                        |                       |
| HORIZONTAL                   |                                                                                                                                         |                        |                       |
| Time Base Speed              | 35 ranges from 1ns/div to 200s/div                                                                                                      |                        |                       |
| Accuracy                     | ± 0.1% – Roll mode from 100ms to 200s/div                                                                                               |                        |                       |
| Horizontal Zoom              | x100 maximum                                                                                                                            |                        |                       |
| DIGITAL MEMORY               |                                                                                                                                         |                        |                       |
| Max. Sampling Speed          | 100GS/s in ETS – 2.5GS/s in Single Shot Mode on each channel                                                                            |                        |                       |
| Vertical Resolution          | 12 bits                                                                                                                                 |                        |                       |
| Memory Capacity per Channel  | "TRC" approx. 10kB, "TXT" approx. 20kB                                                                                                  |                        |                       |
| User Memory                  | 2MB                                                                                                                                     |                        |                       |
| Other Modes                  | Envelope mode (Factors from 2 to 64)                                                                                                    |                        |                       |
| XY Mode                      | Between two from the four traces – math functions and cursors                                                                           |                        |                       |
| OTHER FUNCTIONS              |                                                                                                                                         |                        |                       |
| Autoset                      | Complete autoset < 3s with recognition of channels, Frequency >30Hz                                                                     |                        |                       |
| Trigger Mode                 | Automatic Triggered, Single shot, Auto Level 50%                                                                                        |                        |                       |
| FT Analyzer & Math Functions | FT, +, -, x, / – Editor of mathematical functions                                                                                       |                        |                       |
| Cursors                      | Two or three cursors: V and T simultaneous or Phase Resolution 12 bits, display four digits                                             |                        |                       |
| Power Source                 | Rechargeable 9V 3.8Ah battery (included)                                                                                                |                        |                       |
| Battery Life                 | Four hour operation when fully charged                                                                                                  |                        |                       |
| Communication                | Ethernet, RS-232, Web Server                                                                                                            |                        |                       |

### FEATURES

- 5 complementary tools in a single instrument: oscilloscope, FFT analyzer, multimeter/wattmeter, harmonic analyzer on voltage/current/power and recorder
- Sampling rate 2.5GS/s in one-shot mode and 100GS/s in ETS mode (repetitive signals)
- 2 or 4 isolated measurement channels (600V CAT III) and up to 8 traces on screen
- 2 or 4 independent TRMS digital multimeters (8000 counts, 200kHz)
- LCD touch screen and Windows-like menus on screen
- Probix "plug & play" input terminals and smart sensors
- Standard "real-time" FFT analysis and calculation functions on channels
- Multi-interface communication connectors: USB, Centronics and Ethernet
- Memory depth of up to 50,000 points per channel (oscilloscope and recorder modes)
- Triggering on measurement thresholds in oscilloscope and multimeter modes
- Adapter for measuring up to 700Vac RMS 1000Vdc in meter mode
- Web Server (FTP server/client) with cursors and automatic measurements
- MiniFlex<sup>®</sup> sensors, powered by the instrument (sold as accessory)
- Power measurement option included for power measurements

### PRODUCT INCLUDES

#### OX7102<sup>III</sup> & OX7104<sup>III</sup> Kit

Aluminum carrying case, two red and black 1.5m color-coded leads with needle probe tips, two PROBIX PRHX1 1/10 Probes 250MHz (600V CAT III), two red and black grip probes, two stylus, two Ethernet cables (one straight/one crossover), two for OX7102 & four for OX7104 PROBIX 4mm banana plug adapters; one US power adapter (115/230V), one 110V US power cord, one NIMH 9.6V battery pack, SX-METRO software on CD-ROM, Recorder/Harmonic/Power/50K memory option (installed) and user manual on CD-ROM.



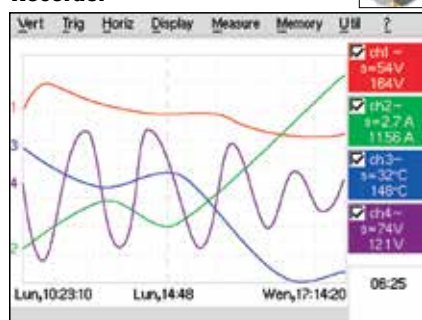
# HANDHELD OSCILLOSCOPES

## OX<sup>III</sup> Series

### Models OX7102<sup>III</sup>, OX7104<sup>III</sup>, OX7202<sup>III</sup> & OX7204<sup>III</sup>

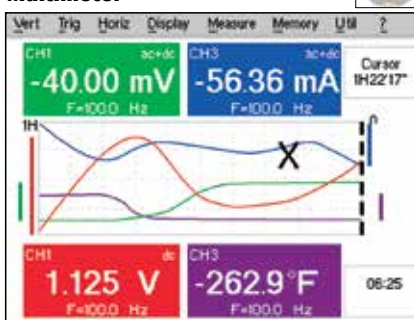
#### Four Tools in One!

##### Recorder



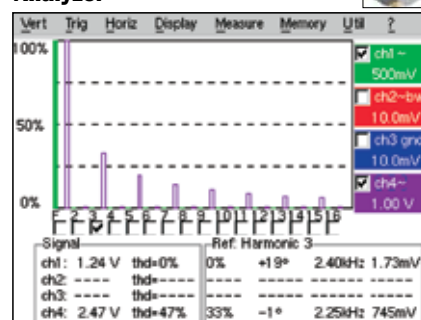
The OX<sup>III</sup> Series supports a great variety of sensors (voltage, current, temperature, 0 to 10V, 4 to 20mA, etc) and displays them in their original physical scale and units.

##### Multimeter



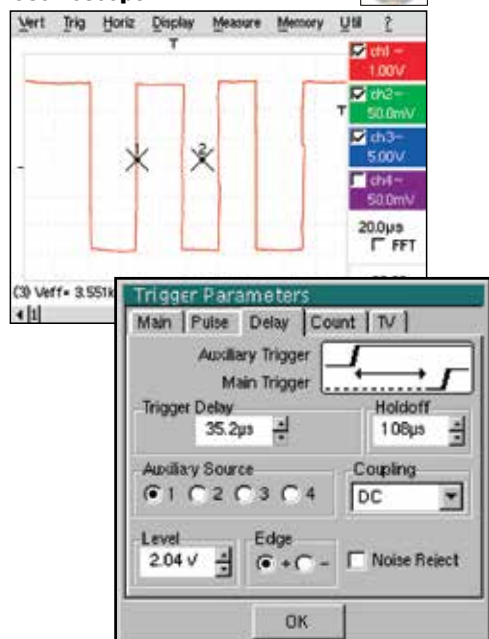
Automatic recording of the measured values are stored in memory on all active channels allowing review of periods lasting from five minutes to 24 hours.

##### Analyzer



Harmonic analysis results are displayed in bargraph form.

##### Oscilloscope



Triggering menu allows selection of type, duration, delay, count and more using touch screen drop-down menu.

#### OPTIONAL ACCESSORIES

##### Probe options for Models OX<sup>III</sup> Series Oscilloscopes

**AmpFlex® 0.5A to 3kA, 200kHz**  
Catalog #2124.91



**MiniFlex® 0.5A to 300A, 3mHz**  
Catalog #2124.92



**PROBIX PRHX5 50Ω Adapter**  
Catalog #2124.75



Visit our storefront for complete list of accessories [www.aemc.com/store](http://www.aemc.com/store)

| CATALOG NO.                   | DESCRIPTION                                                                                                          |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 2124.58                       | Handheld Oscilloscope Model OX7102 <sup>III</sup> 100MHz (2 x 100MHz, Color, 50k memory, Harmonics, Recorder, Power) |
| 2124.59                       | Handheld Oscilloscope Model OX7202 <sup>III</sup> 200MHz (2 x 200MHz, Color, 50k memory, Harmonics, Recorder, Power) |
| 2124.67                       | Handheld Oscilloscope Model OX7104 <sup>III</sup> 100MHz (4 x 100MHz, Color, 50k memory, Harmonics, Recorder, Power) |
| 2124.68                       | Handheld Oscilloscope Model OX7204 <sup>III</sup> 200MHz (4 x 200MHz, Color, 50k memory, Harmonics, Recorder, Power) |
| <b>Accessories (Optional)</b> |                                                                                                                      |
| 2124.75                       | PROBIX PRHX5, 50Ω Adapter                                                                                            |
| 2124.91                       | AmpFlex® 0.5A to 3kA, 200kHz for use with Oscilloscope OX Series                                                     |
| 2124.92                       | MiniFlex® 0.5A to 300A, 3MHz for use with Oscilloscope OX Series                                                     |

### Oscilloscope & BNC Terminated Probes

**Oscilloscope current probes expand oscilloscope applications in industrial or power measurement environments, and are ideal for analysis and measurement of distorted current waveforms and harmonics**

| MODEL                                                                                     | MEASUREMENT RANGE                       |                             | OUTPUT SIGNAL                       | PHASE SHIFT* | MAXIMUM CONDUCTOR SIZE                               |                                                                     | OUTPUT CONNECTION   |
|-------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------|-------------------------------------|--------------|------------------------------------------------------|---------------------------------------------------------------------|---------------------|
|                                                                                           | AC                                      | DC                          | VOLTAGE                             |              | Ø CABLE                                              | BUS BAR                                                             |                     |
|  SL261   | 100mA to 10A<br>1 to 100A               | 100mA to 10A<br>1 to 100A   | 100mV/Ac/dc<br>10mV/Ac/dc           | <1.5°        | 0.46"<br>(11.8mm)                                    | N/A                                                                 | Lead<br>w/BNC<br>UL |
|  MN261   | 0.1 to 24A<br>0.5 to 240A               | —                           | 100mVAc/Ac<br>10mVAc/Ac             | <2.5°        | 0.78"<br>(19.8mm)                                    | N/A                                                                 | Lead<br>w/BNC<br>UL |
|  MR461  | 0.2 to 40A<br>0.5 to 400A               | 0.4 to 60A<br>0.5 to 600A   | 10mV/Ac/dc<br>1mV/Ac/dc             | <1.5°        | One 1.18" (30mm)<br>Two 0.95" (24mm)<br>2 x 500kcmil | Two 1.2 x 0.4"<br>(31.5 x 10mm)                                     | Lead<br>w/BNC       |
|  MR561 | 0.2 to 100A<br>0.5 to 1000A             | 0.4 to 150A<br>0.5 to 1500A | 10mV/Ac/dc<br>1mV/Ac/dc             | <1.5°        | One 1.5" (39mm)<br>Two 0.98" (25mm)                  | One 1.96 x 0.49"<br>(50 x 12.5mm)<br>Two 1.96 x 0.19"<br>(50 x 5mm) | Lead<br>w/BNC       |
|  SR661 | 0.1 to 12A<br>0.1 to 120A<br>1 to 1200A | —                           | 100mVAc/Ac<br>10mVAc/Ac<br>1mVAc/Ac | <1°          | 2.05"<br>(52mm)                                      | 1.96 x 0.19"<br>(50 x 5mm)                                          | Lead<br>w/BNC<br>UL |
|  JM861 | 1 to 30A<br>1 to 300A<br>1 to 3000A     | —                           | 10mVAc/Ac<br>1mVAc/Ac<br>0.1mVAc/Ac | <1°          | 2.52" (64mm)<br>2.52 x 3.94"<br>(64 x 100mm)         | 1.97 x 5.31"<br>(50 x 135mm)                                        | Lead<br>w/BNC       |

\*Phase shift indicated at maximum rating.

Note: All probes are rated 600V CAT III and CE compliant. Not all models are UL approved; please consult factory.

| CATALOG NO. | DESCRIPTION                                                               |
|-------------|---------------------------------------------------------------------------|
| 1201.51     | AC/DC Current Probe Model SL261 (10A-100mV/A, 100A-10mV/A, BNC)           |
| 2115.82     | AC Current Probe Model MN261 (24A-100mV/A, 240A-10mV/A, BNC)              |
| 1200.72     | AC Current Probe Model MR461 (60A-10mV/A, 600A-1mV/A, BNC)                |
| 1200.73     | AC Current Probe Model MR561 (150A-10mV/A, 1500-1mV/A, BNC)               |
| 2113.49     | AC Current Probe Model SR661 (10A-100mV/A, 100A-10mV/A, 1000A-1mV/A, BNC) |
| 2110.90     | AC Current Probe Model JM861 (30A-10mV/A, 300A-1mV/A, 3000A-0.1mV/A, BNC) |