

MTX 3281B
MTX 3282B
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« MTX MOBILE II » Digital Graphic TRMS Multimeters 100,000 COUNTS



**From the laboratory to the field:
a single diagnostic instrument, powerful and complete!**

- Large swivelling graphic LCD display with low power LEDs backlighting
- Four 100,000-point digital display units, bargraph, graphic history of measurements
- Basic precision 0.02 %, pass band 200 kHz
- Three measurement terminals with automatic selection, complete "AUTORANGING" in current
- 8-key "virtual" measurement selector with "one-hand" direct access
- "SPEC" function for direct display of measurement uncertainties
- With the "AUTOPEAK" mode, no more peak factor limitation
- Frequency-domain measurements up to 2 MHz, durations, duty cycle, counting of events
- Temperature measurements using Pt 100, Pt 1000 probes, J and K thermocouples
- "Preferred measurement" key assigned to a physical quantity (conversion & unit)
- Storage of 6,500 measurements with date and time (up to 4 simultaneous parameters)
- Optical RS232, USB, or Bluetooth communication, depending on model
- Power supply by batteries, rechargeable NiMH storage batteries, or mains adapter

metrix®

| Technical specifications | MTX3281B |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Man-Machine Interface | |
| Display | Swivelling graphic LCD (58 x 58 mm) - Contrast adjustable – LEDs Back-lighting, adjustable battery-saving |
| Characteristics | Graphic resolution 160 x 160 - 100,000-point digital display - Height of figures 9 and 6 mm |
| Modes | Main display + Bargraph + (graphic or selection of 3 secondary displays) |
| Measurement connections | 3 Measurement terminals (V, A, COM) - Detection and automatic selection of Vac+dc or lac+dc |
| Controls | Virtual measurement selector, 8 «one-hand» direct access keys - « Preferred function » key |
| Ergonomy | 2 complete languages (French, English) - Configuration menu & Browser - On-line help |
| DC, AC, and AC+DC voltages (automatic or manual ranges) | |
| Ranges | 100,000 mV - 1,00000 V - 10,0000 V - 100,000 V - 1000,00 V |
| Résolution | 1µV - 10µV - 100µV - 1mV - 10mV |
| DC Accuracy | 0,1% L+30D - 0,1% L+8D - 0,1% L+8D - 0,1% L+8D - 0,2% L+8D |
| AC et AC+DC Accuracy | Basic accuracy 0,7% L+40D - Specified Bandwidth DC à 50 kHz |
| DC, AC and AC+DC current (automatic or manual ranges) | |
| Ranges | 1000,00 µA - 10,0000 mA - 100,000 mA - 1000,00 mA - 10,0000A & 20,000A |
| Résolution | 10nA - 100nA - 1µA - 10µA - 100µA - 1mA |
| DC Accuracy | 0,1% L+15D - 0,08% L+8D - 0,08% L+8D - 0,15% L+8D - 0,5% L+15D |
| AC et AC+DC Accuracy | Basic accuracy 1% L+30D - Specified Bandwidth DC à 20 kHz |
| Protection / Allowable overload | Single « A » terminal, only one fuse, HBC, 11 A (1,000 V - 20 kA) / 20 Adc or 20 Arms (30 s max.) |
| Time measurements (automatic or manual ranges)tomatiques ou manuelles | |
| Frequency and period | From 0.62 Hz to 2 MHz - 7 ranges from 10.0000 Hz to 2.0000 MHz - Basic accuracy 0.02 %L + 8D |
| Duty cycle | Resolution 0.01 % - Period of the signal from 200 µs to 0.8 s - Pulse duration > 5 µs |
| Elapsed time | Graph of events with zoom and measurement cursors: relative mode |
| Resistances & Continuity (automatic or manual ranges) | |
| Ranges | 1000,00 Ω - 10,0000 kΩ - 100,000 kΩ - 1000,00 kΩ - 10,0000 MΩ - 50,000 MΩ |
| Résolution | 10mΩ - 100mΩ - 1Ω - 10Ω - 100Ω - 1kΩ |
| Accuracy | 0,1% L+8D - 0,1% L+8D - 0,1% L+8D - 0,1% L+8D - 0,5% L+8D - 2 % L+8D |
| Audible continuity detection | Range 1000,00 Ω - Response Time 5ms |
| Diode test | |
| Diode voltage measurements | From 0 to 2.6000 V – Accuracy n 2 % L + 30 D - Measurement current approx. 1 mA |
| Capacitance (automatic or manual ranges) | |
| Specifications | 7 ranges from 10.00 nF to 10.00 mF - Basic accuracy 1 % L + 5 D - Measurement time < 2 s up to 100 µF |
| Temperature | |
| J or K thermocouple probes | Measurements from -40.0 °C to +750.0 °C (J TC) or + 1,200 °C (K TC)- Basic accuracy 0.1 % L + 3 °C |
| Other Measurements | |
| « Preferred measurement » key | Assignment of any physical quantity to the key (function y = Ax + B and unit can be defined) |
| V Peak > 250 µs and Peak Factor | One-time or periodic phenomena - Additional error, in voltage 3 % L + 50 D, in current 5 % L + 50 D |
| Other functions | |
| AUTOPEAK Function | Automatic management of ranges to comply with maximum Peak Factor specified for the instrument |
| SPEC Function | Triple secondary display: calculation of measurement tolerance (form Min & Max Values, and x % L + xD) |
| HOLD & AUTOHOLD Function | Manual hold of display (HOLD) or automatic hold on stable measurement (AUTOHOLD) |
| REL Function | Triple secondary display: adjustable reference, relative value, deviation in % |
| SURV Function | Survey and storage of «MIN», «MAX», and «AVG» values with timestamping of the events |
| MEM Function | Data Acquisition (up to 4 measurements at once) - Interval from 1 s to 24 h 4 x 150 measurements can be stored Direct sending of the timestamped measurements on the link as they are acquired |

| General characteristics | MTX3281B |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Measurement rate | Digital and graphic display: 2.5 measurements/sec - 40-segment bargraph: 10 measurements/sec |
| Communication (various models) | Optical RS232 link, 9600 to 38400 baud - USB adapter - Bluetooth wireless link |
| Temperature | Reference 23 °C ± 5 °C - Operation -10 °C to +55 °C - Storage -40 °C to +70 °C |
| EMC/Safety | Emissions and immunity as per NF EN 61326-1, 1998 / IEC 61010, 2001, Cat IV-600 V or Cat III-1000 V |
| Power supply / Autonomy | 3 LR6 batteries or AA NiMH storage batteries / approximately 80 h (batteries) or 65 h (NiMH storage batteries) (depends on use) |
| Housing | ABS V0 - Dimensions, closed H/W/D: 44 x 85 x 180 mm - Mass: 400g - protection index IP51 |

Models and versions: basic version = MTX3281B / Bluetooth version = MTX3281B-BT / RS232 Kit version = MTX3281B-COM

Accessories provided: 1 set of cables, 4 mm-dia. banana jack, 1 set of 3 LR6 batteries, 1 installed HBC fuse, 10 x 38 mm 1000 V-T11A-20 kA, user's manual on CD-Rom, calibration certificate, simplified operating guide, and safety instructions on paper.

Accessories, optional or according to version:

Fast charging kit (fast charger + 3 AA NiMH storage batteries) (HX0053), set of 3 AA NiMH storage batteries (HX0051), "Hands free" transport and operating kit (HX0052), communication kit (optical RS232 cable + PC software) (HX0050), optical/USB cable (HX0056), USB/RS232 adapter for PC (HX0055), USB/Bluetooth adapter for PC (HX0054), measurement adapter for K thermocouple (P06.2393.06), measurement adapter for Pt100 sensors (HX0091).

| Technical specifications | MTX3282B |
|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Man-Machine Interface | |
| Display | Swivelling graphic LCD (58 x 58 mm) - Contrast adjustable – LEDs Back-lighting, adjustable battery-saving |
| Characteristics | Graphic resolution 160 x 160 - 100,000-point digital display - Height of figures 9 and 6 mm |
| Modes | Main display + Bargraph + (graphic or selection of 3 secondary displays) |
| Measurement connections | 3 Measurement terminals (V, A, COM) - Detection and automatic selection of Vac+dc or lac+dc |
| Controls | Virtual measurement selector, 8 «one-hand» direct access keys - « Preferred function » key |
| Ergonomy | 2 complete languages (French, English) - Configuration menu & Browser - On-line help |
| DC, AC, and AC+DC voltages (automatic or manual ranges) | |
| Ranges | 100,000 mV - 1,00000 V - 10,0000 V - 100,000 V - 1000,00 V |
| Résolution | 1µV - 10µV - 100µV - 1mV - 10mV |
| DC Accuracy | 0,1% L+30D - 0,05% L+8D - 0,03% L+8D - 0,03% L+8D - 0,035% L+8D |
| AC et AC+DC Accuracy | Basic accuracy 0,3% L+40D - Specified Bandwidth DC à 100 kHz |
| DC, AC and AC+DC current (automatic or manual ranges) | |
| Ranges | 1000,00 µA - 10,0000 mA - 100,000 mA - 1000,00 mA - 10,0000A & 20,000A |
| Résolution | 10nA - 100nA - 1µA - 10µA - 100µA - 1mA |
| DC Accuracy | 0,1% L+15D - 0,08% L+8D - 0,08% L+8D - 0,15% L+8D - 0,5% L+15D |
| AC et AC+DC Accuracy | Basic accuracy 0,3% L+30D - Specified Bandwidth DC à 50 kHz |
| Protection / Allowable overload | Single « A » terminal, only one fuse, HBC, 11 A (1,000 V - 20 kA) / 20 Adc or 20 Arms (30 s max.) |
| Time measurements (automatic or manual ranges)tomatiques ou manuelles) | |
| Frequency and period | From 0.62 Hz to 2 MHz - 7 ranges from 10.0000 Hz to 2.0000 MHz - Basic accuracy 0.02 %L + 8D |
| Duty cycle | Resolution 0.01 % - Period of the signal from 200 µs to 0.8 s - Pulse duration > 5 µs |
| Positive and negative pulses | Counting up to 99,999, min duration 5 µs - Measurement of duration from 100 µs to 12.5 s, resolution 10 µs |
| Elapsed time | Graph of events with zoom and measurement cursors: relative mode |
| Resistances & Continuity (automatic or manual ranges) | |
| Ranges | 1000,00 Ω - 10,0000 kΩ - 100,000 kΩ - 1000,00 kΩ - 10,0000 MΩ - 50,000 MΩ |
| Résolution | 10mΩ - 100mΩ - 1Ω - 10Ω - 100Ω - 1kΩ |
| Accuracy | 0,1% L+8D - 0,07% L+8D - 0,07% L+8D - 0,07% L+8D - 0,5% L+8D - 2% L+8D |
| Audible continuity detection | Range 1000,00 Ω - Response Time 5ms |
| Diode test | |
| Diode voltage measurements | From 0 to 2.6000 V - Precision 2 % L + 30 D - Measurement current approx. 1 mA |
| Capacitance (automatic or manual ranges) | |
| Specifications | 7 ranges from 10.00 nF to 10.00 mF - Basic accuracy 1 % L + 5 D - Measurement time < 2 s up to 100 µF |
| Temperature | |
| J or K thermocouple probes | Measurements from -40.0 °C to +750.0 °C (J TC) or + 1,200 °C (K TC)- Basic accuracy 0.1 % L + 3 °C |
| Pt 100 or Pt 1000 probes | Measurements from -125.0 °C to + 800.0 °C - Basic accuracy 0.5 °C |
| Other Measurements | |
| « Preferred measurement » key | Assignment of any physical quantity to the key (function y = Ax + B and unit can be defined) |
| V Peak > 250 µs and Peak Factor | One-time or periodic phenomena - Additional error, in voltage 3 % L + 50 D, in current 5 % L + 50 D |
| Other functions | |
| AUTOPEAK Function | Automatic management of ranges to comply with maximum Peak Factor specified for the instrument |
| SPEC Function | Triple secondary display: calculation of measurement tolerance (form Min & Max Values, and x % L + xD) |
| HOLD & AUTOHOLD Function | Manual hold of display (HOLD) or automatic hold on stable measurement (AUTOHOLD) |
| REL Function | Triple secondary display: adjustable reference, relative value, deviation in % |
| SURV Function | Survey and storage of «MIN», «MAX», and «AVG» values with timestamping of the events |
| MATH Function | Automatic management of ranges to comply with maximum Peak Factor specified for the instrument |
| MEM Function | Data Acquisition (up to 4 measurements at once) - Interval from 1 s to 24 h 6500 measurements can be stored Direct sending of the timestamped measurements on the link as they are acquired |

| General characteristics | MTX3282B |
|--------------------------------|---------------------------------------------------------------------------------------------------------|
| Measurement rate | Digital and graphic display: 2.5 measurements/sec - 40-segment bargraph: 10 measurements/sec |
| Communication (various models) | Optical RS232 link, 9600 to 38400 baud - USB adapter - Bluetooth wireless link |
| Temperature | Reference 23 °C ± 5 °C - Operation -10 °C to +55 °C - Storage -40 °C to +70 °C |
| EMC/Safety | Emissions and immunity as per NF EN 61326-1, 1998 / IEC 61010, 2001, Cat IV-600 V or Cat III-1000 V |
| Power supply / Autonomy | 3 LR6 or AA NiMH storage batteries / 80 h (batteries) or 65 h (NiMH storage batteries) (depends on use) |
| Mains power | Switching mode Adapter / Charger 100-240 V ±10%, 50/60 Hz - Charging time 7H30 (2600mAh) |
| Housing | ABS V0 - Dimensions, closed H/W/D: 44 x 85 x 180 mm - Mass: 400g - protection index IP51 |

Models and versions: basic version = MTX3282B / Bluetooth version = MTX3282B-BT / RS232 Kit version = MTX3282B-COM

Accessories provided: 1 set of cables, 4 mm-dia. banana jack, 1 set of 3 AA NiMH storage batteries, 1 mains adapter/charger, 1 installed HPC fuse 10 x 38 mm 1000 V-T11A-20 kA, user's manual on CD-Rom, calibration certificate, simplified operating guide, and safety instructions on paper.

Accessories, optional or according to version:

Fast charging kit (fast charger + 3 AA NiMH storage batteries) (HX0053), set of 3 AA NiMH storage batteries (HX0051), "Hands free" transport and operating kit (HX0052), communication kit (optical RS232 cable + PC software) (HX0050), optical/USB cable (HX0056), USB/RS232 adapter for PC (HX0055), USB/Bluetooth adapter for PC (HX0054), measurement adapter for K thermocouple (P06.2393.06), measurement adapter for Pt100 sensors (HX0091).

| Technical specifications | MTX3283B |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Man-Machine Interface | |
| Display | Swivelling graphic LCD (58 x 58 mm) - Contrast adjustable – LEDs Back-lighting, adjustable battery-saving |
| Characteristics | Graphic resolution 160 x 160 - 100,000-point digital display - Height of figures 9 and 6 mm |
| Modes | Main display + Bargraph + (graphic or selection of 3 secondary displays) |
| Measurement connections | 3 Measurement terminals (V, A, COM) - Detection and automatic selection of Vac+dc or lac+dc |
| Controls | Virtual measurement selector, 8 «one-hand» direct access keys - « Preferred function » key |
| Ergonomy | 2 complete languages (French, English) - Configuration menu & Browser - On-line help |
| Tensions DC, AC et AC+DC (gammes automatiques ou manuelles) | |
| Gammes | 100,000 mV - 1,00000 V - 10,0000 V - 100,000 V - 1000,00 V |
| Résolution | 1µV - 10µV - 100µV - 1mV - 10mV |
| Précision DC | 0,1% L+20D - 0,05% L+8D - 0,02% L+8D - 0,02% L+8D - 0,03% L+8D |
| AC et AC+DC | Basic accuracy 0,3% L+40D - Specified Bandwidth DC à 200 kHz |
| DC, AC and AC+DC current (automatic or manual ranges) | |
| Ranges | 1000,00 µA - 10,0000 mA - 100,000 mA - 1000,00 mA - 10,0000A & 20,000A |
| Résolution | 10nA - 100nA - 1µA - 10µA - 100µA - 1mA |
| DC Accuracy | 0,1% L+15D - 0,08% L+8D - 0,08% L+8D - 0,15% L+8D - 0,5% L+15D |
| AC et AC+DC Accuracy | Basic accuracy 0,3% L+ 30D - Specified Bandwidth DC à 50 kHz |
| Protection / Allowable overload | Single « A » terminal, only one fuse, HBC, 11 A (1,000 V - 20 kA) / 20 Adc or 20 Arms (30 s max.) |
| Time measurements (automatic or manual ranges)omatiques ou manuelles) | |
| Frequency and period | From 0.62 Hz to 2 MHz - 7 ranges from 10.0000 Hz to 2.0000 MHz - Basic accuracy 0.02 %L + 8D |
| Duty cycle | Resolution 0.01 % - Period of the signal from 200 µs to 0.8 s - Pulse duration > 5 µs |
| Positive and negative pulses | Counting up to 99,999, min duration 5 µs - Measurement of duration from 100 µs to 12.5 s, resolution 10 µs |
| Elapsed time | Graph of events with zoom and measurement cursors: relative mode |
| Resistances & Continuity (automatic or manual ranges) | |
| Ranges | 1000,00 Ω - 10,0000 kΩ - 100,000 kΩ - 1000,00 kΩ - 10,0000 MΩ - 50,000 MΩ |
| Résolution | 10mΩ - 100mΩ - 1Ω - 10Ω - 100Ω - 1kΩ |
| Accuracy | 0,1% L+8D - 0,07% L+8D - 0,07% L+8D - 0,07% L+8D - 0,5% L+8D - 2% L+8D |
| Audible continuity detection | Range 1000,00 Ω - Response Time 5ms |
| Diode test | |
| Diode voltage measurements | From 0 to 2.6000 V - Accuracy 2 % L + 30 D - Measurement current approx. 1 mA |
| Capacitance (automatic or manual ranges) | |
| Specifications | 7 ranges from 10.00 nF to 10.00 mF - Basic accuracy 1 % L + 5 D - Measurement time < 2 s up to 100 µF |
| Temperature | |
| J or K thermocouple probes | Measurements from -40.0 °C to +750.0 °C (J TC) or + 1,200 °C (K TC)- Basic accuracy 0.1 % L + 3 °C |
| Pt 100 or Pt 1000 probes | Measurements from -125.0 °C to + 800.0 °C - Basic accuracy 0.5 °C |
| Other Measurements | |
| « Preferred measurement » key | Assignment of any physical quantity to the key (function $y = Ax + B$ and unit can be defined) |
| V Peak > 250 µs and Peak Factor | One-time or periodic phenomena - Additional error, in voltage 3 % L + 50 D, in current 5 % L + 50 D |
| Measurement in dBm | Resolution 0.01 dBm - Adjustable reference from 1 Ω to 10,000 Ω |
| Resistive power U ² /R or R I ² | Resolution 100 µW - Adjustable reference from 1 Ω to 10,000 Ω |
| dB function | Triple secondary display: signal frequency, variation in dB in comparison with the reference, maths function |
| Other functions | |
| AUTOPEAK Function | Automatic management of ranges to comply with maximum Peak Factor specified for the instrument |
| SPEC Function | Triple secondary display: calculation of measurement tolerance (form Min & Max Values, and x % L + xD) |
| HOLD & AUTOHOLD Function | Manual hold of display (HOLD) or automatic hold on stable measurement (AUTOHOLD) |
| REL Function | Triple secondary display: adjustable reference, relative value, deviation in % |
| SURV Function | Survey and storage of «MIN», «MAX», and «AVG» values with timestamping of the events |
| MATH Function | Automatic management of ranges to comply with maximum Peak Factor specified for the instrument |
| MEM Function | Data Acquisition (up to 4 measurements at once) - Interval from 1 s to 24 h 6500 measurements can be stored Direct sending of the timestamped measurements on the link as they are acquired |

| General characteristics | MTX3283B |
|--------------------------------|---------------------------------------------------------------------------------------------------------|
| Measurement rate | Digital and graphic display: 2.5 measurements/sec - 40-segment bargraph: 10 measurements/sec |
| Communication (various models) | Optical RS232 link, 9600 to 38400 baud - USB adapter - Bluetooth wireless link |
| Temperature | Reference 23 °C ± 5 °C - Operation -10 °C to +55 °C - Storage -40 °C to +70 °C |
| EMC/Safety | Emissions and immunity as per NF EN 61326-1, 1998 / IEC 61010, 2001, Cat IV-600 V or Cat III-1000 V |
| Power supply / Autonomy | 3 LR6 or AA NiMH storage batteries / 80 h (batteries) or 65 h (NiMH storage batteries) (depends on use) |
| Mains power | Switching mode Adapter / Charger 100-240 V ±10%, 50/60 Hz - Charging time 7H30 (2600mAh) |
| Housing | ABS V0 - Dimensions, closed H/W/D: 44 x 85 x 180 mm - Mass: 400g - protection index IP51 |

Models and versions: basic version = MTX3283B / Bluetooth version = MTX3283B-BT / RS232 Kit version = MTX3283B-COM

Accessories provided: 1 set of cables, 4 mm-dia. banana jack, 1 set of 3 AA NiMH storage batteries, 1 mains adapter/charger, 1 installed HPC fuse 10 x 38 mm 1000 V-T11A-20 kA, user's manual on CD-Rom, calibration certificate, simplified operating guide, and safety instructions on paper.

Accessories, optional or according to version: Fast charging kit (fast charger + 3 AA NiMH storage batteries) (HX0053), set of 3 AA NiMH storage batteries (HX0051), "Hands free" transport and operating kit (HX0052), communication kit (optical RS232 cable + PC software) (HX0050), optical/USB cable (HX0056), USB/RS232 adapter for PC (HX0055), USB/Bluetooth adapter for PC (HX0054), measurement adapter for K thermocouple (P06.2393.06), measurement adapter for Pt100 sensors (HX0091).