metrix®

MTX Mobile

MTX 3281B
MTX 3282B
MTX 3283B

100,000-count TRMS Graphic digital multimeters

From the laboratory to the field, a single, comprehensive diagnostic instrument offering top performance!

- Large **graphic LCD** display, bilingual menus (French/English)
- New **LED backlighting** for easier reading and lower power consumption
- Four **100,000-count digital** displays, bargraph and graphic measurement log
- Basic accuracy **0.02 %**, specified bandwidth **200 kHz**
- 8-key "virtual" measurement selector with **"one-handed" direct access**
- Frequency measurements up to **2 MHz**, durations, duty cycle, counting of events
- **Temperature measurements** with Pt 100 or Pt 1000 probes and J or K thermocouples
- Storage of **6,500 measurements** with date and time (up to 4 simultaneous parameters)
- Optical RS232, **USB or Bluetooth** communication
- **50 %-faster battery recharging with the new Wall Plug mains power pack.**

metrix® A Brand of CHAUVIN ARNOUX GROUP

Uncompromising performance in the

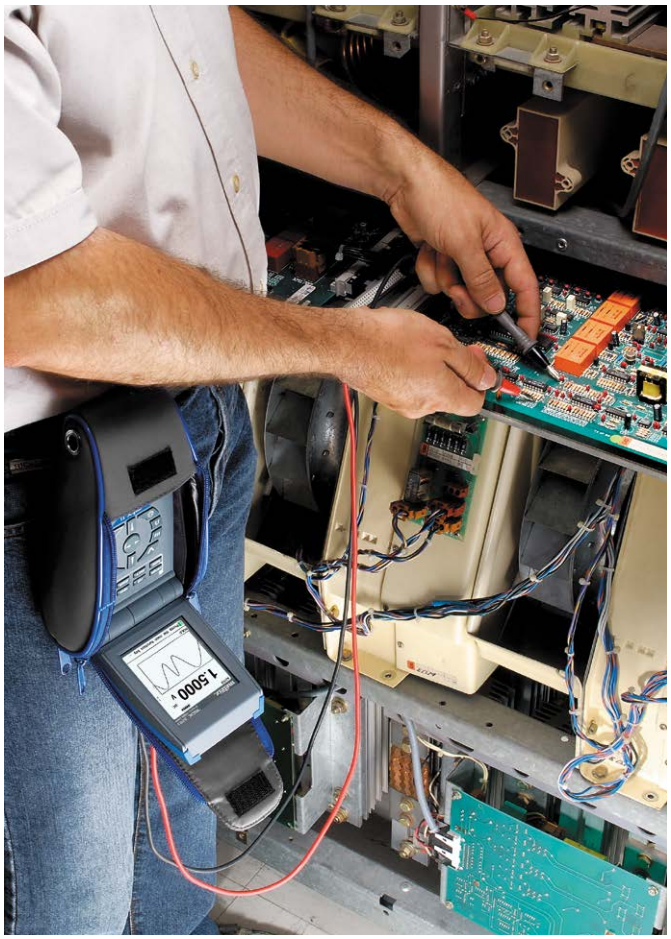
Metrological accuracy

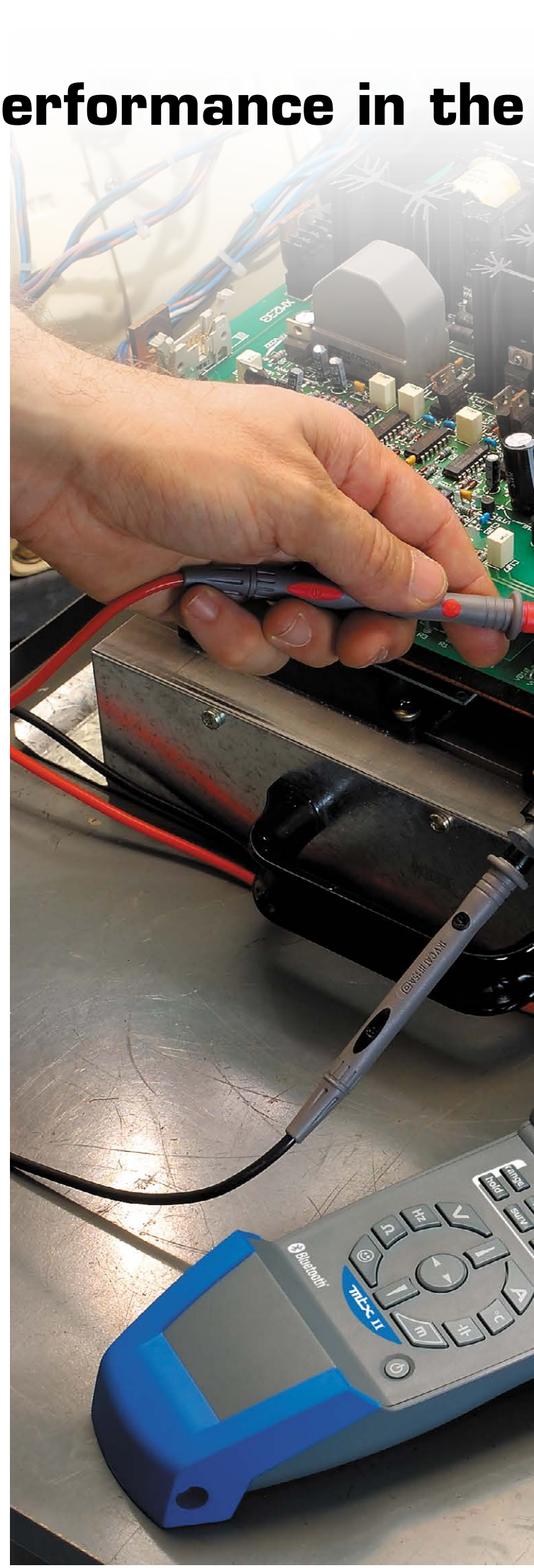
At its launch, the ASYC2 range from Metrix® established a new standard in metrological performance, both for its high-performance specifications and its entirely new "closed-casing" adjustment functions, representing a breakthrough in field instrument technology. The latest ASYC3 range (MTX Mobile) continues this tradition of innovation, with top-of-the-range handheld multimeters offering a resolution of 100,000 counts, 0.02 % basic accuracy and a 200 kHz bandwidth, features that set them apart from the competition.
The customer calibration software, available as an option, makes periodic checking simpler, quicker and more economical.

Specially designed for laboratory and field use

Their unique design, featuring a multidirectional screen and electronic control switch, makes this range of instruments ideally suited for both benchtop and one-handed use.

The power supply system is equally innovative, offering all the benefits of a modern instrument, with rechargeable batteries for on-site use and a mains adapter doubling as a battery charger for lab use. This means you no longer have to worry about the instrument shutting down due to low power during measurements over long periods.





laboratory and on-site

The new Wall Plug switching power pack is multi-voltage. Different according to the country, it is now available with the MTX 3282B and MTX3283B models. It reduces the average charging time of the batteries which have approximately 50 % more capacity than the original models. The MTX Mobile gives a precise indication of the battery's remaining capacity.

The self-extinguishing, moulded, on-site casing is resistant and benefits from an IP 51 protection rating.

Effective design: flawless ergonomics

Compact and protected when closed, the models in the ASYC3 range are particularly easy to handle because of their shape and their "slim-line" casing.

The measurement functions can be selected directly with the hand holding the instrument by simply pressing the required key in the electronic control pad.

In addition, a specially-designed carrying pouch leaves both hands free to deal with the required lead connections.

Uncompromising performance in the

Unprecedented display features for this type of instrument

For greater reading comfort, the range features an extra-large multidirectional multi-display screen with an analogue bargraph and **LED backlighting**. This new backlighting system **improves the contrast in bright light**, making it easier to read, while also **significantly reducing power consumption**. The multimeter display remains easy to read whatever the instrument's position during use.

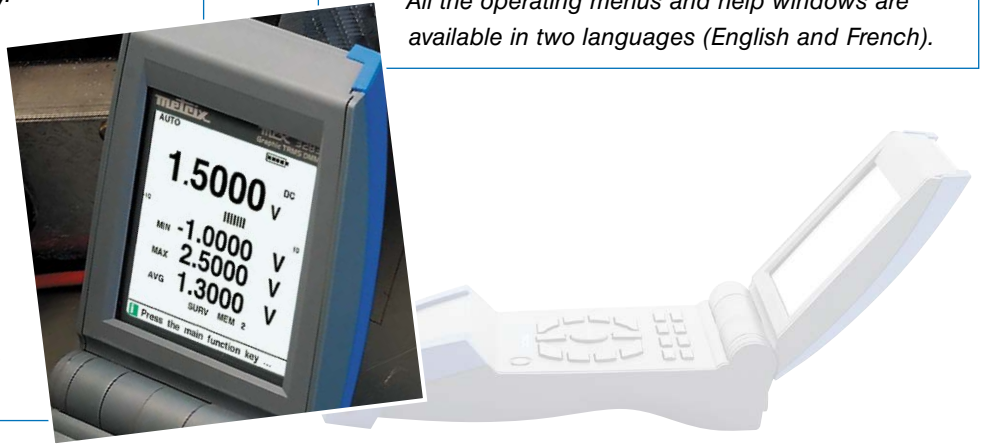
*In **mixed display** mode, the particularly legible digital display offers stable, accurate measurement readings, while rapid variations are clearly indicated by the bargraph. A further dimension is provided by the instrument's graphic recorder, which shows the measurement variations over time.*

All the operating menus and help windows are available in two languages (English and French).

The modes and functions selected, the physical and electrical quantities measured and any relevant warning symbols are all clearly displayed on the instrument's high-resolution 160 x 160-pixel graphic display.

Depending on the function selected, the results are displayed either in mixed digital/graphic mode or in digital mode only.

*The **4-display system** means you can view all the required measurements simultaneously, while limiting the number of necessary operations to the minimum (measurement combinations, SPEC, REL, MEM, SURV).*



laboratory and on-site

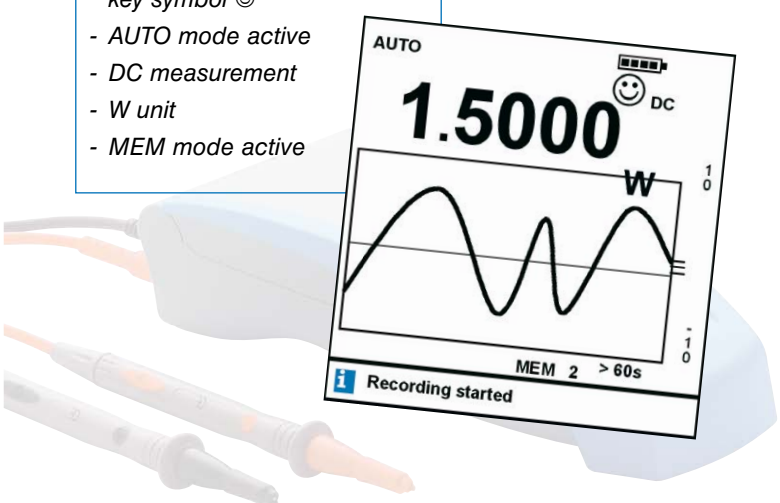
Multimeters with fingertip control

These are the only instruments of their kind equipped with an electronic control switch to replace traditional mechanical switches (the primary cause of malfunctions on conventional hand-held multimeters), thus guaranteeing performance and safety. In addition, direct-access one-touch controls remove the need for the intermediate positions found on conventional mechanical control switches.

The principal measurements are instantly accessible with the instrument's 6 direct-access keys, so it is no longer necessary to choose between the 4 or 5 positions required by conventional mechanical switches for simple voltage or current measurements.

A "favourite measurement" key allows users to program automatic access to the measurement mode they use the most. Whatever the physical quantity measured, this key enables you to convert the scale and define the appropriate measurement unit in order to obtain direct readings of the original quantity.

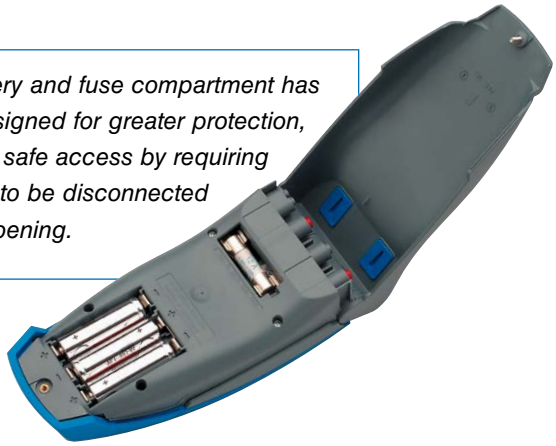
- *Favourite measurement key symbol ☺*
- *AUTO mode active*
- *DC measurement*
- *W unit*
- *MEM mode active*



Technology serving safety

Lead/command consistency is managed entirely by the multimeter, which automatically selects the corresponding function when it detects a lead on the Ampere or Volt terminals. When a lead is connected to the Volt terminal, for example, the instrument automatically proposes to check for the presence of a voltage before carrying out resistance or capacitance measurements.
On the practical side, the Ampere input's single HRC fuse has made it possible to reconcile the instrument's compact design with the increased safety distances required for compliance with IEC standards 61010 1,000 V / Cat. III, 600 V / Cat. IV.
This innovation is also an effective safeguard against wiring errors, which may destroy the safety fuse that normally provides protection during current measurements.

The battery and fuse compartment has been designed for greater protection, ensuring safe access by requiring all leads to be disconnected before opening.



Thanks to technological improvements resulting in a single "A" terminal, current measurements are performed using a single switch position, allowing smooth changes of the measurement range from just a few hundred micro-Amperes to up to 20 Amperes.
It is even possible to carry out current and voltage measurements simultaneously, using 3 measurement leads, and display the "V x A" result.

Single A terminal

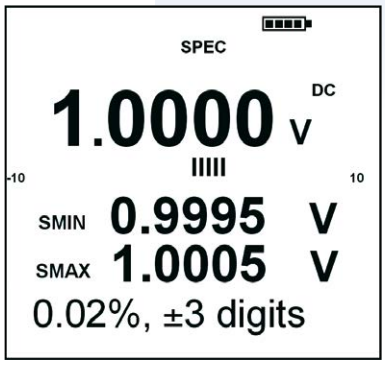
For greater efficiency and safety when working, the instrument proposes only 3 measurement terminals.
When the removable lead is connected to the Ampere or Volt terminal, the corresponding function is automatically selected in AC+DC mode, complete with auto-ranging, thus reducing handling to a minimum.

Uncompromising performance in the laboratory and on-site

Total control of measurement

With the new **AUTOPEAK** mode, current or voltage range changes are now based on the rapid acquisition of peaks, in order to avoid untimely overruns of the instrument's Crest Factor, which may cause measurement errors without the user being aware of it. This means there is no longer any limitation of the crest factor except with the instrument's 1,000 V range.

Another innovative feature is the instrument's **SPEC** function, which automatically displays measurement tolerances without users having to search for them or calculate them.

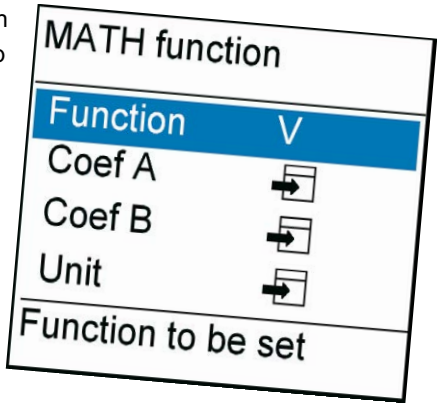


In this way, users are in full control of the measurement uncertainties, whatever the range or the AC signal frequency.

Innovative functions for all-round measurement performance

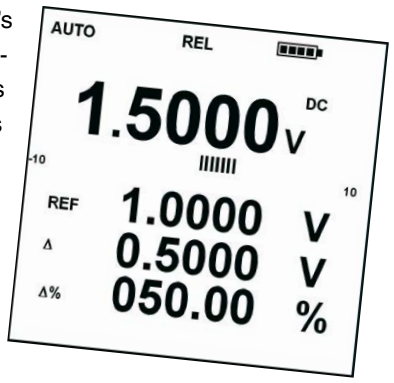
Thanks to their **MATH** function, the models in the ASYC3 Series are ideal for measuring varied physical quantities. This function means users can measure a physical quantity in Volts, Amperes, Hertz or Ohms, convert the quantity and assign the appropriate unit to it, in order to obtain a direct reading on the secondary display.

This type of function can be assigned directly to the "Favourite measurement" key so that it can be activated instantaneously.



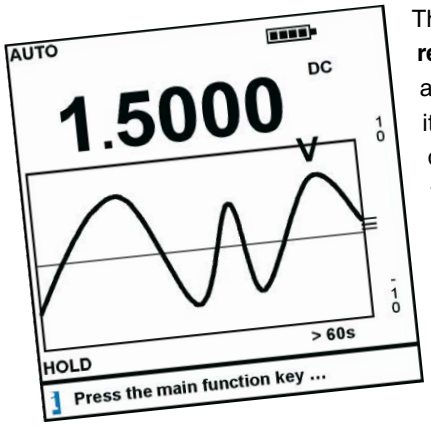
Another frequent application involves testing the attenuation and bandwidth of electronic circuits.
The **dB** function on the ASYC3 Series enables you to directly display all the information you need, including voltage, frequency and attenuation in dB compared with the reference value.

Thanks to the instrument's 4 digital displays, the relative function **REL** provides comprehensive simultaneous display of the absolute value, the absolute deviation, the percentage deviation and the reference value.
In addition, the reference value can be adjusted simply and directly using the **REL** function key.



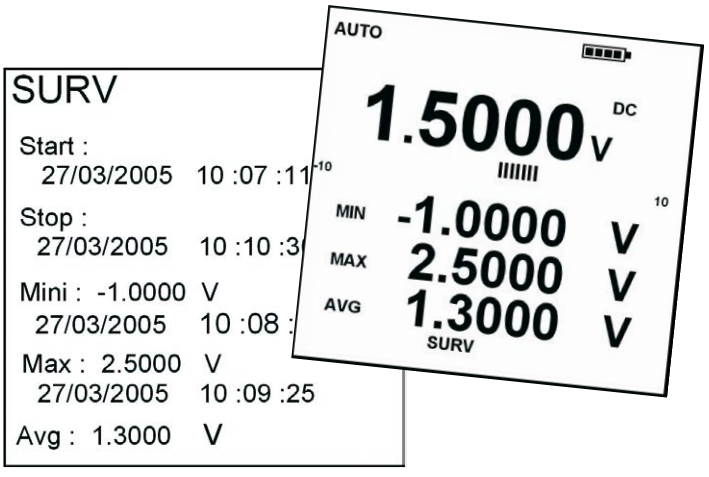
Everything you need to track down faults

The functions provided by the multimeter and recorder integrated in the ASYC3 Series models make them ideal partners in the field for maintenance, adjustment and even R&D.
Wherever you find electronics, whether in industrial processes, production equipment or energy distribution, the ASYC3 Series offers genuine advantages...

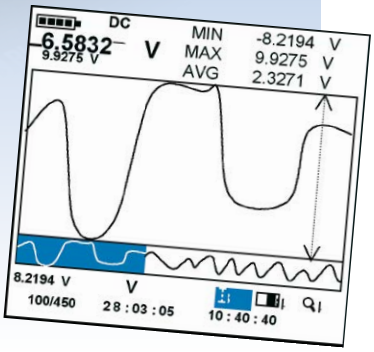


The ASYC3 Series' **graphic recorder window** offers an extra dimension with its at-a-glance graphic display of measurement variations over time.

The **SURV key** can be used to display and record simultaneously the minimum, maximum and average values of a measurement, as well as the dates/times of the extreme values and the start and end of monitoring.



For even more detail, the **MEM key** records up to 6,500 time/date-stamped measurements at intervals ranging from 1 s to 24 h so that they can be analysed graphically on the instrument. This function can be used for 1, 2, 3 or even 4 simultaneous measurements.



Thanks to its PC-compatible analysis software, these measurement results may be exported in real-time or deferred mode, enabling you to store, analyse, document and transfer data into a standard spreadsheet application.

To complete this all-round performance, the measurement of rapid one-off or periodic 250 µs peaks with the instrument's **PEAK** function makes it possible to pinpoint anomalies which are normally undetectable using conventional multimeters, so that users can make an initial diagnosis of the signal types based on the **Crest Factor** displayed.

Modern, universal communication

Universal communication suitable for all working environments is provided by optically-isolated RS232 and USB ports alongside built-in Bluetooth technology.

Metrix® also offers an expanding range of customer services, including a user "hot-line" and our support site, **www.chauvin-arnoux.com**, "customer" calibration software and an extensive after-sales service network.

Models / References

Basic versions*	MTX3281B ❶ MTX3282B ❷ MTX3283B ❸
Basic versions + USB cable and SX-DMM software	MTX3281B-COM MTX3282B-COM MTX3283B-COM
Basic versions + Bluetooth and SX-DMM software	MTX3281B-BT MTX3282B-BT MTX3283B-BT
Kit versions Delivered in hard case with HX0052 "hands-free" kit, 1 set of 2 crocodile clips, 1 set of 2 hook wire-grips, 1 CD-Rom containing the operating manuals in 5 languages	
• MTX3281B + 1 MN09 current clamp	MTX3281B-P
• MTX3282B + 1 K-thermocouple probe adapter, 1 USB cable and SX-DMM acquisition software	MTX3282B-P
• MTX3283B + 1 banana lead with clamp for SMD components (HX0064), 1 USB cable and SX-DMM acquisition software	MTX3283B-P

*** Accessories supplied:**
1 set of Ø 4 mm banana leads, 1 set of 3 LR6 batteries ❶ or 1 set of 3 AA NiMH rechargeable batteries ❷ ❸, 1 mains adapter/charger ❷ ❸, 1 HRC fuse 10 x 38 mm 1,000 V -T11 A-20 kA and 1 operating manual in 5 languages.

Optional accessories
(or depending on versions)

Communication kit (RS232 optical cable + PC software)	HX0050
Set of 3 AA NiMH rechargeable batteries	HX0051
Transport and "hands-free" kit	HX0052
Fast charge kit (fast charger + 3 AA NiMH rechargeable batteries)	HX0053
USB/RS232 adapter for PC	HX0055
Optical cable/USB	HX0056-Z
USB/Bluetooth adapter for PC	P01637301
Measurement adapter for K thermocouple	P06239306

TECHNICAL SPECIFICATIONS	MTX3281B ❶	MTX3282B ❷	MTX3283B ❸
MAN-MACHINE INTERFACE			
Display	Multidirectional graphic LCD (58 x 58 mm) - Adjustable contrast - LED backlighting		
Specifications	Graphic resolution 160 x 160 - 100,000-count digital display		
Modes	Main display + bargraph + (graphic or selection of 3 secondary displays)		
Measurement connections	3 measurement terminals (V, A, COM) - Automatic detection and selection of V_{AC+DC} or I_{AC+DC}		
Controls	Virtual measurement selector with 8 "one-handed" direct access keys - "Favourite function" key		
Ergonomics	2 complete languages (French, English) - Configuration menu & browser - On-line help		
DC, AC and AC+DC voltages / 5 automatic or manual ranges from 100.000 mV to 1,000.00 V			
DC basic accuracy	0.1 % R + 8 D ❶	0.03 % R + 8 D ❷	0.02 % R + 8 D ❸
AC and AC+DC basic accuracy	0.7 % R + 40 D ❶	0.3 % R + 40 D ❷	0.3 % R + 40 D ❸
Specified bandwidth	DC at 50 kHz ❶	DC at 100 kHz ❷	DC at 200 kHz ❸
DC, AC and AC+DC currents / 6 automatic or manual ranges from 1000.00 µA to 20.000 A (max. 30 s)			
DC basic accuracy	0.08 % R + 8 D ❶	0.08 % R + 8 D ❷	0.08 % R + 8 D ❸
AC and AC+DC basic accuracy	1.0 % R + 30 D ❶	0.3 % R + 30 D ❷	0.3 % R + 30 D ❸
Specified bandwidth	DC at 20 kHz ❶	DC at 50 kHz ❷	DC at 50 kHz ❸
Frequency & period / 7 automatic or manual ranges from 10.0000 Hz to 2.0000 MHz – Basic accuracy 0.02 % R + 8 D			
Duty cycle	Rated range 5 to 95 % - Resolution 0.01 %		
Pos. and neg. pulses ❷ ❸	Counting of up to 99,999 pulses, measurement of duration from 100 µs to 12.5 s		
Elapsed time	Graph of events with zoom and measurement cursors: Relative mode (1) or Date/Time ❷ ❸		
Resistance & continuity / 6 automatic or manual ranges from 1000,00 to 50.000 M			
Basic accuracy	0.1 % R + 8 D ❶	0.07 % R + 8 D ❷	0.07 % R + 8 D ❸
Audible continuity detection	Range 1,000.00 - response time 5 ms		
Diode test / 0 to 2.6000 V – Accuracy 2 % R + 30 D – measurement current approx. 1 mA			
Capacitance / Automatic or manual ranges from 10.00 nF to 10.00 mF – 1 % R + 5D - Measurement time < 2 s (for C < 100 µF)			
Temperature / J or K thermocouple probes and Pt 100 or Pt 1000 probes ❷ ❸			
Other measurements			
V Peak > 250 µs and crest factor	Valid for one-off or periodic phenomena		
Measurement in dBm ❸	Resolution 0.01 dBm - Adjustable reference from 1 Ω to 10 000 Ω		
Resistive power U^2/R or $R \times I^2$ ❸	Resolution 100 µW - Adjustable reference from 1 Ω to 10 000 Ω		
dB function ❸ Triple secondary display: signal frequency, variation in dB compared with reference, MATH function			
Other functions			
AUTOPEAK function ❷ ❸	Automatic management of ranges to comply with the Crest Factor of the instrument		
SPEC function	Calculation of measurement tolerance in the form Min & Max Values, and x % R + x D		
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	Monitoring and storage of "MIN", "MAX", and "AVG" values with time/date-stamping		
MATH function ❷ ❸	Scaling and display of the unit for physical quantities (y = Ax+B function and unit definable)		
MEM function	Acquisition of data (up to 4 measurements at once) - Interval from 1 s to 24 h Storage of 4 x 150 measurements (1) or 6,500 measurements (2) (3) Direct transmission of the time/date-stamped measurements via the link as they are acquired		

GENERAL SPECIFICATIONS	MTX3281B ❶	MTX3282B ❷	MTX3283B ❸
Communication (depending on model)	Optical USB link, 9,600 to 38,400 baud - Bluetooth wireless link		
EMC / Safety	Emissions and immunity as per NF EN 61326-1, 1998 / IEC 61010, 2001 - Cat IV-600 V or Cat III-1,000 V		
Power supply / battery life	3 LR6 batteries or AA NiMH rechargeable batteries / approx. 80 h (LR6 batteries) or 65 h (NiMH rechargeable batteries) depending on use		
Mains power supply ❷ ❸	Multi-voltage switching power supply, 100-240 V ± 10 %, 50-60 Hz, 0.3 A Full charge time 7 hours 30 min (2,600 mAh rechargeable batteries)		
Casing	ABS V0 – Dimensions when closed (H/W/D): 44 x 85 x 180 mm - Weight: 400 g - Protection rating IP51		

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