

TRMS AC, DC, AC+DC digital multimeters

Category IV for safety,
versatility for use in the field



	C.A 5271	C.A 5273	C.A 5275	C.A 5277
Display	6,000 counts	2 x 6,000 counts with backlighting		
Bargraph	61 + 2 elements	61 + 2 elements, dual mode (full scale/central zero)		
Acquisition	TRMS AC /DC		TRMS AC / DC / AC+DC	
Measurement range	5 measurements / second			
Autorange / Deactivatable	Yes / No		Yes / Yes	
Automatic AC /DC detection	Yes		No	
V_{DC}	Ranges	600 mV / 6V / 60V / 600 V / 1,000 V		60 mV / 600 mV / 6 V / 60 V / 600 V / 1,000 V
	Typical accuracy	0.2 % + 2 cts		0.09 % + 2 cts
	Resolution	0.1 mV to 1 V		0.01 mV to 1 V
V_{AC}	Ranges	600 mV / 6 V / 60 V / 600 V / 1,000 V		60 mV / 600 mV / 6V / 60 V / 600 V / 1,000 V
	Resolution	0.1 mV to 1 V		0.01 mV to 1 V
	Bandwidth	40 Hz to 3 kHz		40 Hz to 10 kHz
V_{Low AC} (low impedance + low-pass filter)	Ranges	600 mV / 6V / 60V / 600V / 1,000 V		
	Resolution	0.1 mV to 1 V		
V_{AC + DC}	Ranges	60 mV / 600 mV / 6V / 60 V / 600 V / 1,000 V		
	Resolution	0.01 mV to 1 V		
A_{DC}	Ranges	6 A / 10 A (20 A / 30 s)		6,000 μ A / 60mA / 600 mA / 6 A / 10 A (20 A / 30 s)
	Resolution	0.001 A to 0.01 A		1 μ A to 0.01 A
A_{AC}	Ranges	6 A / 10 A		6,000 μ A / 60 mA / 600 mA / 6 A / 10 A (20 A / 30 s)
	Resolution	0.001 A to 0.01 A		1 μ A to 0.01 A
	Ranges			6,000 μ A / 60 mA / 600 mA / 6 A / 10 A (20 A / 30 s)
A_{AC + DC}	Resolution			1 μ A to 0.01 A
	Ranges	600 Ω / 6,000 Ω / 60 k Ω / 600 k Ω / 6 M Ω / 60 M Ω		
Resistance	Resolution	0.1 Ω to 0.1 M Ω		
Audible continuity		Yes		
Test diode		Yes		
Hz	Ranges	600 Hz / 6 kHz / 50 kHz		
	Resolution	0.1 Hz to 10 Hz		
Capacity	Ranges	6 nF / 60 nF / 600 nF / 6 μ F / 60 μ F / 600 μ F / 6 mF / 60 mF		
	Resolution	0.001 nF (1pF) to 10 μ F		
T°	Ranges	-59.6 °C to +1,200 °C -4 °F to +2,192 °F		-59.6 °C to +1,200 °C -4 °F to +2,192 °F
	Resolution	0.1° to 1 °		0.1° to 1 °
Hold		Hold		
Min / MAX (100 ms)		No	Yes	
Peak+ / Peak- (1 ms)		No		Yes
Differential measurement (X) / Relative (DX/X%)		No		Yes
Automatic power-off		Yes (deactivatable)		
Power supply		1 x 9 V		
Dimensions / Weight		90 x 190 x 45 / 400 g		

State at delivery

C.A 5270 multimeter delivered with a set of banana leads, a set of test probes, a 9 V battery and a CD containing the operating manual and the start-up guide.

C.A 5271 standard state at delivery

C.A 5273 with additional K thermocouple temperature sensor

C.A 5275 with additional bag and Multifix adapter

C.A 5277 with additional K thermocouple temperature sensor, bag and Multifix adapter

To order

C.A 5271 TRMS AC/DC multimeter	P01196771
C.A 5273 TRMS AC/DC multimeter	P01196773
C.A 5275 TRMS AC+DC multimeter	P01196775
C.A 5277 TRMS AC+DC multimeter	P01196777

Universal Testing and Measurement

Digital multimeters

The MX 57Ex is certified ATEX & IECEx and can be used in both explosive and non-explosive environments.



The MX HD range of IP 67 multimeters fulfils the requirements for difficult environments.

They are totally protected against:

- dust
- the effects of temporary immersion



	MX 22	MX 24B	MX 44HD	MX 58HD	MX 59HD	MX 57Ex
Reference	MX0022-Z	MX0024-G	MX0044HD	MX0058HD	MX0059HD	MX0057CX
Display	4,000 counts	5,000 counts	4,000 counts	5,000 / 50,000 counts	50,000 counts	50,000 counts
Bargraph	Yes			Analogue, 34 segments, 20 meas./s		
Type of measurement	AVG	TRMS	AVG	TRMS AC & AC+DC		
DC voltage	600 V	1,000 V	1,000 V	5 calibres from 500 mV to 600 V		
AC voltage	600 V	750 V	750 V	5 calibres from 500 mV to 600 V		
Bandwidth	500 Hz	1 kHz	1 kHz	50 kHz	100 kHz	50 kHz
AC/DC current	400 μ A, 4-40-400 mA, 4 A, 10 A	500 mA/10 A	40 mA/10 A	5 mA, 50 mA 500 mA, 20 A (30s)	500 μ A, 5 mA, 50 mA and 500 mA 20 A (30s)	
Frequency	4 MHz	500 kHz	-	Range from 0.62 Hz to 500 kHz		
other measurements						
Resistance	40 M Ω	50 M Ω	6 ranges from 400 Ω to 40 M Ω	6 ranges from 500 Ω to 50 M Ω		
Audible continuity	< 40 Ω	10 to 20 Ω	20 to 40 Ω	Detection threshold from 10 Ω to 20 Ω - resp. time 1 ms		
Diode test	0 à 4 V	0 to 2 V	0 to 3 V	from 0 to 2 V		
Capacitance	-	50 nF to 50 mF	4 nF to 40 μ F	7 ranges from 50 nF to 50 mF		
Temperature	-	-	-	-	-200 $^{\circ}$ C to +800 $^{\circ}$ C / Pt100 and Pt1000 probes	
Other measurements	Min / Max	Min / Max		Duty cycle	Duty cycle - dB function	Duty cycle - dB function and U2/R resistive power Pulse width - timer Event counting
Protection rating	IP 40			IP 67		
Safety	CAT III 600 V		CAT III 600 V	IEC 61010-1 CAT IV 600 V		ATEX 94/9/CE directive, EN/IEC 60079-0-EN: IEC 60079-11, EN/IEC 61241-11-EN/IEC 61241-0, EN/IEC 61010-1-600 V CAT III, CE inspection certificate type LCIE 02 ATEX 6005X & additional clauses 01, 02, 03, 04
Dimensions	170 x 80 x 35 mm		189 x 82 x 40 mm	230 x 155 x 65 mm		189 x 82 x 40 mm
Weight	300 g		400 g	500 g		400 g
State at delivery	Elastomer sheath, set of 2 safety leads, 9 V battery (installed), verification certificate and operating manual		Set of safety test-probe leads, protective sheath, 2 x 1.5 batteries, 2 fuses installed and operating manual	Set of PVC safety test-probe leads, protective sheath, 9 V battery, 2 fuses installed and operating manual	Set of silicone safety test-probe leads, protective sheath, 9 V battery, 2 fuses installed and operating manual	Carrying case, set of safety test-probe leads, 1 spare intrinsic-safety fuse, operating manual



Digital multimeters MTX Mobile range



	MTX 3283	MTX 3282	MTX 3281
<i>Multimeters in the MTX Mobile family: Direct one-handed access to the functions thanks to the electronic measurement switch • Large orientable graphic LCD screen • Dedicated "A" or "V" measurement terminals allowing automatic selection of the corresponding function, in mode AC +DC with automatic range by default • Optical RS232 and USB ports, BlueTooth port</i>			
See below			
Reference			
Display resolution	1 or 4 simultaneous displays of 100,000 counts each		
Analogue display	Fast bargraph associated with the graph or the digital measurements		
Graph of measurements over time	automatic display of the measurements from the last 60 s		
Backlighting / Auto power-off	backlighting time adjustable from 10 s to permanent / Activatable by the user		
TRMS measurements	AC & AC+DC for voltages and currents		
Basic accuracy for DC voltage	0.02 % +8 D	0.03 % +8 D	0.1 % +8 D
Bandwidth	200 kHz	100 kHz	50 kHz
AutoPeak for crest factor	detection and automatic management of the crest factor of the signals measured		
Measurements available			
AC & DC voltage ranges	ranges from 100.000 mV to 1,000.00 V		
Basic accuracy for AC voltage	0.3 % +40 D	0.3 % +40 D	0.7 % +40 D
AC & DC current	ranges from 1,000.00 mA to 20.000 A		
Basic accuracy for DC / AC current	0.08 % +8 D / 0.3 % +30 D		0.08 % +8 D / 1 % +30 D
Single A terminal / simultaneous U & I	automatic ranges on single A terminal, 1 fuse / using 3 leads		
Resistance / Continuity test	Ranges from 1000.00 Ω to 50.000 MΩ / 5 ms fast continuity test		
Frequency / Period / Duty cycle	0.6200 Hz to 2.000 MHz / yes / yes		
Pulse width / Metering	100 μs to 12.5 s / 99,999		no / no
Capacitance / Diode test	ranges from 10.00 nF to 10.00 mF / from 0 to 2.6000 V		
Temperature Pt100/1000 / J/K TC	yes / yes		no / yes
dBm / Resistive power	yes / yes	no / no	
U & I peak / Crest factor	periodic or single peaks lasting 250 ms min. / calculation of signal crest factor		
Measurement processing			
Display hold	Manual (Hold) Or Automatic On Stable Measurement (AutoHold)		
Min / Max / Avg monitoring	calendar date and time		relative date and time
Relative measurements	absolute deviation, deviation in % and reference / display of frequency and deviation in dB		
Measurements of physical quantities	"Favourite measurement" key , scaling and physical unit		
Measurement storage	6,500 measurements + graph		4 x 150 measurements + graph
Time/date-stamping	calendar date and time		relative date and time
SPEC function	display of the instrument's tolerances for each type of measurement		
Interfaces (depending on model)	insulated optical RS232 / insulated optical USB / wireless BlueTooth (100 m without obstructions)		
Measurement processing			
EMC / Safety	emission and immunity as per EN61326-1 / IEC61010 Cat. IV-600 V, Cat. III-1,000 V		
V/A selection / Input alarm	automatic according to lead position / buzzer and visual alarm for A		
Orientable protected display	use on benchtop or worn on belt (hands-free) / protection during transport		
Electronic switch	no more mechanical failures / all-round safety management		
Protected battery/fuse access	separate compartments with mandatory disconnection of leads		
"Closed-case" software calibration	optimization of adjustments (optional SX-MTX328x calibration software)		

State at delivery

MTX3281B: MTX 3281 delivered with 1 set of banana leads Ø 4 mm, 3 x LR6 batteries, HRC fuse, 10 x 38 mm 1,000 V-T11A-20 kA, and an abbreviated operating manual in 5 languages

MTX3282B: MTX 3282 delivered with 1 set of banana leads Ø 4 mm, 3 x AA NiMH rechargeable batteries with mains adapter/charger, HRC fuse, 10 x 38 mm 1,000 V-T11A-20 kA, and an abbreviated operating manual in 5 languages

MTX3283B: MTX 3283 delivered with 1 set of banana leads Ø 4 mm, 3 x AA NiMH rechargeable batteries, HRC fuse, 10 x 38 mm 1,000 V-T11A-20 kA, and an abbreviated operating manual in 5 languages.

References

MTX3281B-COM: MTX3281B + USB cable and SX-DMM software
MTX3282B-COM: MTX3282B + USB cable and SX-DMM software
MTX3283B-COM: MTX3283B + USB cable and SX-DMM software

MTX3281B-BT: MTX3281B + Bluetooth and SX-DMM software
MTX3282B-BT: MTX3282B + Bluetooth and SX-DMM software
MTX3283B-BT: MTX3283B + Bluetooth and SX-DMM software

MTX3281B-P: Delivered in hard case with HX0052 "hands-free" kit and 1 MN09 current clamp, 1 set of 2 crocodile clips, 1 set of 2 hook wire-grips, 1 CD-Rom containing the operating manuals in 5 languages

MTX3282B-P: Delivered in hard case with HX0052 "hands-free" kit and 1 K-thermocouple probe adapter, 1 USB cable and SX-DMM acquisition software, 1 set of 2 crocodile clips, 1 set of 2 hook wire-grips, 1 CD-Rom containing the operating manuals in 5 languages

MTX3283B-P: Delivered in hard case with HX0052 "hands-free" kit and 1 banana lead with clamp for SMD components (HX0064), 1 USB cable and SX-DMM acquisition software, 1 set of 2 crocodile clips, 1 set of 2 hook wire-grips, 1 CD-Rom containing the operating manuals in 5 languages