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A Chauvin Arnoux brand

MTX 3297Ex

TRMS digital multimeter with intrinsic safety



For permanent use in Ex Zones

ATEX | IECEx | 1000 V CAT III / 600 V CAT IV | TRMS AC+DC | IP67*

Measure up

MTX 3297Ex, the ideal digital multimeter for your electrical measurement work in explosive Ex zones.

In mines



In the presence of gas

In the presence of explosive dust

Approved and certified for the highest levels of risk. An exceptional multimeter which meets the strictest requirements.



The MTX 3297Ex

is certified as Ex and IECEx for the following zones:

- IIC (gas) **0**, 1 and 2
- IIIC (dust) **20**, 21 and 22
- Mines **M1**

for **permanent** use in the oil, chemicals, agri-food, cosmetics and pharmaceutical industries, as well as cement production and mining.

Ex certification has been adopted by the countries in the European Union and several other European countries.

IEC Ex certification, developed by **the International Electrotechnical Commission (IEC)**, aims to harmonize and simplify the certification of equipment for hazardous zones worldwide.

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MTX 3297Ex

Unrivalled ergonomics and rugged design

Isolated optical communication

Single terminal with automatic switch to current measurement when the connector is inserted into the A terminal

Terminal strip with reminder and connection check on the display

Detection and indication of a hazardous voltage present on the instrument's terminals

Large backlit screen with double display

Bargraph with central zero mode

Electronic function switch with backlit keys

1 main measurement / 1 key

- Voltage
- Current
- Resistance
  (continuity, semiconductor junction)
- Capacitance
- Frequency
  (duty cycle/pulse width)
- Temperature
- AC/DC current measurement using a clamp with I/O ratio selection

A moulded casing for excellent handling and protection against shocks and falls



3-year warranty

Very high industrial performance



Outside explosive zones, the **MTX 3297Ex** is a high-performance industrial multimeter compliant with the **IEC 61010-2-033 standard** for work on **1000 V CAT III / 600 V CAT IV** electrical installations.

High performance for reliable, accurate measurements whatever the type, shape and amplitude of the signal

- TRMS AC+DC acquisition
- 60,000-count resolution
- 100 MHz bandwidth
- 1 µV resolution for voltage, 0.01 µA resolution for current

Functions to help with analysis and troubleshooting

- **Min, MAX, Peak+ and Peak-** functions
- **ΔX** differential and **ΔX /X** relative functions
- Low-pass filter for measurement on PWM signals
- **V_{LowZ} low-impedance** DC voltage in the presence of disturbance voltages

When used with the SX-DMM software for PC, the isolated optical communication allows real-time processing of the data, remote control of the MTX 3297Ex, upgrading and maintenance.

Designed and manufactured in France

MTX 3297Ex

Efficiency and productivity in all circumstances

Whatever your industrial activity, the **MTX 3297Ex** multimeter fulfils all your requirements for electrical measurement, while remaining **simple to use** and comfortable to handle.

This multimeter guarantees **excellent measurement reliability**, **electrical safety** in your work and higher productivity in your activity.



Electricity generation
(coal-fired power plants, gas-fired plants, hydroelectric plants, etc.)



Process industries
(chemicals, pharmaceuticals, cosmetics, etc.)



Processing industries
(wood, metals, etc.)



Arms industry and ordnance devices
(explosives, gunpowder, etc.)



Agri-food industries
(flour, cereals, etc.)



Industrial paint shops
(automotive, rail, etc.)

MTX 3297Ex

All-round versatility

Simplify your work and **boost your efficiency** thanks to the **versatility** of the **MTX 3297Ex**, offering accuracy, reliability and multifunctionality to fulfil all your expectations in terms of industrial maintenance and electrical diagnostics.

INDUSTRIAL MAINTENANCE AND TROUBLESHOOTING

Measurement quality and performance for troubleshooting faults on motors, PLCs and other equipment

- TRMS AC+DC acquisition
- 60,000-count display
- Resolution from 1 µV for voltage and 0.01 µA for current

Functions to help with analysis and diagnostics

- Min, MAX, Peak+ and Peak- functions
- ΔX differential and ΔX /X relative functions

Measurement, verification and adjustment of the parameters, their constants and the way they change.

- Low-pass filter for measurement on PWM signals
- V_{LowZ} low-impedance DC voltage in the presence of disturbance voltages

ELECTRICAL MAINTENANCE

All the features and functions of a conventional multimeter

- Voltage, current and resistance measurements
- Audible continuity, diode test, etc.
- Capacitance and temperature
- TRMS AC+DC acquisition

IP67*

The multimeter's performance features and specifications remain the same thanks to its IP67* liquid and dust-proofing.

*Out of operation

TECHNICAL SPECIFICATIONS

DC, AC and AC+DC voltages		
V DC	**Measurement range**	0.001 mV to 1000.0 V DC
	Uncertainty	0.05 % + 25 cts
V AC, V AC+DC	**Measurement range**	0.001 mV to 1000.0 V AC or AC+DC
	AC, AC+DC uncertainty / Bandwidth	0.05 % + 25 cts. 0.05% + 40 cts / 100 kHz
V_{LOWZ}	**Measurement range**	0.01 mV to 1000.0 V
	Uncertainty / Bandwidth	0.05 % + 25 cts / 300 Hz
Qualified measurement range in Ex zones		0.001 mV to 65.00 V
DC, AC & AC+DC currents (protection by fuse)		
A DC	**Measurement range**	0.01 µA to 10.00 A DC (max. 20 A/30 s)
	Uncertainty	0.8 % + 20 cts
A AC, A AC+DC	**Measurement range**	0.01 µA to 10.00 A AC or AC+DC (max. 20 A/30 s)
	Uncertainty / Bandwidth	1.0 % + 25 cts / 20 kHz
Qualified measurement range in Ex zones		0.01 µA to 5.00 A
with external sensor (clamp)	**up to 6,000 A depending on sensor, transformation ratio 1, 10, 100, 1,000 mV/A**	
Frequency		
Hz	**Measurement range**	10.00 Hz to 200.0 kHz (for V), 20.00 kHz (for A)
	Uncertainty	0.1 % + 1 ct
Resistance & Continuity, Diode		
Ω	**Measurement range**	0.00 Ω to 60.000 MΩ
	Uncertainty	0.1 % + 20 cts
Continuity	Audible signal < 30 ± 5 Ω / < 5 V, I < 1.1 mA	
Diode test	3.000 V, 1 % + 30 cts / U < 5 V, I < 1.1 mA	
Capacitance		
nF/µF/mF	**Measurement range**	0.100 nF to 60.000 mF
	Accuracy/resolution	1 % + 10 cts
Temperature Pt100/Pt1000		
°C/°F	**Measurement range**	-200.0 °C to +800.0 °C
	Uncertainty	0.1 % ± 1.5°C
Other measurements		
Main measurement	Conductance	
Secondary measurements	Duty cycle, pulse width, resistive power (U^2/R), dBm	
Functions		
MAX/Min/AVG, Peak+/Peak-	100 ms on all the main measurements except Peak (1 ms)	
ΔREL, ΔREL/R	Differential value, relative value	
PWM filter	4th-order 300 Hz low-pass filter	
General specifications		
Display	Double 60,000-count LCD screen with 3-level backlighting	
Power supply	4 x AA/FR6 Li-FeS2 Ex-qualified batteries / Battery life 350 h	
Compliance outside Ex zones	IEC 6010-2-033 1000V CAT III/600V CAT IV, EN 61326-1 Class B	
Ingress protection / Environment	IP 67* / Storage -20°C to +70°C, Use -10°C to +55°C	
Mechanical specifications	Dimensions (L x W x H) : 196 x 90 x 47.1 mm – Weight: 715g	
Warranty	3 years	

TO ORDER

MTX 3297Ex multimeter with intrinsic safety.....MTX3297
delivered with 1 set of 2 straight/elbowed cables 1.5m long, 1 set of test probes, 1 Quick Start Guide in 18 languages including the information (link & QR code) for downloading the User's Manual free of charge, 1 safety manual, 1 set of 4 x 1.5V AA batteries/FR6 Li-FeS2 Ex/IEC Ex-qualified batteries (pre-installed in the instrument).

ACCESSORIES AND OPTIONS (USE OUTSIDE Ex ZONES)

Optical/USB cable.....HX0056-Z
Carrying bag.....HX0052B
MultiFix transport and mounting accessory.....P01102100Z
Pt100/Pt1000 adapter for multimeter with Ø4 mm connections.....HX0091
SP14 450°C Pt100 temperature probe made of 316 L stainless steel for general use.....P01655020
For other PT100/Pt1000 temperature sensors, see.....www.chauvin-arnoux.com
MINI05 10-100A AC current clamp.....P01105105Z
MA110 3-30-300-3000 A flexible current clamp, clamping Ø 45 mm.....P01120660
E25 bi-calibre 60 A AC / 80 A DC current clamp.....P01120025
PAC15 400 A AC / 600 A DC current clamp.....P01120115
For other current clamp and current sensor models, see.....www.chauvin-arnoux.com
Set of measurement accessories for electricians.....P01295459Z
Clamp for SMD component measurements.....HX0064
SX-DMM software available for download free of charge from.....www.chauvin-arnoux.com

SPARES (FOR USE IN Ex ZONES)

Fuse Ex 10x38 10A 1000V/30kA (single).....AT0097
Set of 4 x Ex 1.5V AA/FR6 Li-FeS2 batteries.....HX0097
Set of 2 red/black moulded straight/elbowed PVC cables.....P01295451Z
Set of 2 red/black moulded test probes.....P01295454Z

IN Ex ZONES



OUTSIDE Ex ZONES



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