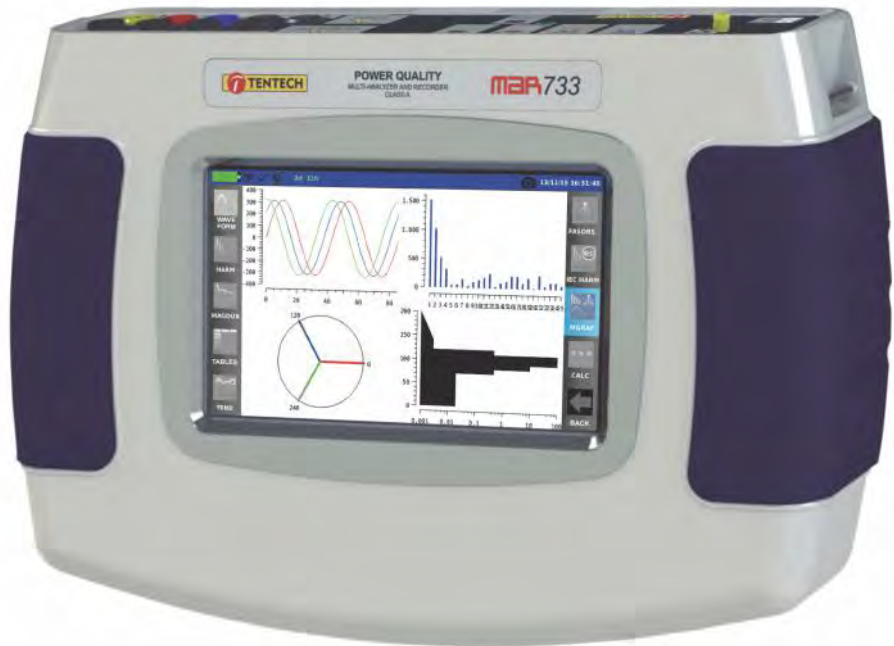


## MAR733

In accordance with IEC 61000-4-30 - class A

### Features

- Color display TFT LCD, touch screen 7"
- Intuitive and friendly interface
- GPS time synchronization
- Battery operating time >10 hours
- 16 GB internal memory (up to 32 GB optional)
- Standards:
  - Measurement methods used = IEC 61000-4-30 (class A);
  - Flicker = IEC 61000-4-15;
  - Transients = IEEE 1159;
  - Monitor mode = EN50160;
  - Harmonics = IEC 61000-4-7.
- Selectable languages: English, Spanish and Portuguese
- Advanced features:
  - Multi-screen display
  - List of events
  - Real-time trend graph
  - Magnitude and duration of events
  - Monitoring



### Description

The MAR733 Power Analyzer is designed to simultaneously acquire four voltage channels and four current channels. RMS magnitudes are measured using a 16-bit acquisition system, with 1024 samples per cycle taken for each of the eight channels. Transients are measured with a sampling frequency of 200 kHz, allowing for the detection of transients from 5  $\mu$ s. This entire system runs continuously for all magnitudes and events.

The MAR733 performs the measurement of primary quantities and the calculation of secondary quantities in accordance with IEC 61000-4-30, which characterizes this equipment as Class A.

What is Class A compliance?

The IEC 61000-4-30 Class A standard eliminates the possibility that the same phenomenon, as measured by two different devices, may have different values. The IEC 61000-4-30 Edition 2 defines the measurement methods for each parameter in order to produce reliable results, comparable and reproducible.

Compliance with the standard includes measurement uncertainty and time synchronization with a reference signal.

### Accessories

- 4 Current probe
- 4 Test leads with alligator clips
- 1 AC adapter
- 1 Ethernet cable
- 1 USB Cable
- 1 Protective bag
- 1 User guide
- 1 Software

# MAR733

## In accordance with IEC 61000-4-30 - class A

ELECTRICAL FEATURES	
Electrical supply	
Battery:	Rechargeable lithium-ion
Battery life:	>10 hours
Charging Time:	2 hours typically
External power supply:	AC adapter 110/240 Vac 90 W (50/60 Hz)
Input Voltage AC / DC	
Number of inputs:	5 (VA, VB, VC, VN and ground)
Range:	1 to 1000 Vac
Resolution:	0.01 V
Accuracy:	0.1 %
Voltage overload:	+10 % of maximum value for 1 second
Input impedance:	2 M $\Omega$ phase-neutral, phase-phase, 1 M $\Omega$ phase-ground
Maximum peak voltage:	10 kV
Bandwidth:	1500 Hz
AC / DC current inputs	
Number of inputs:	4 (IA,IB,IC,IN)
Type:	Flexible* or Clamp
Range:	With flexible current probe TI Slim; 5 A to 6000 A With clamp AL 100; 50 mA to 100 A
*Optional diameter of the flexible sensor. 6.3" or 9.4" (160 mm or 240 mm)	
Resolution:	0.01 A
Accuracy:	0.1 % + accuracy of current probe
Maximum Peak voltage:	8.4 kA
Bandwidth:	4000 Hz
Frequency	
Frequency:	40 up to 75 Hz
Resolution:	0.001 Hz
Accuracy:	$\pm$ 0.01 Hz
Connection Types	
Single phase:	2 wires
2-phase:	2 wires, 3 wires
3-phase:	3 wires, 4 wires and 5 wires
MEASUREMENT PARAMETERS	
Voltage:	By phase and directly Neutral
Current:	By phase and directly Neutral
Power:	Active, reactive and apparent
Accuracy:	$\pm$ 0.2 % + accuracy of current probe
Energy:	kWh, kVAh, kvarh and power generation
Accuracy:	$\pm$ 1 %
Power factor (TPF):	Inductive and capacitive
Range:	0.001 up to 1 inductive and 0.001 up to 1 capacitive
Resolution:	0.001
Accuracy:	$\pm$ 0.1 %
Shift factor:	Inductive and capacitive
Range:	0.001 up to 1 inductive and 0.001 up to 1 capacitive
Resolution:	0.001
Accuracy:	$\pm$ 0.1 %
THD - TID (V, I):	0.0 to 100 %
Resolution:	0.1%
Accuracy:	$\pm$ 5 %
K Factor:	1.0 to 50.0
Resolution:	0.1 %
Accuracy:	$\pm$ 10 %
Crest factor:	1.0 up to > 10
Accuracy:	$\pm$ 5 %
Inrush current:	In accordance with IEC 61000-4-30
Range:	0 to 20 kA
Ratio:	User configurable

# MAR733

## In accordance with IEC 61000-4-30 - class A

Harmonics and inter-harmonics	
Measures Orders:	1st to 63th in accordance with IEC 61000-4-7
Phase Angle:	0° to -360°
Histograms (harmonic spectrum):	Percentages and absolute values
Unbalance Voltage	
Range:	0 to 20.0 %
Resolution:	0.1%
Accuracy:	0.1 %
Transient capture	
Voltage disturbance:	Up to 6 kV
Detected minimum term:	4 μs
Conformities	
Flicker:	Plt, Pst (1 min) Pinst
Range:	0 to 20.00
Resolution:	0.01
Accuracy:	0.1 %
Events (sag, swell, and outage) IEC 61000-4-30 Class A:	Date, time, magnitude, duration, event classification (momentary or temporary)
Standards	
Measurement method:	IEC 61000-4-30 (class A)
Flicker:	IEC 61000-4-15
Transients:	IEEE 1159
Monitoring:	EN50160
Harmonics:	IEC 61000-4-7
GENERAL TECHNICAL FEATURES	
Sampling System	
Sampling/cycle - resolution:	1024 sampling/cycle - 16 bit ADC
Sampling:	2 MHz and 250 kHz per channel
Integration interval:	200 milliseconds to 2 hours (custom)
Data memory storage	
Data storage:	16 GB (32 GB Optional)
Time synchronization	
GPS (optional):	Uncertainty < 100 ns
Display	
Type:	7", TFT color LCD (touchscreen)
Resolution:	800 x 480 pixels
Communication interface	
Ethernet:	Ethernet port RJ45 - 100 Mbps (TCP/IP)
USB:	Host 2.0
Wireless (Optional):	802.11 b/n/g - 2.4GHz
3G/EDGE/GPRS (Optional):	Quadband. Discharge and remote viewing
SOFTWARE	
Compatibility:	Windows 7 and higher
Languages:	English, Spanish and Portuguese
MECHANICAL	
Dimension:	8.6" x 13" x 3"
Environmental protection:	IP 52
Pollution Degree:	II
Overvoltage category:	1000 V CAT III / 600 V CAT IV
Protection:	Protective cover
Weight:	5.7 lb
Environmental	
Operation temperature:	-14°F up to 140°F
Storage temperature:	-4 °F up to 158 °F
Humidity:	0 % to 95 %, non condensing



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