

INTRODUCTION

METRAVI Digital Clamp On Power Meter Model 307 is a high technology product and has been produced under strict quality control.

The meter has been designed and tested according to EN 61010-1 2000 version to grant the user the utmost safety conditions thanks to CPU (beep sound to alter with the overload voltage) and the assuring double insulation and over voltage category III 600V protection.

Model 307, 3 ϕ Digital Power Clamp Meter is a handheld meter that is designed for use in the field, electricity power department. The meter is powered by 1.5VAAA \times 3 battery and has over-moulded technology housing

| Function | Maximum Input Voltage |
|-------------------|---|
| ACV Hz | 600 VAC rms < 60 secs. |
| Active power | 600 VAC rms < 60 secs. 1500A AC rms < 60 secs. |
| Apparent power | |
| Reactive power | |
| Horse power | |
| ▲ kW | |
| Electricity power | |
| PF | 450VAc rms < 60 secs. |
| Phase sequence | |

GENERAL DESCRIPTION

The meter can perform the following measurements:

- AC voltage measurement (VAC).
- AC current measurement
- Active Power measurement. (kW)
- Reactive Power measurement. (kVAr)
- Apparent Power measurement. (kVA)
- Energy measurement.
- Power factor measurement (PF).
- Frequency measurement.
- Phase sequence measurement
- For Three Phase measurements - Active Power and Power Factor.

Each of these functions can be selected by means of a 6 positions rotary switch.

The quantity selected is displayed with indication of measuring unit and active functions.

The meter comes with auto-power-off function, 15 minutes after no change of the last selection function or rotary switch position, to extend the battery life span. Buzzer alert with one short single following by consecutive 6 secs. before the power comes off.

Auto Power Off function can be disabled.

FEATURES

- TRMS measurement
- 1500A current measurement
- Live wire indication
- Peak hold and data hold function.
- Max. Min and average hold function
- Relative value measurement to help you compute the data in voltage or current measurement mode.
- Complies with CE safety CAT III Over voltage 600V according to EN 61010- 1 (2000 version).
- Can be used to measure in single phase, two phase and three phase loads.

Safety

The meter complies with : EN 61010-1 (2000 version) Class 2,

Insulation : Double insulation

Pollution degree : Two

Over voltage category : CAT III 600V For indoor use, Operating: 2000 m, max altitude:

Storage : 10,000 m

General Data

Mechanical characteristics

Dimensions(meter only) : 255 x 85 x 35mm

Weight (including battery) : Approximate 550g

Power supply

Battery type : 1.5VAAA \times 3 (1 unit)

Indication of low battery : The symbol "BAT" is displayed when battery voltage is low.

Standby current : 20mA

Display

Specifications : LCD display with max. reading 5999 counts + symbol and decimal point.



*Technical Specifications & Appearance are subject to change without prior notice

GENERAL SPECIFICATIONS

ENVIRONMENT

Environmental Conditions

Reference temperature: 23°C ± 5°C

Working temperature: 0°C ~ 40 °C

Relative humidity: <80%

Storage temperature: -20°C ~ 50 °C

Storage humidity: <85%

EMC and LVD

This meter is designed and tested to comply with the requirements of the European EMC Directive 89/336/EEC and in accordance with Low Voltage Directive 73/23/EEC, EN publication 61010-1 (2000 version), pollution degree 2 and installation category (over voltage category) III 600V.

ACCESSORIES

Standard Accessories

The accessories contained inside the packaging are the following:

- Pair of test leads
- Instruction manual
- 1.5VAAA×3 Batteries
- Red, black and yellow tie-lines

Frequency Measurement and Phase sequence measurement

| Range | Resolution | Accuracy | Protection Against Overload |
|------------|------------|-------------------------------|-----------------------------|
| 200Hz/2kHz | 0.1Hz/1Hz | ± (1.0%+5d) | 450V AC rms |
| Phase | AC50V~450V | Positive ABC/ Negative ACB | |

Power parameters measurements

| Function | Range | Resolution | Accuracy | Protection Against Overload |
|--------------------|--------------|------------|--------------|-----------------------------|
| Active power | 10W~600kW | 10W | ± (2.5%+15d) | 600V AC rms 1500A AC rms |
| Horse power | 0.01P~600P | 0.01P | | |
| ▲kW | 10W~600kW | 10W | | |
| Apparent power | 10kVA~600kVA | 10VA | | |
| Reactive power | 0~300kVAr | 10kVAr | | |
| Electricity energy | 0.01~9999kWh | 0.01kWh | | |
| PF | 0.3~1.00 | 0.01 | | |
| HD | .00~.99 | .01 | | |

1. The meter horse power: 1P=735W
2. In power parameter, make sure the accuracy stable should make the input current larger than 5A

TECHNICAL SPECIFICATIONS

The accuracy is indicated as [% of reading + number of digits]. It is referred to the following environmental conditions: temperature 23°C ± 5°C, relative humidity < 80%.

DC Voltage

| Range | Resolution | Accuracy | Frequency Range | Input Impedance | Protection Against Overload |
|-------|------------|-------------|-----------------|-----------------|-----------------------------|
| 60V | 10mV | ± (1.2%+3d) | 40Hz~100Hz | 1MΩ | 600V AC rms |
| 600V | 100mV | | | | |

AC Current Measurement

| Range | Resolution | Accuracy | Frequency Range | Protection Against Overload |
|---------------|------------|----------------|-----------------|-----------------------------|
| 600A 1500A | 0.1A 1A | ± (2.5% + 15d) | 50Hz | 1500A AC rms |

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