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Digital Multimeter W/RS-232 Interface

AUTORANGING W/BACKLIGHT

Part No. 01MAS345 / 01MAS344

DESCRIPTION

This meter is an autoranging professional measuring instrument. Digit reading is 3999 counts and the bar graph consists of 38 segments for LCD, capable of performing functions:

- DC voltage measuring (Auto Ranging)
- AC voltage measuring (Auto Ranging)
- DC current measuring
- AC current measuring
- Temperature measuring *(Only MAS345)*
- Frequency measuring *(Only MAS344)*
- Resistance measuring (Auto Ranging)
- Capacitance measuring
- Diode testing
- Transistor testing
- Audible continuity testing

INPUT JACKS

This meter has four input jacks that are protected against overload to the limits. During use, connect the black test lead to the COM jack and the red test lead as shown below:

FUNCTION	RED LEAD CONNECTION	INPUT LIMITS
DCV / ACV	V/Ω	1000V dc or 750 V rms ac
Ω	V/Ω	250V dc or rms ac
⊣◀ •))	V/Ω	250V dc or rms ac
mA	mA	400mA dc or rms ac
10A	10A	10A dc or rms ac

SPECIFICATIONS

Accuracy is specified for a period of one year after calibration and at 18°C to 28°C (64°F to 82°F) with relative humidity to 75%.

GENERAL

Max. Voltage Between Terminals and Earth Ground:
1000V dc or 750V rms ac (sine)
Power Supply: 9V NEDA 1604 6F22 006P
Ranging Method: Auto / Manual
Display:
LCD, 3999 counts max and bar graph consists of 38 segments
Overrange Indication: "OI" displayed
Polarity Indication: "-" displayed automatically
Low Battery Indication: "⊟" displayed
Operating Temperature: 5°C to 35°C (41°F to 95°F)
Storage Temperature: –10°C to 60°C (14°F to 140°F)
Dimension: 78mm x 186mm x 35mm
Weight: 300g (including battery)

ACCESSORIES SUPPLIED WITH METER

- Operating Manual
- Set of test leads
- 9V battery NEDA 1604 6F22 006P
- "K" type thermocouple
- Holster
- RS232 Cable
- Software included

DC VOLTAGE

Range	Resolution	Accuracy
4V	1mV	± 0.5% of rdg ± 3 digits
40V	10mV	
400V	0.1V	
1000V	1V	± 0.8% of rdg ± 3 digits

Input Impedance: 10MΩ

AC VOLTAGE

Range	Resolution	Accuracy
4V	1mV	± 1.2% of rdg ± 5 digits
40V	10mV	
400V	0.1V	
750V	1V	± 1.5% of rdg ± 5 digits

Input Impedance: 10MΩ
Frequency Range: 40 to 400Hz
Response: Average, calibrated in rms of sine wave

RESISTANCE

Range	Resolution	Accuracy
400Ω	0.1Ω	± 1.2% of rdg ± 3 digits
4KΩ	1Ω	
40KΩ	10Ω	
400KΩ	0.1KΩ	
4MΩ	1KΩ	
40MΩ	10KΩ	± 3.0% of rdg ± 5 digits

Maximum Open Circuit Voltage: 3.0V
Overload Protection: 250V dc or rms.ac for all ranges

DC CURRENT

Range	Resolution	Accuracy
4mA	1µA	± 1.2% of rdg ± 3 digits
400mA	0.1mA	
10A	10mA	± 2.0% of rdg ± 8 digits

Overload Protection: F 15A / 250V fuse for 10A range.

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AC CURRENT

Range	Resolution	Accuracy
4mA	1µA	± 1.5% of rdg ± 8 digits
400mA	0.1mA	
10A	10mA	± 3.0% of rdg ± 8 digits

Overload Protection: F 15A / 250V fuse for 10A range.
Frequency Range: 40 to 400Hz
Response: Average, calibrated in rms of sine wave.

CAPACITANCE

Range	Resolution	Accuracy
4nF	1pF	± 4.0% or rdg ± 5 digits
400nF	0.1nF	

TEMPERATURE *(ONLY MAS345)*

Range	Resolution	Accuracy
0°C to 400°C	1°C	± 3.0% of rdg ± 3 digits
401°C to 750°C	1°C	± 3.0% of rdg ± 5 digits

FREQUENCY *(ONLY MAS344)*

Range	Resolution	Accuracy
40KHz	10Hz	±3.0%

AUDIBLE CONTINUITY

Function	Description
	Built-in buzzer will sound, if resistance is lower than 30Ω

DIODE

Function	Resolution	Test Current	Open Circuit Voltage
	1mV	25µA	3.0V

TRANSISTOR

Function	Range	Base Current	Vcd
hFE	1 to 1000	10µA	3.0V