



**4½ DIGIT 19999 COUNTS
TRUE RMS
DIGITAL MULTIMETER
MODEL - 405**



FEATURES

- **Display :** 4½ digit LCD display (19999 Counts)
- **Digit Size :** 17mm(H)
- **CE approved.**
- **IEC - 1010 Overload Category II**
- **Over range Indication :** '1' Most Significant Digit blinks
- **DATA HOLD facility**
- **Power Consumption :** 14mW Typical.
- **Auto Power Off :** Meter automatically shuts down after Approx. 45 min. of the last reading.
- **Polarity :** Automatic (-) negative polarity indication
- **Operating Temperature :** 0°C to 50°C
Relative Humidity : < 70% R.H.
- **Storage Temperature :** -20°C to 60°C
Relative Humidity : < 80% R.H. With battery removed from meter.
- **Dimension :** 189mm(L) x 87mm(W) x 37mm(H)
- **Resistance, Diode test & Audible Continuity, Logic test, Frequency, & Duty Cycle Function.**
- **Accessories :** Test Leads, Carrying Case, User Manual, Battery.

TECHNICAL SPECIFICATIONS:

Accuracy : ± (% reading + digit) one year warranty.

DC VOLTAGE

Range	Resolution	Accuracy
200 mV	10 V	±(0.05% rdg + 3dgts)
2 V	100 V	
20 V	1 mV	
200 V	10 mV	
1000 V	100 mV	

Input Impedance : 10M
Overload Protection : 500V DC/350 rms on 200mV range, 1000V DC/750V rms on all other ranges

AC VOLTAGE 50Hz~500Hz (TRUE RMS)

Range	Resolution	Accuracy
200 mV	10 V	±(1.0% rdg + 10 dgts)
2 V	100 V	
20 V	1 mV	
200 V	10 mV	
750 V	100 mV	

Input Impedance : 10M
Overload Protection : 500V DC or AC rms on 200mV range, 1000V DC or 750V AC rms on all other range

AC VOLTAGE 500Hz to 2KHz (TRUE RMS)

Range	Resolution	Accuracy
200 mV	10 V	±(2.0% rdg + 20 dgts)
2 V	100 V	
20 V	1 mV	
200 V	10 mV	
750 V	100 mV	Unspecified

Input Impedance : 10M
Overload Protection : 500V DC or AC rms on 200mV range, 1000V DC or 750V AC rms on all other range

AC CURRENT(TRUE RMS)

Range	Resolution	Accuracy
200 A	10 nA	±(0.8% rdg + 10 dgts)
2 mA	100 nA	
20 mA	1 A	
200 mA	10 A	
20 A*	1 mA	

Burden Voltage : 300mV for 200 A, 2mA, 20mA
600mV for 200mA & 800mV for 20A.
Overload Protection : 500mA/600V fuse on mA inputs (fast blow ceramic fuse). * 10A continuous, 20A for 30 seconds maximum.

RESISTANCE

Range	Resolution	Accuracy
200	0.01 m	±(0.25% rdg + 10 dgts)
2 K	0.1	±(0.15% rdg + 3 dgts)
20 K	1	
200K	10	±(0.25% rdg + 10 dgts)
2 M	100	
20 M	1 K	
		+(1.0% rdg + 10 dgts)

Overload Protection : 500V DC or AC rms
Burden Voltage : 3.3V DC

DC CURRENT

Range	Resolution	Accuracy
200 A	10 nA	±(0.5% rdg + 5 dgts)
2 mA	100 nA	
20 mA	1 A	
200 mA	10 A	
20 A*	1 mA	

Burden Voltage : 300mV for 200 A, 2mA, 20mA
600mV for 200mA & 800mV for 20A.
Overload Protection : 500mA/600V fuse on mA inputs (fast blow ceramic fuse). * 10A continuous, 20A for 30 seconds maximum.

FREQUENCY

Range	Resolution	Accuracy	Input Impedance
2 KHz	0.1 Hz	±(0.5% rdg + 3 dgts)	10M // 10pF
20 KHz	1 Hz		
200 KHz	10 Hz		

Sensitivity : 50mV rms (Sine Wave), 400mV rms at > 30% and < 70% duty cycle
Input Frequency : More than 10 Hz at pulse width > 2 sec.
Overload Protection : 500V DC or AC rms

LOGIC TEST

Threshold		Pulse Width (min)	Pulse Rep (max)	Pulse Rise (max)
Logic Hi (▲)	Logic Low (▼)			
2.8V ± 0.8V	0.8V ± 0.5V	25nsec	1Mpps	10 sec

Test Voltage : 5V DC
Impedance : 120K // 100pF
Duty Cycle : >20% and <80%
Indication : 40msec beep at logic Hi
Overload Protection : 500V DC or AC rms
Frequency Response : 20MHz

CONTINUITY TEST

Range	Audible Indication	Response Time	Open Circuit Volts
2 V	Less than 150	Approx. 500ms	3.3V DC Typical

Overload Protection : 500V DC or AC rms

DUTY CYCLE

Range	Resolution	Pulse Width	Accuracy
0 - 90.0%	0.1%	> 10 sec.	±(2.0% rdg + 10 dgts)

Overload Protection : 500V DC or AC rms
Frequency Range : 20 Hz to 20 KHz

DIODE TEST

Range	Resolution	Accuracy	Test Current	Open Circuit Volts
2 V	0.1mV	±(0.5% rdg + 1 dgt)	1.0mA	3.3V DC Typical

Overload Protection : 500V DC or AC rms



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