

HT32 - HT37 - HT39

TRMS CAT IV PROFESSIONAL DIGITAL MULTIMETER

The models HT32, HT37 and HT39 are a family of professional TRMS multimeters able to perform AC/DC voltage, AC/DC current in complete Autorange. Each model has also the MIN/MAX, Data HOLD and AutoPowerOFF features. The HT39 model is also equipped with RS-232 serial interface for connection to a PC and use of dedicated software, more than a backlight function for comfortable reading even in poorly lit environments.

| FUNCTIONS | HT32 | HT37 | HT39 |
|--------------------------------|------|------|------|
| TRMS measurements | • | • | • |
| DC/AC Voltage | • | • | • |
| DC/AC Current | • | • | • |
| Resistance and Continuity test | • | • | • |
| Frequency | • | • | • |
| Capacitance | • | • | • |
| Diode test | • | • | • |
| Data HOLD | • | • | • |
| MAX/MIN | • | • | • |
| PEAK | | • | • |
| Relative measurement | | • | • |
| Bargraph | | • | • |
| Backlight | | | • |
| AutoPowerOFF | • | • | • |
| Real-time recording from PC | | | • |
| RS-232 interface | | | • |

GENERAL SPECIFICATIONS

| | |
|----------------------------|-----------------------------|
| Display: | LCD, 4 dgt, 4000 points |
| Power supply: | 1x9V battery type IEC6F22 |
| AutoPowerOFF: | after 30 min of idleness |
| Safety: | IEC/EN 61010-1 |
| Category of measurement: | CAT IV 600V – CAT III 1000V |
| Insulation: | double insulation |
| Pollution degree: | 2 |
| RS-232 interface: | optical/serial (only HT39) |
| Size (LxWxH): | 164x82x44mm |
| Weight (included battery): | 400g |

ACCESSORIES

| | Code |
|---|--------|
| Standard | |
| Couple of test leads | 4413-2 |
| Rubber protection holster | |
| Battery | |
| User manual | |
| Optional | |
| Carrying bag | B80 |
| Windows software + serial cable (only HT39) | SW39 |

| TECHNICAL SPECIFICATIONS | HT32 | HT37 - HT39 |
|---------------------------------------|-------------------|--------------------------------|
| DC Voltage | | |
| Measurement range: | 0.1mV ÷ 1000V | 0.1mV ÷ 1000V |
| Basic accuracy: | ±(0.5%rdg + 2dgt) | ±(0.5%rdg + 2dgt) |
| AC Voltage | | |
| Measurement range: | 0.1mV ÷ 750V | 0.1mV ÷ 750V |
| Basic accuracy: | ±(0.9%rdg + 5dgt) | ±(0.9%rdg + 5dgt) |
| DC Current | | |
| Measurement range: | 0.1µA ÷ 0.01A | 0.1µA ÷ 3.999mA 0.01A ÷ 10A |
| Basic accuracy: | ±(1.0%rdg + 2dgt) | ±(1.0%rdg + 2dgt) |
| AC Current | | |
| Measurement range: | 0.1mA ÷ 10A | 0.1mA ÷ 10A |
| Basic accuracy: | ±(0.5%rdg + 5dgt) | ±(1.5%rdg + 5dgt) |
| Resistance and continuity test | | |
| Measurement range: | 0.1Ω ÷ 60MΩ | 0.1Ω ÷ 40MΩ |
| Basic accuracy: | ±(0.7%rdg + 2dgt) | ±(0.7%rdg + 2dgt) |
| Buzzer: | <500Ω | <450Ω |
| Frequency | | |
| Measurement range: | 1Hz ÷ 60MHz | 1Hz ÷ 40MHz |
| Basic accuracy: | ±(0.1%rdg + 1dgt) | ±(0.1%rdg + 1dgt) |
| Capacitance | | |
| Measurement range: | 0.001nF ÷ 6mF | 0.001nF ÷ 40mF |
| Basic accuracy: | ±(1.9%rdg + 8dgt) | ±(2.0%rdg + 8dgt) |

HT37
HR000037



HT32
HR000032

HT39
HR000039



1. ELECTRICAL SPECIFICATIONS

Accuracy is given as \pm (% of reading + no. of least significant digits) at $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$, with relative humidity Less than 80% R.H.

DC VOLTAGE

| Range | Resolution | Accuracy | Overload protection |
|---------|------------|----------------------|---------------------|
| 400.0mV | 0.1mV | $\pm(0.5\%rdg+2dgt)$ | 1000VDC 750Vrms |
| 4.000V | 0.001V | | |
| 40.00V | 0.01V | | |
| 400.0V | 0.1V | | |
| 1000V | 1V | | |

Input impedance: $10\text{M}\Omega$ // less 100pF

AC VOLTAGE (TRMS)

| Range | Resolution | Accuracy (50~500Hz) | Overload protection |
|---------|------------|--------------------------------------|---------------------|
| 400.0mV | 0.1mV | Not specified | 1000VDC 750Vrms |
| 4.000V | 0.001V | $\pm(1.3\%rdg+5dgt)$ (50 ÷ 300Hz) | |
| 40.00V | 0.01V | $\pm(1.2\%rdg+5dgt)$ (50 ÷ 500Hz) | |
| 400.0V | 0.1V | | |
| 750V | 1V | | |

Input impedance: $10\text{M}\Omega$ // less 100pF

DC CURRENT

| Range | Resolution | Accuracy | Output voltage | Overload protection |
|---------------|-------------|----------------------|----------------|-----------------------|
| 400.0 μ A | 0.1 μ A | $\pm(1.0\%rdg+2dgt)$ | <4mV/ μ A | 600Vrms |
| 4000 μ A | 1 μ A | | 2V max | Fast fuse 10A / 1000V |
| 10A | 10mA | | | |

AC CURRENT (TRMS)

| Range | Resolution | Accuracy 50 ~ 500Hz | Output voltage | Overload protection |
|-------|------------|----------------------|----------------|-----------------------|
| 10A | 10mA | $\pm(1.5\%rdg+5dgt)$ | 2V max | Fast fuse 10A / 1000V |

RESISTANCE

| Range | Resolution | Accuracy | Open voltage | Overload protection |
|-----------------|-----------------|----------------------|--------------|---------------------|
| 400.0 Ω | 0.1 Ω | $\pm(1.0\%rdg+5dgt)$ | 1.3V | 600Vrms |
| 4.000k Ω | 0.001k Ω | $\pm(0.7\%rdg+2dgt)$ | | |
| 40.00k Ω | 0.01k Ω | | | |
| 400.0k Ω | 0.1k Ω | | | |
| 4.000M Ω | 0.001M Ω | $\pm(1.0\%rdg+2dgt)$ | | |
| 40.00M Ω | 0.01M Ω | $\pm(1.5\%rdg+2dgt)$ | | |





FREQUENCY

| Range | Resolution | Accuracy | Sensitivity | Overload protection |
|----------|------------|-----------------------|------------------------|---------------------|
| 4000Hz | 1Hz | $\pm(0.01\%rdg+1dgt)$ | >1.5VACrms <5VACrms | 600Vrms |
| 40.00kHz | 0.01kHz | | | |
| 400.0kHz | 0.1kHz | | | |
| 4.000MHz | 0.001MHz | | >2VACrms <5VACrms | |
| 40.00MHz | 0.01MHz | | | |

CAPACITANCE

| Range | Resolution | Accuracy | Overload protection |
|---------------|---------------|-----------------------|---------------------|
| 4.000nF | 0.001nF | $\pm(3.0\%rdg+10dgt)$ | 600Vrms |
| 40.00nF | 0.01nF | $\pm(2.0\%rdg+8dgt)$ | |
| 400.0nF | 0.1nF | | |
| 4.000 μ F | 0.001 μ F | | |
| 40.00 μ F | 0.01 μ F | | |
| 400.0 μ F | 0.1 μ F | $\pm(5.0\%rdg+2dgt)$ | |
| 4.000mF | 0.001mF | | |
| 40.00mF | 0.01mF | | |

DIODE TEST

| Range | Resolution | Accuracy | Test current | Open Voltage |
|-------|------------|----------------------|--------------|--------------|
| | 10mV | $\pm(1.5\%rdg+5dgt)$ | 1.5mA | <3V |

Overload protection: 600Vrms

TEST CONTINUITY

| Range | Buzzer | Overload protection |
|-------|----------------|---------------------|
| | R<450 Ω | 600Vrms |





2. GENERAL SPECIFICATIONS

Display:

- LCD display, 4 digit with maximum reading 4000 counts with analogical bargraph
- Automatic polarity indication.
- "OL" over range indication


Features:

- MAX and MIN
- HOLD
- Manual Range selection
- PEAK
- REL
- Backlight
- RS-232 interface
- AutoPowerOFF after 30 minutes

Measuring rate:

- 1.5 times per second.

Low battery indicator:

- The "  " appears when the battery voltage is low

Operating temperature:

- 0°C to 30 °C, <80%RH

Storage temperature:

- -20°C to 60°C, <80%RH

General informations:

- Altitude up to 2000m
- Pollution degree: 2
- Insulation: class 2 (double insulation)

Power supply:

- Single 9V alkaline battery type NEDA1604, JIS006P, IEC6F22

Dimension(with holster):

- 164(L)x82(W)x44(H) mm.

Weight (included battery):

- 400g

Applied standards:

- LVD: EN 61010-1 CAT IV 600V – CAT III 1000V
- EMC: EN60326

This product conforms to the prescriptions of the European directive on low voltage 2006/95/EEC and to EMC directive 2004/108/EEC

