

Digital Multimeter, Datalogger

MODEL: TES-2802

Features

- Inductance Measurement (40mH~40H)
- Capacitance Measurement (40nF~40μF)
- **Temperature Measurement (-50°C~1300°C, -58°F~1900°F)**
- Data logger function. (Memory: 16000 records)
- True RMS V, A
- Also provides MAX/MIN REL and data HOLD mode.
- DMM talks with PC via RS-232 interface
- AUTO-power off
- AUTO-Ranging on Volt, Ohm, Frequency
- 3-3/4 Digital LCD with bar-graph
- Back Light



#135-TES-2802

Specifications

DC Voltage (Autorange & Manual range)

| Range | Resolution | Accuracy | Input Impedance | Overload Protection |
|-------|------------|------------------|-----------------|---------------------|
| 400mV | 0.1mV | ±0.5% rdg + 2dgt | >100MΩ | 660Vrms |
| 4V | 1mV | | ≅11MΩ | |
| 40V | 10mV | | ≅10MΩ | |
| 400V | 100mV | | | |
| 600V | 1V | ±0.8% rdg + 2dgt | | |

DC Current (Manual range & Autorange)

| Range | Resolution | Accuracy | Overload Protection |
|--------|------------|-------------------|----------------------------|
| 400μA | 0.1μA | ±1% rdg + 2 dgt | 0.5A/600V high energy fuse |
| 4000μA | 1μA | | |
| 40mA | 10μA | | |
| 400mA | 100μA | | |
| 20A | 10mA | ±1.5% rdg + 2 dgt | 20A/600V high energy fuse |

AC Voltage (Autorange & Manual)

| Range | Resolution | Accuracy | Input Impedance | Overload Protection | Frequency Response |
|-------|------------|----------------|-----------------|---------------------|--------------------|
| 4V | 0.001V | ±1.2%rdg+20dgt | ≅11MΩ | 660Vrms | 40-450Hz |
| 40V | 0.01V | ±1.2%rdg+5dgt | ≅10MΩ | | |
| 400V | 0.1V | | | | |
| 600V | 1V | ±1.5%rdg+5dgt | | | |

AC Current (Manual Range)

| Range | Resolution | Accuracy | Overload Protection | Frequency Response |
|--------|------------|--------------------|-------------------------------|--------------------|
| 400μA | 0.1μA | ±1.5% rdg + 5 dgts | 0.5A/600V high energy fuse | 40-450Hz |
| 4000μA | 1μA | | | |
| 40mA | 10μA | | | |
| 400mA | 100μA | ±2% rdg + 5 dgts | 20A/600V high energy fuse | |
| 20A | 10mA | | | |

Audible continuity

| Range | Resolution | Open circuit Voltage | Continuity Beeper | Overload Protection |
|-------|------------|----------------------|-------------------|---------------------|
| | 0.1Ω | ≅ -1.5V | ≤ Approx. 40Ω | 660Vrms |

Diode Test

| Range | Resolution | Short circuit Current | Open circuit Voltage | Overload Protection |
|-------|------------|-----------------------|----------------------|---------------------|
| | 1mV | 0.8mA typical | ≅ 3V | 660Vrms |

Resistance (Ω) (Autorange & Manual Range)

| Range | Resolution | Accuracy | Open circuit Voltage | Overload Protection |
|-------|------------|---------------------|----------------------|---------------------|
| 400Ω | 100mΩ | ±1% rdg + 5 dgts | ≅ -0.3V DC | 660Vrms |
| 4KΩ | 1Ω | ±0.75% rdg + 3 dgts | | |
| 40KΩ | 10Ω | | | |
| 400KΩ | 100Ω | | | |
| 4MΩ | 1KΩ | 1.5% rdg + 5 dgts | | |
| 40MΩ | 10KΩ | | | |

Frequency (Hz) (Autorange)

| Range | Resolution | Accuracy | Sensitivity |
|--------|------------|-------------------|-------------|
| 4KHz | 1Hz | 0.1% rdg + 2 dgts | 200mV |
| 40KHz | 10HZ | | |
| 400KHz | 0.1KHz | | |
| 4MHz | 1KHz | | 5V |
| 40MHz | 10KHz | | |

Capacitance (F)

| Range | Resolution | Accuracy | Test Frequency |
|-------|------------|------------------|----------------|
| 40nF | 10pF | 3% rdg + 10 dgts | 200Hz |
| 400nF | 100pF | | |
| 4μF | 1nF | | |

Temperature Probe used: K (CA) type sensor

Inductance (The accuracy is based on when "Q" value is greater than 1)

| Range | Resolution | Accuracy | Test Frequency |
|-------|------------|------------------|----------------|
| 40mH | 10μH | 5% rdg + 10 dgts | 200Hz |
| 400mH | 100μH | | |
| 4H | 1mH | | |
| 40H | 10mH | | |

| Range | Resolution | Accuracy | Overload protection |
|---------------|------------|---------------|---------------------|
| -50°- 399.9°C | 0.1°C | ±1% rdg + 3°C | 660Vrms |
| -50°- 399.9°F | 0.1°F | ±1% rdg + 5°F | |
| -50°- 1300°C | 1°C | ±1% rdg + 3°C | |
| -58°- 1900°F | 1°F | ±1% rdg + 5°F | |