

SPECIAL FEATURES :

- AmpTip™ low-current range.
- Backlighted LCD display.
- Duo-Core to simultaneously measure clamp-on Amps + A DMM functions.
- VFD-V & Hz for fundamental V/Hz of most Variable-Frequency-Drives
- Display Hold & Non-Contact EF-Detection (NCV)
- AC True RMS Voltage & Current functions.
- Fast 80ms Peak-RMS mode to capture in-rush currents
- Probe contact EF-Detection for more precise indication of live.
- Line level ACV frequency 10.00Hz to 999.9Hz.
- Cx ranges 200.0μF to 2500μF for start & Run Motor Capacitors.

GENERAL SPECIFICATIONS :

- * **Sensing** : True RMS
- * **Jaws Opening size & conductor diameter** : 30mm Max.
- * **Display** : 3-5/6 digits 6000 counts; dual display
- * **Update Rate** : 5 per second nominal
- * **Polarity** : Automatic
- * **Operating Temperature** : 0°C to 40°C
- * **Relative Humidity** : Maximum 80%R.H. for temperature upto 31°C
decreasing linearly to 50% R.H. at 40°C.
- * **Altitude** : Operating below 2000m
- * **Storage Temperature** : -20°C ~ 60°C, < 80% R.H. (with battery removed)
- * **Temperature Coefficient** : Nominal 0.15 x (specified accuracy) / °C @ (0°C — 18°C or 28°C — 40°C),
or otherwise specified.
- * **Power Supply** : Standard 1.5V AAA Battery x 2
- * **Power Consumption** : typical 6.2mA
- * **Low Battery** : Below approx. 2.85V for Capacitance & Hz
Below approx. 2.5V for other functions
- * **APO timing** : Idle for 32 minutes approx.
- * **APO Consumption** : typical 5μA.
- * **Dimension** : 217(L) x 76(W) x 37(H)mm
- * **Weight** : approx. 189 gms.

SAFETY :

- **Safety** : Double insulation per UL/IEC/EN61010-1 Ed. 3.0, CAN/CSA C22.2
No. 61010-1 Ed. 3.0, UL/IEC/EN61010-2-032 Ed. 3.0 & UL/IEC/EN61010-2-033 Ed. 1.0
CAT III 600V & CAT IV 300V AC & DC.
- **E.M.C.** : Meets EN61326-1 : 2013
Temperature function at 80MHz ~ 150MHz :
In an RF field of 1V/m :
Total Accuracy = Specified Accuracy + 25 digits
Other Functions:
In an RF field of 3V/m :
Total Accuracy = Specified Accuracy + 20 digits
- **Overload Protection** :
Clamp-on jaws : 600A rms continuous
“+” & COM Terminals (all other functions): 600VDC/VAC rms
- **Pollution Degree** : 2
- **Transient Protection** : 6.0kV (1.2/50μs surge)
- **Rugged Fire retarded casing.**
- **LVD EN61010-2-032 / EN61010-1 to CAT III 600V & CAT IV 300V**

ACCESSORIES : Test leads set, Users Manual, Carrying Case, Bkp60 banana plug K-type thermocouple.

OPTIONAL ACCESSORIES : BKB32 banana plug to type-K socket plug adaptor.

17 FUNCTIONS 22 RANGES**Preliminary Data**

ELECTRICAL SPECIFICATIONS : KM 175D

Accuracy is $\pm$ (% of reading digits + number of digits) or otherwise specified, at 23°C $\pm$ 5°C
Maximum Crest Factor <2.5:1 at full scale & <5:1 at half scale or otherwise specified, and with frequency components within the specified frequency components within the specified frequency bandwidth for non-sinusoidal waveforms.

AMPTIP™ CLAMP-ON AC CURRENT

Range	Resolution	Accuracy ^{1) 2) 3) 4)}
50Hz ~ 60Hz		
60.00 A	0.1 A	$\pm(1.5\%rdg + 5dgts)$

¹⁾ Induced error from adjacent current-carrying conductor : < 0.06A/A

²⁾ Induced error from ACV measurement <0.60A / kV @ 50 / 60Hz

³⁾ Add 10d to the specified accuracy @ < 6A

⁴⁾ Induced non-zero residual while beeper turns on : <20d

REGULAR CLAMP-ON AC CURRENT

Range	Resolution	Accuracy ^{1) 2) 3) 4)}
50Hz ~ 100Hz		
60.00 A ⁵⁾	0.01 A	±(1.8%rdg + 5dgts)
600.0 A	0.1 A	
100Hz ~ 400Hz		
60.00 A ⁵⁾	0.01 A	±(2.0%rdg + 5dgts)
600.0 A	0.1 A	

¹⁾ Induced error from adjacent current-carrying conductor : < 0.06A/A

²⁾ Induced error from ACV measurement <0.60A / kV @ 50 / 60Hz.

³⁾ Specified accuracy is for measurements made at the jaw center. When the conductor is not positioned at the jaw center, add 2% to specified accuracy for position errors.

⁴⁾ Induced non-zero residual while beeper turns on : < 20d

⁵⁾ Add 10d to specified accuracy @ < 6A.

DC μ A

Range	Resolution	Accuracy
200.0 μ A	0.1 μ A	$\pm(1.0\%rdg + 5dgts)$
2000 μ A	0.1 μ A	

Burden Voltage : 3.5mV/ μ A

TEMPERATURE

Range	Accuracy ^{1) 2)}
-40.0°C ~ 99.9°C	1.0% ~ 0.8°C
100.0°C ~ 400°C	1.0% ~ 1°C
-40.0°F ~ 99.9°F	1.0% ~ 1.5°F
100°F ~ 752°F	1.0% ~ 2°F

¹⁾ K-type thermocouple range & accuracy not included

²⁾ Accuracies assume meter interior has the same temperature of the ambient (isothermal stage) for a correct junction voltage compensation. Allow enough time to reach the isothermal stage for a significant change of ambient temperature. It can take up to an hour for changes > 5°C.

DIODE TESTER

Range	Resolution	Accuracy
3.000 V	1 mV	$\pm(1.5\%rdg + 5dgts)$

Test Current : 0.3mA typically Open Circuit Voltage : < 3.5VDC typical.

80ms PEAK-RMS for Clamp-on ACA

Response	80ms to > 90% of specifications, & is specified from 2% of range.
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AUDIBLE CONTINUITY TESTER

Audible Threshold	Between 10 Ω and 250 Ω
Response Time	32ms approx.

AC VOLTAGE (with Digital Low-Pass Filter)

Range	Resolution	Accuracy
50Hz ~ 60Hz		
600.0 V	0.1 V	$\pm(1.0\%rdg + 5dgts)$

Input Impedance : 10M Ω , 100pF nominal

DC VOLTAGE

Range	Resolution	Accuracy
600.0 V	0.1 V	$\pm(1.0\%rdg + 5dgts)$

Input Impedance : 10M Ω , 100pF nominal

RESISTANCE

Range	Resolution	Accuracy
600.0 Ω	0.1 Ω	$\pm(1.0\%rdg + 5dgts)$
6.000K Ω	0.001k Ω	
60.00K Ω	0.01 k Ω	$\pm(1.2\%rdg + 5dgts)$
600.0K Ω ¹⁾	0.1 k Ω	
6000K Ω ²⁾	1 k Ω	

Open Circuit Voltage : 1.7VDC typical

¹⁾ Test Current : 2 μ A typical

²⁾ Test Current : 0.2 μ A typical

CAPACITANCE

Range	Resolution	Accuracy ¹⁾
200.0 μ F	0.1 μ F	$\pm(2.0\%rdg + 4dgts)$
2500 μ F	1 μ F	

¹⁾ Accuracies with film capacitor or better

HZ LINE LEVEL FREQUENCY

Function	Sensitivity (Sine RMS) ¹⁾	Range
600 V	50 V	5.00Hz~999.9Hz

Accuracy : 1% + 5d

¹⁾ DC-bias, if any, not more than 50% of Sine RMS.

NON-CONTACT EF-DETECTION

Bar-Graph Indication	EF-H (High Sensitivity)	EF-L (Low Sensitivity)
	Typical Voltage (Tolerance)	
-	10V (5V ~ 25V)	40V (32V ~ 70V)
--	25V (20V ~ 66V)	110V (55V ~ 165V)
---	55V (50V ~ 125V)	220V (130V ~ 265V)
----	110V (90V ~ 200V)	400V (250V ~ 500V)
-----	220V (>180V)	550V (>430V)

Indication : Bar-graph segments & audible beep tones proportional to the field strength

Detection Frequency : 50/60Hz

Detection Antenna : Inside the top side of the stationary jaw

Probe-Contact EF-Detection : For more precise indication of live wires, such as distinguishing between live and ground connections, use direct contact testing with one single test-probe via an input terminal. The COM terminal (Black) has the test sensitivity.

All Specifications are subject to change without prior notice