

Benchtop 5-1/2 Digit DMM with High-speed Comparator and High-accuracy

DIGITAL HiTESTER 3237, 3238, 3239



3239

- Cannot be used with any industrial power line of greater than 250V
- GP-IB/-01 model
- RS-232C/
- CE CAT II 300 V
- True RMS

- High-speed 3.3 msec comparator for production line use
- Comparator function with open-collector output, beep sound, or LED display
- Built in RS-232C interface and External control I/O, or added GP-IB interface (-01 model)

Order Code:	3237	(with RS-232C interface)
	3237-01	(with GP-IB, RS-232C)
	3238	(with RS-232C interface)
	3238-01	(with GP-IB, RS-232C)
	3239	(with RS-232C interface)
	3239-01	(with GP-IB, RS-232C)

Basic and economical 3237/3237-01



Economy model offering basic functionality for optimal cost performance

High-accuracy & multi-functional 3238/3238-01



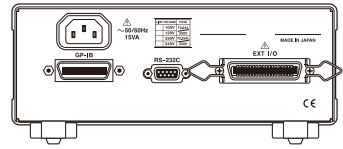
Multifunctional, high-accuracy model that adds AC/DC current and frequency measurement functionality to the 3237

For 4-terminal resistance measurement 3239/3239-01



Adds 4-terminal measurement functionality to Model 3238 for even more accurate resistance measurements

Rear panel (-01 specifications, shared by all 3 models)



Sampling speed Values in the () show samples/s			
Frequency	FAST	MEDIUM	SLOW
50 Hz	3.3 ±1 ms (300)	130 ±5 ms (8)	1040 ±50 ms (1)
60 Hz	3.3 ±1 ms (300)	108 ±5 ms (9)	1080 ±50 ms (1)

* Approximately 55 ms required for self-calibration at 30-minute intervals. Does not apply at resistances higher than 2 MΩ, or LPO higher than 200 kΩ.

Basic specifications (Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year) *Basic accuracy is when sampling rate "Slow".

	3237	3238	3239
DC voltage range	199.999 m/1999.99 m/19.9999/199.999/1000.00 V		
Basic accuracy	±0.025 % rdg. ±2 dgt. (2 V range) ±0.01 % rdg. ±2 dgt. (2 V range)		
AC voltage range	1999.99 m/19.9999/199.999/750.00 V		
Basic accuracy	±0.2 % rdg. ±100 dgt. (45 Hz to 3 kHz) ±0.1 % rdg. ±100 dgt. (45 Hz to 10 kHz)		
Resistance (2-terminals)	199.999/1999.99/19.9999 k/199.999 k/199.999 M/100.000 MΩ		
Basic accuracy	±0.05 % rdg. ±2 dgt. (2000 to 200 kΩ range) ±0.02 % rdg. ±2 dgt. (2000 to 200 kΩ range)		
LP resistance (2-terminals)	1999.99/19.9999 k/199.999 k/1999.99 kΩ		
Basic accuracy	±0.05 % rdg. ±6 dgt. (2000 to 200 kΩ range) ±0.02 % rdg. ±6 dgt. (2000 to 200 kΩ range)		
Continuity Test	A built-in buzzer sounds when the resistance value is less than 50.00 Ω.		
Open terminal voltage	6 V (Ω, Diode check), 0.45 V (Continuity check, LPO)		
DC current range	N/A	199.999 m/1999.99 mA	
Basic accuracy	±0.1 % rdg. ±6 dgt. (200 mA range)		
AC current range	N/A	199.999 m/1999.99 mA	
Basic accuracy	±0.3 % rdg. ±100 dgt. (200 mA range, 45 Hz to 3 kHz)		
Hz (Frequency)	N/A	99.9999/999.999/9.99999 k/99.9999 k/300.000 kHz (Min. measurement 10 Hz)	
Basic accuracy	±0.015 % rdg. ±2 dgt. (Input level : 0.2 V to 700 V, 4 ranges)		
Resistance (4-terminals)	N/A	N/A	199.999/1999.99 /19.9999 k/199.999 k/1999.99 kΩ
Basic accuracy	±0.02 % rdg. ±2 dgt. (2000 to 200 kΩ range)		
LP Resistance (4-terminals)	N/A	N/A	1999.99 /19.9999 k/199.999 k/1999.99 kΩ
Basic accuracy	±0.02 % rdg. ±6 dgt. (2000 to 200 kΩ range)		
Sampling rate	300 times/s (Fast), 8 to 9 times/s (Medium), 1 time/s (Slow)		
Display	Digital LED, max. 199999 dgt.		
Functions	Comparator, Save/Load of settings (Up to 30 types of setting conditions), Printer output, Current measurement with clamp-on probes and scaling, External control I/O		
Interface	External input/output (input: C-MOS level (high: 3.8 to 5 V; low: 0 (short) to 1.2 V); output: open collector (max. 35 V DC/50 mA); RS-232C (standard) and GP-IB (option, -01 specifications))		
Power supply	100/ 120/ 220/ 240 V AC (specify when ordering), 50/60 Hz		
Dimensions and mass	215 mm (8.46 in)W × 80 mm (3.15 in)H × 265 mm (10.43 in)D, 2.6 kg (91.7 oz)		
Accessories	Test lead L9170-10 ×1, Instruction manual ×1, Power cord ×1, Spare fuse each 1		

*L9170-10 is a bundled accessory. *Requires the 9704 to connect a Clamp-on probe

TEST LEAD L9170-10
70 cm (2.30 ft) length

CLAMP ON PROBE 9132-50
1000 A AC
CLAMP ON PROBE 9010-50
500 A AC

CONVERSION ADAPTER 9704
Receiving end: Female BNC; Output end: Male banana-plug *Not compatible with older generation Memory Recorders with banana input terminals

Printer options

PRINTER 9442
For printing numerical values
112 mm (4.41 in) paper width

AC ADAPTER 9443-02
For the Printer 9442, EU type

CONNECTION CABLE 9444
For the Printer 9442, 9 pin - 9 pin, 1.5 m (4.92 ft) length

RECORDING PAPER 1196
For the Printer 9442, 112 mm (4.41 in) × 25 m (82.03 ft), 10 rolls/set

PC communication

RS-232C CABLE 9637
For the PC, 9pin - 9pin, cross, 1.8m (5.91 ft) length

RS-232C CABLE 9638
For the PC, 9pin - 25pin, cross, 1.8m (5.91 ft) length

GP-IB CONNECTOR CABLE 9151-02
2 m (6.56 ft) length

4-terminal measurement probes

PIN TYPE LEAD 9461
A:240 mm (9.45 in), B:132 mm (5.20 in), L:804 mm (2.64 ft)

PIN TYPE LEAD 9455
A:260 mm (10.24 in), B:136 mm (5.35 in), L:890 mm (2.92 ft)

ZERO ADJUSTMENT BOARD 9454
For the L2100, 9465-10, 9465, 9461

FOUR TERMINAL LEAD 9453
A:280 mm (11.02 in), B:118 mm (4.65 in), L:1360 mm (4.46 ft), 60V DC

CLIP TYPE LEAD 9452
A:220 mm (8.66 in), B:197 mm (7.76 in), L:1360 mm (4.46 ft)

CLIP TYPE LEAD 9287-10
A:130 mm (5.12 in), B:83 mm (3.27 in), L:1100 mm (3.61 ft), 70V DC L:1100 mm (3.61 ft), 70V DC

About probe length

A: From junction to probe
B: Probe part
L: Whole length

Introducing a New Digital, Multi-module DMM (Digital-Multi-Module) Station

DMM STATION MR8741, MR8740



8 modules of the DVM unit MR8990 install into the Memory HiCorder MR8741 to create a DMM station

DIGITAL VOLTMETER UNIT MR8990



- Use the new DVM Unit MR8990 to measure DC voltages on 2 channels (for use with the Memory HiCorder MR8741/8740 only)
- High-precision measurement for applications such as investigating minute voltage fluctuations in sensor output
- The MR8741 (MR8740) can save data from 16 (54) Digital Voltmeter Units at once. (DCV measurement only)
- Unlike standard multi-channel scan-type loggers, these instruments can perform simultaneous sampling
- High accuracy of $\pm 0.01\%$ and super-high 1.2 million-count resolution
- High-speed sampling at 500 samples/s
- Isolated input (channel-to-channel and channel-to-chassis: max. rated voltage to earth of 300 V AC/DC)

Order Code: **MR8740** (54-ch model, 864 MW memory, main unit only)
MR8741 (16-ch model, 256 MW memory, main unit only)
MR8990 (use with the MR8740/8741 main unit)

Note: Instrument requires input units and other dedicated options. Input cords not included. The MR8990 cannot operate alone.

Inserted next to instrument; mix and match. For other options, please see the product catalog.

Options	DIGITAL VOLTMETER UNIT MR8990	STRAIN UNIT 8969	LOGIC UNIT 8973
	2 ch, high-precision DC V input, 0.1 μ V resolution, high-speed sampling 500 times/s	2 ch, strain gauge type converter amp *Includes Conversion Cable 9769	4 terminals, 16 ch
	ANALOG UNIT 8966	FREQ UNIT 8970	CURRENT UNIT 8971
	2 ch, voltage input, DC to 5 MHz bandwidth	2 ch, for measurement of frequency, rpm, pulse, etc.	2 ch, for measuring current using dedicated current sensors, use up to 4 with MR8740; not compatible with MR8741
	TEMP UNIT 8967	DC/RMS UNIT 8972	
	2 ch, thermocouple temperature input	2 ch, voltage/DC to 400 kHz, RMS rectifier, DC and 30 to 100 kHz bandwidth	
	HIGH RESOLUTION UNIT 8968		
	2 ch, voltage input, DC to 100 kHz bandwidth		

■ DVM Unit MR8990 Basic specifications (Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

Measurement functions	Install into Memory HiCorder MR8740/8741 for use; 2 channels of DC voltage measurement
Measurement ranges (20 div. f.s.)	100 mV range (5 mV/div.): -120.0000 mV to 120.0000mV, 0.1 μ V resolution to 500 V range (50 V/div.): -500.000 V to 500.000 V, 1 mV resolution, 5 ranges
Measurement accuracy	Basic accuracy: $\pm 0.01\%$ rdg. $\pm 0.0025\%$ f.s.
Max. allowable input	500 V DC (upper limit voltage that can be applied between input terminals without damage)
Max. rated voltage to earth	300 V AC/DC (input and instrument are isolated; upper limit voltage that can be applied between input channels or between input channels and chassis without damage)
Max. sampling rate	2 ms (500 samples/s)

■ Main Unit MR8740/8741 Basic specifications (Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

	MR8740	MR8741
Number of channels	Block I: 16 analog units] From 32 analog + 8 standard logic [Block I: 13 analog units + 3 logic units] 26 analog + 56 logic (8 standard logic + 48 logic unit) [Block II: 11 analog units] From 22 analog + 8 standard logic [Block II: 8 analog units + 3 logic units] 16 analog + 56 logic (8 standard logic + 48 logic unit) *Instrument consists of two blocks, Block I and Block II *Block I and Block II start measurement simultaneously by means of trigger synchronization (internal setting) *Analog unit channels are isolated from each other and from the recorder. Logic unit channels and standard logic terminal channels share a common GND with the recorder.	[8 analog units] From 16 analog + 16 standard logic [5 analog units + 3 logic units] 10 analog + 64 logic (16 standard logic + 48 logic unit)
Memory capacity	16 MW/ch (fixed), total of 864 MW installed	16 MW/ch (fixed), total of 256 MW installed
Removable storage	USB memory (2.0)	
Display	None (1 digital DVI terminal per block, 800 \times 600 dots)	None (1 digital DVI terminal, 800 \times 600 dots)
External interfaces	[LAN] 100Base-TX (DHCP and DNS support, FTP server, HTTP server) [USB] USB 2.0 Series A receptacle \times 2 (mouse operation)	
Power supply	100 to 240 V AC, 50/60 Hz (250 VA max.)	100 to 240 V AC, 50/60 Hz (120 VA max.)
Dimensions and mass	426 mm (16.77 in)W \times 177 mm (6.97 in)H \times 505 mm (19.88 in)D, 10.8 kg (3809.5 oz) (main unit only)	350 mm (13.78 in)W \times 160 mm (6.30 in)H \times 320 mm (12.60 in)D, 5.4 kg (190.5 oz) (main unit only)
Accessories	Instruction manual \times 1, Application disk (Wave viewer Wv, Communication commands table) \times 1, Power cord \times 1	

Generate and Measure Signals Simultaneously

DC SIGNAL SOURCE SS7012



- Improve stability and reduce calibration costs compared with the previous HIOKI model
- For instrumentation systems (4 - 20 mA) and loop testing
- Check temperature control equipment and electric distribution
- 8 types of thermocouples to test thermoelectric power generation
- Ideal for electrical device testing and routine maintenance of production equipment such as calibrators
- Use the max. 25 mA DC sink as an electric load

Order Code: **SS7012**

Note: Use of the AC Adapter and/or rechargeable batteries and dedicated charger is recommended.

■ Basic specifications (Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

[Generation functions]	
Circuit method	Bipolar sink and source
Constant Voltage	2.5 V: 0 to ± 2.5000 V ($\pm 0.03\%$ of setting ± 300 μ V, 100 μ V resolution) 25 V: 0 to ± 25.000 V ($\pm 0.03\%$ of setting ± 3 mV, 1 mV resolution)
Constant Current	25 mA: 0 to ± 25.000 mA ($\pm 0.03\%$ of setting ± 3 μ A, 1 μ A resolution)
Thermoelectric power generation	K: at TC: 0 $^{\circ}$ C, -174.0 to 1372.0 $^{\circ}$ C ($\pm 0.05\%$ of setting ± 0.5 $^{\circ}$ C, 0.1 $^{\circ}$ C resolution), Other types: E, J, T, R, S, B, N selectable
Thermoelectric power generation	K: at TC: RJ, -174.0 to 1372.0 $^{\circ}$ C ($\pm 0.05\%$ of setting ± 1.0 $^{\circ}$ C, 0.1 $^{\circ}$ C resolution), Other types: E, J, T, R, S, B, N selectable
Standard resistance (Rs)	100 Ω (± 0.2 Ω)
Automatic generation	Number of memory steps: 20, Interval time: 1 to 99 sec (at CV, CC, TC mode)

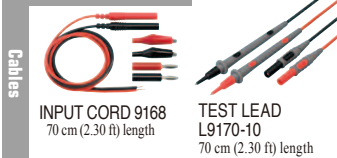
[Measurement functions]

Voltage	2.5 V: 0 to ± 2.8000 V ($\pm 0.03\%$ rdg. ± 300 μ V, 100 μ V resolution, 1 M Ω input resistance) 25 V: 0 to ± 28.000 V ($\pm 0.03\%$ rdg. ± 3 mV, 1 mV resolution, 1 M Ω input resistance)
Current	25 mA: 0 to ± 28.000 mA ($\pm 0.03\%$ rdg. ± 3 μ A, 1 μ A resolution, 25 Ω input resistance)
Temperature	-25.0 to 80.0 $^{\circ}$ C (± 0.5 $^{\circ}$ C at 23 ± 5 $^{\circ}$ C, 0.1 $^{\circ}$ C resolution, use with the RJ sensor 9184)
Sampling rate	Approx. 1.67 times/sec

Additional functions

Power supply	AC adapter 9445-02/03 (100 to 240 V AC 50/60 Hz, 9 VA), Ni-MH battery HR6 \times 4, 6 VA, (fully charged 2500 mAh Ni-MH batteries: 170 minutes continuous use), or LR6 (AA) alkaline battery \times 4, 6 VA
Dimensions and mass	104 mm (4.09 in)W \times 180 mm (7.09 in)H \times 58 mm (2.28 in)D, 660 g (23.3 oz) (including LR6 \times 4 batteries)
Accessories	Input cord 9168 \times 1, Test lead L9170-10 \times 1, Fuse \times 1, LR6 (AA) alkaline battery \times 4, Instruction manual \times 1

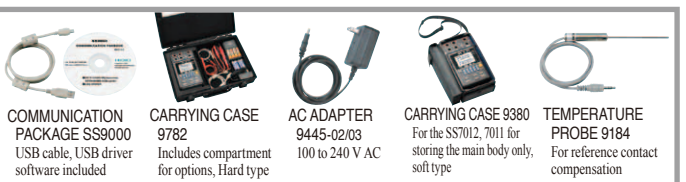
* Bundled accessories



INPUT CORD 9168
70 cm (2.30 ft) length

TEST LEAD
L9170-10
70 cm (2.30 ft) length

Commercially available rechargeable batteries (AA Ni-MH batteries \times 4) may also be used to power the SS7012. Using locally purchased rechargeable batteries and dedicated battery chargers is recommended; however, HIOKI will not be able to guarantee operating time as different rechargeable batteries exhibit different power specifications per charge. The SS7012 cannot be used to recharge batteries.



COMMUNICATION PACKAGE SS9000
USB cable, USB driver software included

CARRYING CASE 9782
Includes compartment for options, Hard type

AC ADAPTER 9445-02/03
100 to 240 V AC

CARRYING CASE 9380
For the SS7012, 7011 for storing the main body only, soft type

TEMPERATURE PROBE 9184
For reference contact compensation

Must-have Instruments for Electricity Professionals! Standard Models Provide Multiple Measurement Functions

DIGITAL MULTIMETER DT4252, DT4256



- The DT4256, which features a multi-functional design, measures signals ranging from 4 to 20 mA
- The DT4252 meets diverse measurement needs
- $\pm 0.3\%$ DC V basic accuracy, wide 40 Hz to 1 kHz AC V frequency characteristics
- Low-pass filter (100 Hz/ 500 Hz) cuts high harmonics(when measuring inverter fundamental waveforms)
- USB communications function supports PC measurements (optional)
- Broad -10 (14°F) to 50°C (122°F) operating temperature range

Order Code: DT4252 (with 10 A input terminal)
DT4256 (Multi-functional model, with 10 A input terminal)



Regarding DMM Accuracy Due to the many ranges and functions available in a DMM, only the basic accuracy is indicated for reference. Please refer to the individual catalogs for detailed accuracy information.

■ **Basic specifications** (Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

	DT4252	DT4256
DC Voltage (Basic accuracy)	600.0 mV to 1000 V 5 ranges, Basic accuracy: $\pm 0.3\%$ rdg. ± 5 dgt.	600.0 mV to 1000 V 5 ranges, Basic accuracy: $\pm 0.3\%$ rdg. ± 3 dgt.
AC Voltage 40 to 500 Hz	6.000 V to 1000 V, 4 ranges, Frequency characteristics: 40 Hz to 1 kHz Basic accuracy: $\pm 0.9\%$ rdg. ± 3 dgt. (True RMS, crest factor 3)	
AUTO AC/DCV	N/A	Yes
Resistance	600.0 Ω to 60.00 M Ω , 6 ranges, Basic accuracy: $\pm 0.7\%$ rdg. ± 5 dgt.	600.0 Ω to 60.00 M Ω , 6 ranges, Basic accuracy: $\pm 0.7\%$ rdg. ± 3 dgt.
DC Current Basic accuracy	6.000 A / 10.00 A, 2 ranges, Basic accuracy: $\pm 0.9\%$ rdg. ± 5 dgt.	60.00 mA to 10.00 A, 4 ranges, Basic accuracy: $\pm 0.9\%$ rdg. ± 3 dgt.
From 4 to 20mA Percentage conversion display	N/A	Yes
AC Current 40 to 500 Hz Basic accuracy	6.000 A / 10.00 A, 2 ranges, Basic accuracy: $\pm 1.4\%$ rdg. ± 3 dgt. (True RMS, crest factor 3, 40 Hz to 1kHz)	600.0 mA to 10.00 A, 3 ranges, Basic accuracy: $\pm 1.4\%$ rdg. ± 3 dgt. (True RMS, crest factor 3, 40 Hz to 1kHz)
AC Current (use with Clamp on probes) 40 to 1k Hz	N/A	10.00 A to 1000 A, 7 ranges, Add the Clamp on probe accuracy to basic accuracy: $\pm 0.9\%$ rdg. ± 3 dgt. (True RMS, crest factor 3)
Voltage detection	N/A	Hi: AC40 V to 600 V, Lo: AC80 V to 600 V
C (capacitance)	1.000 μ F to 10.00 mF, 5 ranges, Basic accuracy: $\pm 1.9\%$ rdg. ± 5 dgt.	
Frequency	99.99 Hz (5 Hz or more) to 99.99 kHz, 4 ranges (limited by the minimum detectable voltage and current), Basic accuracy: $\pm 0.1\%$ rdg. ± 1 dgt.	
Continuity check	Continuity threshold [ON]: 25 Ω or less (Indicate buzzer sound, red LED), [OFF]: 245 Ω or more, Response time: 0.5 ms or more	
Diode test	Open terminal voltage: 5.0 V or less, Testing current 0.5 mA or less, Threshold of forward voltage: 0.15 V to 1.5 V	
Other functions	Filter function, Display value hold, Auto hold, Max/Min/Average value display, Relative display, Auto-power save, USB communication (option)	
Display	Main and Sub displays: 4-digits LCD, max. 6000 digits, bar graph	
Display refresh rates	5 times/s (Capacitance measurement: 0.05 to 5 times/s, depending on measured value, Frequency: 1 to 2 time/s, Temperature: 1 time/s)	
Power supply	LR03 alkaline batteries $\times 4$, Continuous use: 130 hours (backlight OFF)	
Dimensions and mass	84 mm (3.31 in)W \times 174 mm (6.85 in)H \times 52 mm (2.05 in)D, 390 g (13.8 oz) (including batteries and holster)	
Accessories	Test lead L9207-10 $\times 1$, Holster $\times 1$, Instruction manual $\times 1$, LR03 alkaline battery $\times 4$	

Must-have Instruments for Electricity Professionals! Safety and Application-specific Models

DIGITAL MULTIMETER DT4253, DT4254, DT4255



- The DT4253, which is built in high-sensitivity current ranges, measures currents ranging from instrumentation signals (4 to 20 mA) to flame currents (μ A)
- The DT4254, which is ideal for solar power system and power equipment management, measures up to 1700 V DC during open voltage inspections
- The DT4255 prevents short-circuit accidents with a fast-blow fuse and current-limiting resistor
- $\pm 0.3\%$ DC V basic accuracy, wide 40 Hz to 1 kHz AC V frequency characteristics
- Low-pass filter (100 Hz/ 500 Hz) cuts high harmonics (when measuring inverter fundamental waveforms)
- USB communications function supports PC measurements (optional)
- Broad -10 (14°F) to 50°C (122°F) operating temperature range

Order Code: DT4253 (with DC mA / with temperature measurement)
DT4254 (Voltage measurement only)
DT4255 (with fused measurement terminals)



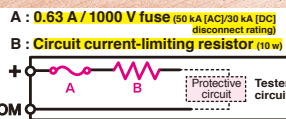
Regarding DMM Accuracy Due to the many ranges and functions available in a DMM, only the basic accuracy is indicated for reference. Please refer to the individual catalogs for detailed accuracy information.

■ **Basic specifications** (Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

	DT4253	DT4254	DT4255
DC Voltage (Basic accuracy)	600.0 mV to 1000 V 5 ranges, Basic accuracy: $\pm 0.3\%$ rdg. ± 5 dgt.	600.0 mV to 1500 V 5 ranges, Basic accuracy: $\pm 0.3\%$ rdg. ± 3 dgt.	600.0 mV to 1000 V 5 ranges, Basic accuracy: $\pm 0.3\%$ rdg. ± 3 dgt.
AC Voltage 40 to 500 Hz	6.000 V to 1000 V, 4 ranges, Frequency characteristics: 40 Hz to 1 kHz Basic accuracy: $\pm 0.9\%$ rdg. ± 3 dgt. (True RMS, crest factor 3)		
AUTO AC/DCV	Yes		
Resistance	600.0 Ω to 60.00 M Ω , 6 ranges, Basic accuracy: $\pm 0.7\%$ rdg. ± 5 dgt.	N/A	600.0 Ω to 60.00 M Ω , 6 ranges, Basic accuracy: $\pm 0.7\%$ rdg. ± 3 dgt.
DC Current	60.00 μ A to 60.00 mA, 4 ranges, Basic accuracy: $\pm 0.8\%$ rdg. ± 5 dgt.	N/A	N/A
From 4 to 20mA Percentage conversion display	Yes	N/A	N/A
AC Current (use with Clamp on probes) 40 to 1k Hz	10.00 A to 1000 A, 7 ranges Add the Clamp on probe accuracy to basic accuracy: $\pm 0.9\%$ rdg. ± 3 dgt. (True RMS, crest factor 3)	N/A	10.00 A to 1000 A, 7 ranges Add the Clamp on probe accuracy to basic accuracy: $\pm 0.9\%$ rdg. ± 3 dgt. (True RMS, crest factor 3)
Temperature (THERMOCOUPLES)	K: -40.0 to 400.0 $^{\circ}$ C (DT4910) Add the Temperature probe accuracy to basic accuracy: $\pm 0.5\%$ rdg. ± 2 $^{\circ}$ C	N/A	N/A
Voltage detection (50/60 Hz)	N/A	Hi: AC40 V to 600 V, Lo: AC80 V to 600 V	
C (capacitance)	1.000 μ F to 10.00 mF, 5 ranges, Basic accuracy: $\pm 1.9\%$ rdg. ± 5 dgt.	N/A	1.000 μ F to 10.00 mF, 5 ranges, Basic accuracy: $\pm 1.9\%$ rdg. ± 5 dgt.
Frequency	99.99 Hz to 99.99 kHz, 4 ranges (limited by the minimum detectable voltage), Basic accuracy: $\pm 0.1\%$ rdg. ± 1 dgt.		
Continuity check	Continuity threshold [ON]: 25 Ω or less, [OFF]: 245 Ω or more, Response time: 0.5 ms or more	N/A	Continuity threshold [ON]: 25 Ω or less, [OFF]: 245 Ω or more, Response time: 0.5 ms or more
Diode test	Open terminal voltage: 5.0 V or less, Testing current 0.5 mA or less, Threshold of forward voltage: 0.15 V to 1.5 V	N/A	Open terminal voltage: 5.0 V or less, Testing current 0.5 mA or less, Threshold of forward voltage: 0.15 V to 1.5 V
Other functions	Filter function, Display value hold, Auto hold, Max/Min/Average value display, Relative display, Auto-power save, USB communication (option)		
Display	Main and Sub displays: 4-digits LCD, max. 6000 digits, bar graph		
Display refresh rates	5 times/s (Capacitance measurement: 0.05 to 5 times/s, depending on measured value, Frequency: 1 to 2 time/s)		
Power supply	LR03 alkaline batteries $\times 4$, Continuous use: 130 hours (backlight OFF)		
Dimensions and mass	84 mm (3.31 in)W \times 174 mm (6.85 in)H \times 52 mm (2.05 in)D, 390 g (13.8 oz) (including batteries and holster)		
Accessories	Test lead L9207-10 $\times 1$, Holster $\times 1$, Instruction manual $\times 1$, LR03 alkaline battery $\times 4$		

Key Point Absolute prevention of short-circuit accidents (DT4255)

In the event of erroneous operation, a protective circuit functions to prevent a short-circuit. A current-limiting resistor limits the short-circuit current if damage to the tester's circuitry results in a short-circuit condition, and a fast-blow fuse quickly disconnects the circuit to ensure safety.



Speedy and Professional Performance in a Pocket DMM

DIGITAL MULTIMETER DT4221, DT4222



DT4221



DT4222



- Achieving a high level of safety in a compact body and lightweight design
- Test leads conveniently wrap around the back
- $\pm 0.5\%$ DC V basic accuracy, wide 40 Hz to 1 kHz AC V frequency characteristics
- Low-pass filter (100 Hz/ 500 Hz) cuts high harmonics
- Current measurement function eliminated to enhance safety
- Broad -10 (14°F) to 50°C (122°F) operating temperature range

Order Code: **DT4221** (V measurement only, for electrical work)
DT4222 (with C/R measurement, for general use)

Options for the DT4911 (DT4911 is a bundled accessory)



TEST LEAD DT4911
CAT IV 300V, CAT III 600V, 54cm (1.77ft) length

CONTACT PIN SET L4933
Attaches to the tip of the Test Lead L9207-10/DT4911, L9206, DC70V/AC33V

SMALL ALLIGATOR CLIP SET L4934
Attaches to the tip of the L4932, L9207-10/DT4911, L9206, CAT III 300V, CAT II 600V

Regarding DMM Accuracy Due to the many ranges and functions available in a DMM, only the basic accuracy is indicated for reference. Please refer to the individual catalogs for detailed accuracy information.

■ **Basic specifications** (Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

	DT4221	DT4222
DC Voltage	600.0 mV to 600.0 V, 4 ranges, Basic accuracy: $\pm 0.5\%$ rdg. ± 5 dgt.	
AC Voltage	6.000 V to 600.0 V, 3 ranges, Frequency characteristics: 40 Hz - 1 kHz Basic accuracy: $\pm 1.0\%$ rdg. ± 3 dgt. (True RMS, crest factor 3)	
Resistance	N/A	600.0 Ω to 60.00 M Ω , 6 ranges Basic accuracy: $\pm 0.9\%$ rdg. ± 5 dgt.
C (capacitance)	N/A	1.000 μ F to 10.00 mF, 5 ranges Basic accuracy: $\pm 1.9\%$ rdg. ± 5 dgt.
Frequency	AC V measurement: 99.99 Hz (5 Hz or more) to 9.999 kHz, 3 ranges Basic accuracy: $\pm 0.1\%$ rdg. ± 2 dgt.	
Continuity check	Continuity threshold [ON]: 25 Ω or less (buzzer sound), [OFF]: 245 Ω or more Response time: 0.5 ms or more	
Diode test	N/A	Open terminal voltage: 2.5 V or less, Testing current 0.5 mA or less, Threshold of forward voltage: 0.15 V to 1.5 V
Voltage detection	80 V to 600 V AC	N/A
Other functions	Filter function, Display value hold, Relative display, Auto-power save	
Display	Main and Sub displays: 4-digits LCD, max. 6000 digits, bar graph	
Display refresh rates	5 times/s (Capacitance measurement: 0.05 to 5 times/s, depending on measured value, Frequency: 1 to 2 time/s)	
Power supply	LR03 alkaline batteries $\times 4$, Continuous use: 40 hours (backlight OFF)	
Dimensions and mass	72 mm (2.83 in)W \times 149 mm (5.87 in)H \times 38 mm (1.50 in)D, 190 g (6.7 oz) (including batteries and holster)	
Accessories	Test lead DT4911 $\times 1$, Holster $\times 1$, Instruction manual $\times 1$, LR03 alkaline battery $\times 1$	



Other options

MAGNETIC STRAP Z5004

CARRYING CASE C0200
For the DT4220 series

Safety, Quality, Value - Budget DMM Featuring $\pm 0.5\%$ Accuracy

DIGITAL MULTIMETER DT4211, DT4212



DT4211



DT4212



- Extensive measurement functionality
- Large screen for excellent visibility
- No dead batteries during measurement with approx. 800 hours of continuous operating time
- CAT III 600 V, CAT II 1000 V
- Wide operating temperature range of -10°C to 50°C
- 3-year product guarantee, 12-month accuracy guarantee
- True RMS (DT4212 only)
- Temperature measurement (DT4212 only)

Order Code: **DT4211** (for general use)
DT4212 (for electrical work)

Regarding DMM Accuracy Due to the many ranges and functions available in a DMM, only the basic accuracy is indicated for reference. Please refer to the individual catalogs for detailed accuracy information.

■ **Basic specifications** (Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

	DT4211	DT4212
DC Voltage	400.0 mV to 1000 V, 5 ranges, Basic accuracy: $\pm 0.5\%$ rdg. ± 3 dgt.	
AC Rectifier	Average rectified	True RMS, crest factor 2 to 1.5
AC Voltage	400.0 mV to 1000 V, 5 ranges, Frequency characteristics: 40 Hz - 500 Hz Basic accuracy: $\pm 1.0\%$ rdg. ± 5 dgt.	
Resistance	400.0 Ω to 40.00 M Ω , 6 ranges, Basic accuracy: $\pm 0.5\%$ rdg. ± 2 dgt.	
DC Current	400.0 μ A to 10.00 A, 6 ranges, Basic accuracy: $\pm 1.2\%$ rdg. ± 3 dgt.	
AC Current	400.0 μ V to 10.00 A, 6 ranges, Frequency characteristics: 40 Hz - 500 Hz Basic accuracy: $\pm 1.2\%$ rdg. ± 5 dgt.	
Temperature (use with DT4910)	N/A	K: -55.0 to 400.0 °C, 400 to 700 °C, Add the Temperature probe accuracy to Basic accuracy: $\pm 2.0\%$ rdg. ± 1 °C
Voltage detection	N/A	
C (capacitance)	50.00 nF to 100.0 μ F, 5 ranges, Basic accuracy: $\pm 2.0\%$ rdg. ± 5 dgt.	
Frequency	AC V measurement: 5.000 Hz (1 Hz or more) to 5.000 MHz, 7 ranges, Basic accuracy: $\pm 0.1\%$ rdg. ± 3 dgt. Minimum sensitivity voltage: Square wave of 1.5 Vrms	
Continuity check	Continuity threshold [ON]: 90 Ω ± 40 Ω or less (Buzzer sound)	
Diode test	Open terminal voltage: 3.0 V or less, Testing current 0.5 mA	
Environment	Operating temperature: -10 to 50 °C, Storage temperature: -20 to 60 °C	
Other functions	Display value hold, Relative display, Auto-power off, Back light	
Display	4-digits LCD, max. 4000 counts	
Display refresh rates	3 times/s	
Power supply	LR6 alkaline batteries $\times 2$, R6P manganese batteries $\times 2$, Continuous use: 800 hours (When using alkaline batteries)	
Dimensions and mass	91.6 mm (3.61 in)W \times 180.6 mm (7.11 in)H \times 57.1 mm (2.25 in)D, 388 g (13.7 oz) (including batteries and holster)	
Accessories	Test Lead L9206 $\times 1$, holster (attached) $\times 1$, instruction manual $\times 1$, R6P manganese battery $\times 2$	

Shared options for DT4211, DT4212

Options for the L9206 (L9206 is a bundled accessory)

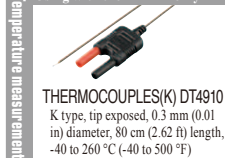


TEST LEAD L9206
98 cm (3.22 ft) length, for DT4210s

CONTACT PIN SET L4933
Attaches to the tip of the Test Lead L9207-10/DT4911, L9206, DC70V/AC33V

SMALL ALLIGATOR CLIP SET L4934
Attaches to the tip of the L4930, L9207-10/DT4911, L9206, CAT III 300V, CAT II 600V

Using with the DT4212 only



THERMOCOUPLES(K) DT4910
K type, tip exposed, 0.3 mm (0.01 in) diameter, 80 cm (2.62 ft) length, -40 to 260 °C (-40 to 500 °F)



MAGNETIC STRAP Z5004

CARRYING CASE C0202
For the DT4280s/DT4250s/DT4210s, FT3424

CARRYING CASE C0201
For the DT4250s, DT4210s, FT3424



CONNECTION CABLE SET L4930
1.2 m (3.94 ft) length

EXTENSION CABLE SET L4931
Expands the length of L4930, 1.5 m (4.92 ft) length

TEST PIN SET L4932
Attaches to the tip of the L4930, CAT IV 600V, CAT III 1000V

ALLIGATOR CLIP SET L4935
Attaches to the tip of the L4930, CAT IV 600V, CAT III 1000V

BUS BAR CLIP SET L4936
Attaches to the tip of the L4930, CAT III 600V

MAGNETIC ADAPTER SET L4937
Attaches to the tip of the L4930, CAT III 1000V

TEST PIN SET L4938
Attaches to the tip of the L4930, CAT III 600V

BREAKER PIN SET L4939
Attaches to the tip of the L4930, CAT III 600V

GRABBER CLIP 9243
Attaches to the tip of the L4930/9197/9322 and other leads, CAT III 1000 V, 196 mm (7.72 in) length

DMM Testers

Voltage Measurement Safety Assured by Non-Contact Testing

SAFETY HiTESTER 3258



Applicable electric cable types
 Size: 100 mm² or larger insulated electric line

 100 mm² (17 mm dia.) insulated cable

- Non-metallic contact for optimum safety
- Capture the voltage value of covered electric wires
- Also ideal for metallic busbars and terminals
- Optimized for 400 V AC circuits

Order Code: 3258

Ensures safe measurements in the cubicle



Regarding DMM Accuracy Due to the many ranges and functions available in a DMM, only the basic accuracy is indicated for reference. Please refer to the individual catalogs for detailed accuracy information.

Basic specifications (Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

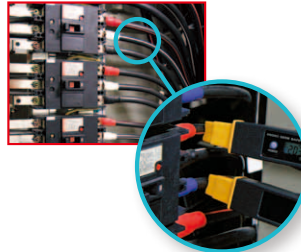
Measurement parameter	AC voltage (AC potential bridge)
Objects of measurement	Insulated conductors (IV or CV equivalent, min. 100 mm ² x-section), metal conductors <i>Note: Not usable on shielded conductors</i>
Measurement range	420.0V/ 600V AC (Auto)
Measurement values	True RMS
Max. rated voltage to earth	600V AC rms
Influence of adjacent wiring	±5% rdg. or less
Temperature characteristics	0.05 % rdg./ °C
Display	Digital LCD, max. 4200 digit (zero suppress at 10 digits or less)
Display refresh rate	Approx. once every 0.6 seconds
Display response	2.4 s or less
Functions	Data hold function, auto-power off, low battery warning
Power supply	LR6 (AA) alkaline battery ×6, Continuous use: 14 hr (Power ON, no measurement), or 1-minute measurements for 1000 times, or 5-minute measurements for 200 times
Dimensions and mass	51mm (2.01in)W × 275mm (10.83in)H × 37.5mm (1.48in)D (one probe), 670g (23.6oz)
Accessories	Instruction manual ×1, LR6 (AA) alkaline battery ×6, Soft carrying case ×1

Basic accuracy Covered (unshielded) electric wires (Indoor PVC or equivalent, 100 mm² or larger)

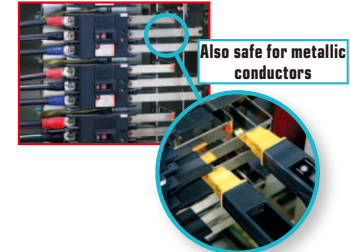
Measurement range	Accuracy guaranteed range	Accuracy	
		40 - 66 Hz	66 - 400 Hz
420 V	30.0 - 420.0 V	±1.5% rdg. ±5 dgt.	±2.5% rdg. ±5 dgt.
600 V	380 - 480 V	±2.0% rdg. ±5 dgt.	
	481 - 600 V	±5.0% rdg. ±5 dgt.	

Note: For insulated cables over 38 mm² to less than 100 mm², add 0.5% rdg. to measurement accuracy

Easily measure right through cable insulation



Safely measure around busbars



Pencil-type DMM with LED Light

PENCIL HiTESTER 3246-60



Regarding DMM Accuracy Due to the many ranges and functions available in a DMM, only the basic accuracy is indicated for reference. Please refer to the individual catalogs for detailed accuracy information.

Basic specifications (Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

DC Voltage	419.9 mV to 600 V, 5 ranges, Basic accuracy: ±1.3 % rdg. ±4 dgt.
AC Voltage	4.199 V to 600 V, 4 ranges, Basic accuracy: ±2.3 % rdg. ±8 dgt. (Average rectified)
Resistance	419.9 Ω to 41.99 MΩ, 6 ranges, Basic accuracy: ±2.0 % rdg. ±4 dgt.
Continuity buzzer	Detection level 50 Ω ±40 Ω
Diode check	Judges the right direction only, Open terminal voltage: 3.4 V or less, Testing current: 800 μA or less
Auto power save	Available (cancel selectable)
Display	Digital LCD, max. 4199 digits
Sampling rate	2.5 times/sec
Power supply	Coin type lithium battery (CR2032) ×1, Continuous use: 150 hours (at DC V function), 30 hours (with light turned on for 10 seconds and off for 20 seconds per cycle and in DC V function)
Dimensions and mass	30 mm (1.18 in)W × 182 mm (7.17 in)H × 26.5 mm (1.04 in)D, 80 g (2.8 oz)
Accessories	Instruction manual ×1, Coin type lithium battery (CR2032) ×1 (for trial purposes only), Sleeves (Red/ Black each 1)

- Test lead and main unit in a single body
- Overload protection to 600 V at resistance or continuity functions
- LED light brightly illuminates test points

Order Code: 3246-60

Environmentally-friendly DMM

SOLAR HiTESTER 3245-60



Order Code: 3245-60

Regarding DMM Accuracy Due to the many ranges and functions available in a DMM, only the basic accuracy is indicated for reference. Please refer to the individual catalogs for detailed accuracy information.

■ **Basic specifications** (Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

DC Voltage	419.9 mV to 600 V, 5 ranges, Basic accuracy: $\pm 1.3\%$ rdg. ± 4 dgt.
AC Voltage 50 to 500 Hz	4.199 V to 600 V, 4 ranges, Basic accuracy: $\pm 2.3\%$ rdg. ± 8 dgt. (Average rectified)
Resistance	419.9 Ω to 41.99 M Ω , 6 ranges, Basic accuracy: $\pm 2.0\%$ rdg. ± 4 dgt.
Continuity buzzer	Detection level 50 Ω ± 40 Ω , Diode check: Not available
Light meter	"1000" digits display to approx. 50,000 lx
Auto power save	Available (cancel selectable)
Display	Digital LCD, max. 4199 digits
Sampling rate	2.5 times/sec
Main power supply	Rechargeable lithium-ion battery powered by solar source: 8 hours of use available on 3 hours of charging at 50,000 lx
Secondary power supply	Coin type lithium battery (CR2032) $\times 1$, Continuous use with secondary battery: 150 hours
Dimensions and mass	60 mm (2.36 in)W \times 135 mm (5.31 in)H \times 23 mm (0.91 in)D, 140 g (4.9 oz)
Accessories	Instruction manual $\times 1$, Coin type lithium battery (CR2032) $\times 1$ (for trial purposes only), Sleeves (Red/ Black each 1)

- Hybrid power system incorporates both a solar-charged main battery and a backup battery
- Pocket-sized CAT III (600 V) and CAT IV (300 V) conformance (when test pin sleeves are attached)
- Neat test probe storage in the back of the unit

Compact ! Palm Size Body, Less Than 1cm Thin!

CARD HiTESTER 3244-60



Rugged external case protects the DMM. Standard accessory.

*When used in CAT III environments, test pin sleeves are required.

Order Code: 3244-60

Regarding DMM Accuracy Due to the many ranges and functions available in a DMM, only the basic accuracy is indicated for reference. Please refer to the individual catalogs for detailed accuracy information.

■ **Basic specifications** (Accuracy guaranteed for 1 year)

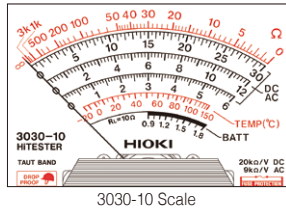
DC Voltage	419.9 mV to 500 V, 5 ranges, Basic accuracy: $\pm 0.7\%$ rdg. ± 4 dgt.
AC Voltage 50 to 500 Hz	4.199 V to 500 V, 4 ranges, Basic accuracy: $\pm 2.3\%$ rdg. ± 8 dgt. (Average rectified)
Resistance	419.9 Ω to 41.99 M Ω , 6 ranges, Basic accuracy: $\pm 2.0\%$ rdg. ± 4 dgt.
Continuity buzzer	Detection level 50 Ω ± 40 Ω , Diode check: Not available
Auto power save	Available (cancel selectable)
Display	Digital LCD, max. 4199 digits
Sampling rate	2.5 times/sec
Power supply	Coin type lithium battery (CR2032) $\times 1$, Continuous use: 150 hours
Dimensions and mass	55 mm (2.17 in)W \times 109 mm (4.29 in)H \times 9.5 mm (0.37 in)D, 60 g (2.1 oz)
Accessories	Instruction manual $\times 1$, Carrying case $\times 1$, Coin type lithium battery (CR2032) $\times 1$ (for trial purposes only), Sleeves (Red/ Black each 1)

- Better contact test leads with 15 mm gold-plated tip pin
- Only 9.5 mm (0.37 in) thick and 60 g (2.1 oz) in weight
- Full auto-ranging function and automatic power saving function
- Overload protection to 500 V at resistance or continuity functions



Basic Tester with Improved Safety Features (20 kΩ/V)

HiTESTER 3030-10



Not CE Marked
CAT III 600 V

Basic specifications (Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

DC Voltage range	0.3 V (16.7 kΩ/V), 3/12/30/120/300/600 V (20 kΩ/V) Accuracy: ±2.5 % f.s. Max. rated voltage: 600 V
AC Voltage range	12 V (9 kΩ/V) Accuracy: ±4 % f.s. 30/120/300/600 V (9 kΩ/V) Accuracy: ±2.5 % f.s. Average rectifier effective value, Max. rated voltage: 600 V
DC Current range	60 μA/30 m/300 mA (300 mV internal voltage drop) Accuracy: ±3 % f.s.
Resistance range	0 to 3 kΩ (center scale 30 Ω), R × 1, R × 10, R × 100, R × 1 k Accuracy: ±3 % of scale length
Battery check	0.9 to 1.8 V, load resistance 10 Ω, Accuracy: ±6 % f.s.
Temperature scale	<i>Note: The 3030-10 includes a temperature measurement scale, but because the optional Thermister Temperature Probe 9021-01 has been discontinued, the scale is not available for new customers.</i>
Power supply	For resistance measurement range, R6P (AA) × 2 batteries
Dimensions and mass	95 mm (3.74 in)W × 141 mm (5.55 in)H × 39 mm (1.54 in)D, 280 g (9.9 oz)
Accessories	Test lead L9207-30 × 1, Spare fuse × 1, R6P (AA) manganese batteries × 2, Instruction manual × 1, Carrying case 9390 × 1

- Drop proof design withstands drop onto a concrete floor from a height of 1 meter
- LED check, Battery check support

Order Code: 3030-10

*The L9207-30 and the 9390 are bundled

TEST LEAD L9207-30
70 cm (2.30 ft) length

CARRYING CASE 9390
Plastic type

HIGH-VOLTAGE PROBE 9017
Up to 30kV DC, 1.4 m (4.59 ft) length, not CE marked

For Maintenance Service (20 kΩ/V)

MULTI TESTER 3008



Not CE Marked

Basic specifications (Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

DC Voltage range	6/30/60/300/600V (20 kΩ/V) Accuracy: ±2.5 % f.s.
AC Voltage range	6/30/150/300/600 V (10 kΩ/V) Accuracy: ±2.5 % f.s. , Average rectifier effective value
Resistance range	0 to 10 kΩ (center scale 100 Ω), R × 1, R × 10, R × 100 Accuracy: ±3 % of scale length
Power supply	For resistance measurement range, R6P (AA) × 2 batteries
Safety considerations	Circuit: Fuse-protected, internal circuit protection using the 10Ω resistance Meter: Diode-protected
Dimensions and mass	94 mm (3.70 in)W × 134 mm (5.28 in)H × 56 mm (2.20 in)D, 350 g (12.3 oz)
Accessories	Test lead 9060 × 1, Spare fuse × 1, R6P (AA) manganese battery × 2, Instruction manual × 1, Carrying case × 1

- Supply current limiting resistance of 10 Ω restricts short circuit current
- High-power fuse protects up to 50,000 A
- Drop proof design withstands dropping onto a concrete floor from a height of 1 meter

Order Code: 3008

Bundled Accessories

TEST LEAD 9060
85 cm (2.79 ft) length