HIOKI

Even if you mistakenly

measure voltage using the resistance range

Erroneous circuit-breaker activation

Arcing and sparks

Prevent Hazards

DT4223 **DT4224**

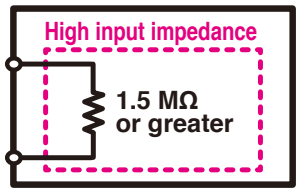
It's extremely dangerous to measure a commercial power supply with an instrument set to the resistance range (used to measure continuity, capacitance, and diodes). Doing so can cause electrical equipment to stop operating due to tripped circuit breakers or result in arcing. Hioki's new Digital Multimeter DT4223/DT4224 prevents potential hazards that can be caused by erroneous instrument operation with a new, one-of-a-kind design.

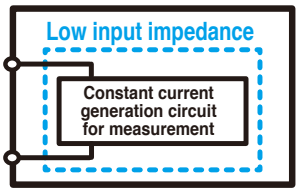
World's first! Avoid hazards with Hioki's proprietary non-circuit-breaker-tripping design

Conventional measurement

Voltage range measurement circuit

Resistance range measurement circuit



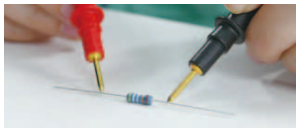


Switch to resistance range ▶ Switch measurement circuit

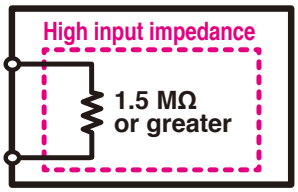
Because changing the measurement range also changes the measurement circuit, mistakenly inputting voltage with the instrument set to the resistance range will cause a large current to flow to the device, leading to hazards such as tripped circuit breakers and arcing.

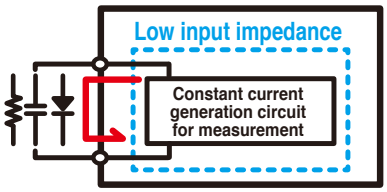
Measuring with Hioki's non-circuit-breaker-tripping design

Resistance range measurement circuit



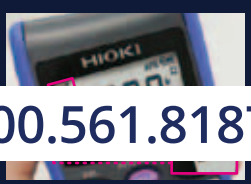
Input-based switching of the measurement circuit





Switch to resistance range ▶ Detect input ▶ Switch measurement circuit

The measurement circuit is switched after the instrument detects resistance, continuity, capacitance, or diode input. Even if you mistakenly input voltage with the instrument set to the resistance range, the high input impedance will limit the current flowing to the instrument to 1.5 mA or less to prevent potential hazards.



Detection results are indicated with a LoZ icon so that you can check which measurement circuit is being used.

which measurement circuit has been selected.

Warning function notifies you of incorrect input.

instrument is set to the resistance range.

New features for greater ease of use

-10°C to 65°C operating temperature range

The instrument can now be used in a greater range of environments, including at subzero temperatures and on scorching hot summer days.

Auto hold for easy checking of the display

The display value is automatically held once measured values stabilize. By letting you check measured values without the need to press a button, this feature is useful in settings where your hands are otherwise occupied.

Visual warning function

A red backlight warns you of excessive voltage input, facilitating visual confirmation in noisy settings.

Specifications

(Typical ranges are indicated; may not reflect maximum or minimum measurable signal)

Measurement items	DT4223	DT4224
DC voltage	600.0 mV to 600.0 V	600.0 mV to 600.0 V
AC voltage	6.000 V to 600.0 V	6.000 V to 600.0 V
Resistance	600.0 Ω to 60.00 MΩ	600.0 Ω to 60.00 MΩ
Capacitance	n/a	1.000 µF to 10.00 mF
Frequency	99.99 Hz to 9.999 kHz	99.99 Hz to 9.999 kHz
Continuity check	Yes	Yes
Diode check	n/a	Yes
Voltage detection	Yes	n/a
AUTO AC/DCV	Yes	n/a

Basic Characteristics	DT4223 / DT4224
Display count	6000
DCV basic accuracy	0.5 %rdg. ±5 dgt.
True RMS	Yes
Safety standard categories	CAT III 600V / CAT IV 300V

Additional Functions	DT4223	DT4224
Back light	Yes	Yes
Drop proof	Yes	Yes

Pocket models
DT4221 / DT4222

Standard models
DT4252 / DT4253 / DT4254 / DT4255 / DT4256

High-end models
DT4281 / DT4282

HIOKI
HIOKI E.E. CORPORATION

All information correct as of June 23, 2016. All specifications are subject to change without notice. Chirasi_DT4223_24E1-66E Printed in Japan

HIOKI

DIGITAL MULTIMETER DT4200 Series

NEW

DT 4200 SERIES

MADE IN JAPAN

Defy conventional wisdom for achieving testing safety with

Hazard 1

Mistakenly tripped circuit breakers and arcs due to careless input of voltage to the resistance range can be extremely hazardous.

Erroneous circuit-breaker activation

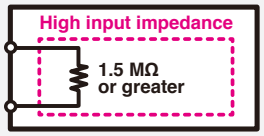
Arcing and sparks

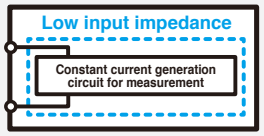
The DT4223 and DT4224 feature a new proprietary function that prevents accidents resulting from breakers that mistakenly trip due to incorrect input

Conventional digital multimeters

Voltage range measurement circuit

Resistance range measurement circuit





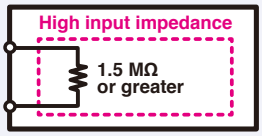
Switch to resistance range ▶ Switch measurement circuit

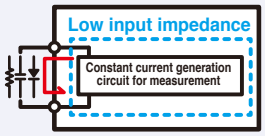
Because changing the measurement range also changes the measurement circuit, mistakenly inputting voltage with the instrument set

DT4223 / DT4224 Digital Multimeter

Resistance range measurement circuit

Input-based switching of the measurement circuit





Switch to resistance range ▶ Detect input ▶ Switch measurement circuit

The measurement circuit is switched after the instrument detects resistance, continuity, capacitance, or diode input. Even if you mistakenly

Safe testers that protect workers from dangerous accidents

Engineered based on extensive customer feedback,
the Hioki Digital Multimeter DT4200 series delivers the design
and quality needed in order to ensure safety in field measurement.

Hazard 2 **Prevent unavoidable debris from shorting the measurement target and causing an accident.**

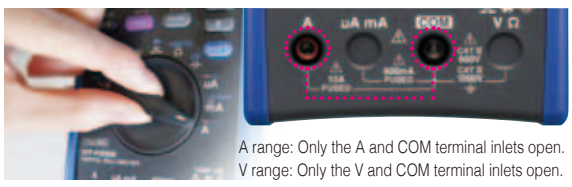
The DT4255's voltage input terminals incorporate a protective fuse so that contamination of the instrument's internal components with iron powder or other particulate matter will not result in an internal short-circuit. The fuse can be replaced easily on site.

Hazard 3 **Continued high input may result in major accidents such as fire.**

To prevent an accident, a warning function immediately notifies the operator if the DMM receives excessively high input.

*Red screen available on high-end models and DT4223/DT4224 only.

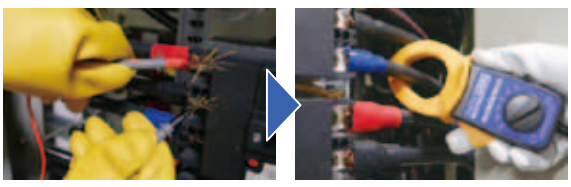
Hazard 4 **Wrong insertion may lead to short-circuits.**



A range: Only the A and COM terminal inlets open.
V range: Only the V and COM terminal inlets open.

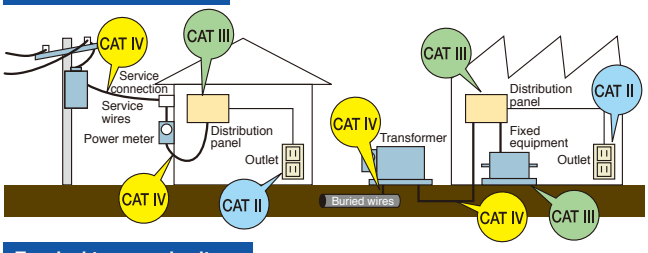
The DT4281 and DT4282 use terminal shutters to keep probes from being inserted into the wrong inlets. The shutters block whichever terminal is not being used based

Hazard 5 **Mistakenly measuring voltage using the current range may lead to a short-circuit.**

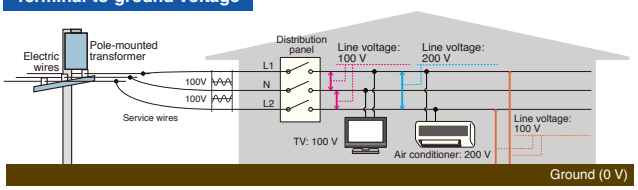


The DT4281, DT4253, DT4255, and DT4256 eliminate the root cause of such accidents by providing clamp-on sensor-based current measurement functionality instead of using

Measurement categories



Terminal-to-ground voltage



Safe measurement requires use of an instrument that suits the measurement location.

To ensure operators' ability to use measuring instruments safely, IEC 61010 classifies the locations in which instruments are used into a series of safety-based measurement categories (ranging from CAT II to CAT IV). Using an instrument that does not satisfy the required safety level can lead to an electrical accident.

CAT IV **600 V**

Terminal-to-ground voltage

Measurement category suited to the location of use

High-end models	**CAT III 1000 V / CAT IV 600 V**
Standard models	**CAT III 1000 V / CAT IV 600 V**
Pocket models	**CAT III 600 V / CAT IV 300 V**

Designed and manufactured in Japan to ensure high quality and guaranteed with a 3-year warranty for peace of mind

All development, design, and manufacturing processes for almost all Hioki digital multimeters are carried out at our Head Office in Nagano Prefecture. Some of the industry's

3 years

Field-Proven Strength and Usability
DT4200 series

Robust design capable of withstanding a drop from a height of 1 m onto concrete

Drop tester

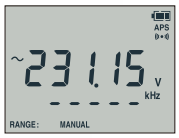
To test our products' ability to withstand mechanical shock, we repeatedly drop them from a height of at least 1 m until they break. This drop-testing regime leads to more robust products by fostering a series of design improvements.

DROP PROOF

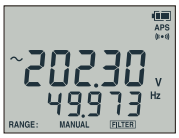
Preventing instrument failure by keeping out dust

If dust gets into the instrument's enclosure, it can cause the device to fail. Since dust can get into the instrument especially easily through the gap around the rotary switch, the DT4200 series incorporates a dust-proof part known as an O-ring where the rotary switch is mounted to improve the device's dust resistance.

Fast, accurate measurement of the output voltage on the secondary side of an inverter



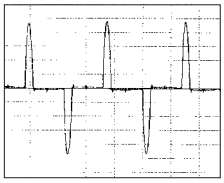
With low-pass filter off



With low-pass filter on

The DT series can accurately measure the voltage on the secondary side of an inverter, just like a power meter. Its low-pass filter rejects harmonic components so that the fundamental wave can be isolated and accurately measured.

True RMS measurement for accurate measurement of even distorted current waveforms



Average-value method measured value

True RMS method measured value

Current waveforms are often distorted, causing the average-value and true RMS measurement methods to yield different results. To obtain accurate readings, RMS measurement is indispensable.

Outstanding viewing angle so display is easy to read at an angle or even in a dim location

The DT4200 series features a display with a wide viewing angle and a backlight function so that it's easy to read, even when you can't view the screen from the front or when making measurements in a dim location.

Rotary switch that's easy to operate even when wearing gloves

The DT4200's rotary switch is designed to be easy to turn even when wearing thick work gloves, for example while working in hazardous measurement locations or harsh conditions.

Outstanding hands-free ease of use in the field when working with numerous measurement locations

Secure the instrument on the wall so that you don't have to hold it.

The display automatically stops once the measured value stabilizes.

Press the MEM key to save measured values in the instrument's internal memory.

It's hard to carry out work tasks smoothly when you're juggling a measuring instrument, probes, recording paper, and other supplies. Field concerns like these are resolved by the DT4200's magnetic strap, auto-hold function, and ability to save results in its internal memory. These capabilities boost work efficiency and help reduce work times.

*The auto-hold function is available exclusively in high-end, standard models and DT4223,DT4224. The ability to save results in internal memory is available exclusively in high-end models.

Extensive selection of probe tips that you can choose based on the measurement location, improving ease of measurement

With screw terminals

In deep-set locations

For clamping around the

With the DT4200, you can choose the probe type that best suits your measurement location, making it possible to measure in areas that can't be reached with conventional probes and busbars that you wish to clamp between probes.

*Compatible probe tips vary with the DMM model. Please see page 16. The optional Connection Cable L4930 is

High-end models

Featuring high accuracy, extensive additional functionality, and a broad range of measurement parameters

DCV typical accuracy: ±0.025% rdg. ±2 dgt.
Measurement categories: CAT III (1000 V) / CAT IV (600 V)

For electrical work in the field
DT4281

Designed for maximum safety in the field when measuring current with clamp-on sensors.

DC voltage	60.000 mV to 1000.0 V
AC voltage	60.000 mV to 1000.0 V
DC + AC voltage	6.000 V to 1000.0 V
DC current	600.00 µA to 600.00 mA
AC current	600.00 µA to 600.00 mA
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic detection	Voltage detection function

For laboratory and research use
DT4282

Designed for use in laboratories and R&D applications where you wish to measure a wide variety of parameters.

DC voltage	60.000 mV to 1000.0 V
AC voltage	60.000 mV to 1000.0 V
DC + AC voltage	6.000 V to 1000.0 V
DC current	600.00 µA to 10.000 A
AC current	600.00 µA to 10.000 A
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic detection	Voltage detection function

The range figures given indicate the instrument's measurement ranges (not the range of measurable values).

Applications

Magnetic strap frees both hands for work

Using the magnetic strap (option)

By using the magnetic strap to secure the instrument to the wall, you can free both hands so that you can more easily record measured values, significantly boosting work efficiency.

Automatically hold display values and save results with one touch to the DMM's internal memory

The display is automatically held once the measured value stabilizes. You can save measurement results to the instrument's internal memory simply by pressing the MEM key, making it easy to read and record values during inspection work.

Manage measurement data on a computer

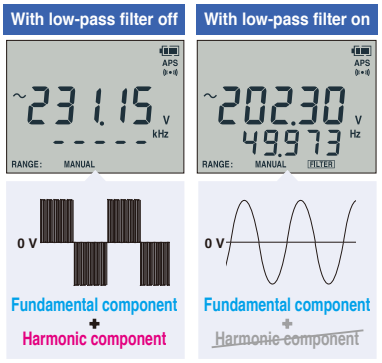
Using the Communication Package DT4900-01 (option)

Measurement results can be downloaded to a computer via a USB connection. Once downloaded, you can save them as a file (text format) or display them as a graph using the desired interval. Results can also be sent in real time while measurement is ongoing.

*The computer and multimeter are electrically isolated by means of optical communications so that data can be sent with peace of mind.

Measure output voltage on the secondary sides of inverters

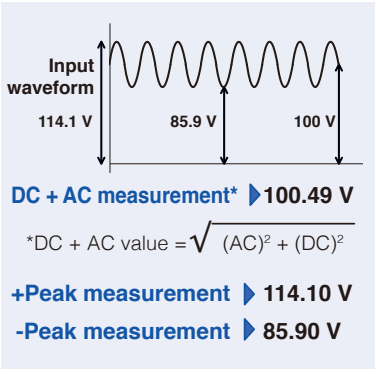
Accurately measure the fundamental wave alone by eliminating harmonic components with the DMM's low-pass filter function.



Ripple voltage confirmation of DC charging systems

Peak value measurement / DC + AC voltage measurement

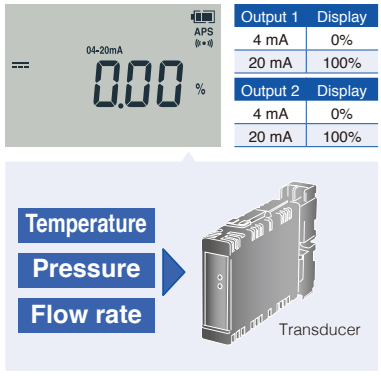
High-end models can detect ripple voltage with a superposed DC signal.



Percentage display for instrumentation signal measurement

4 to 20 mA / 0 to 20 mA percentage-equivalent display

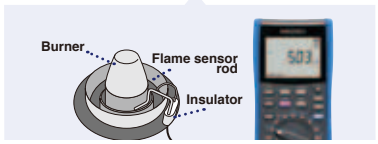
You can check percentage-equivalent values.

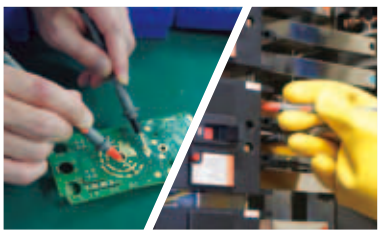


Measure very low currents used by gas-burning devices

DC µA range

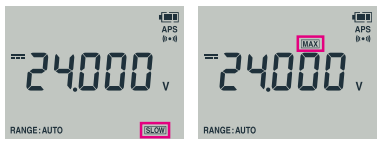
High-end models provide a DC 600.00 µA range for measuring burner flame currents.





Intuitive notification of continuity check results and excessively high input with a red screen backlight and beep

High-end models notify the operator of continuity check results and excessively high input with a red screen backlight and beep, making it possible to check measurement results intuitively.

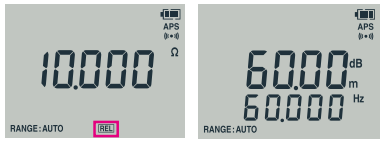


Display refresh rate

Change the display refresh speed to stabilize the display when performing measurement characterized by a high level of variability.

Maximum/minimum value display

Check the maximum and minimum measured values shown on the display after pressing the MAX/MIN button.

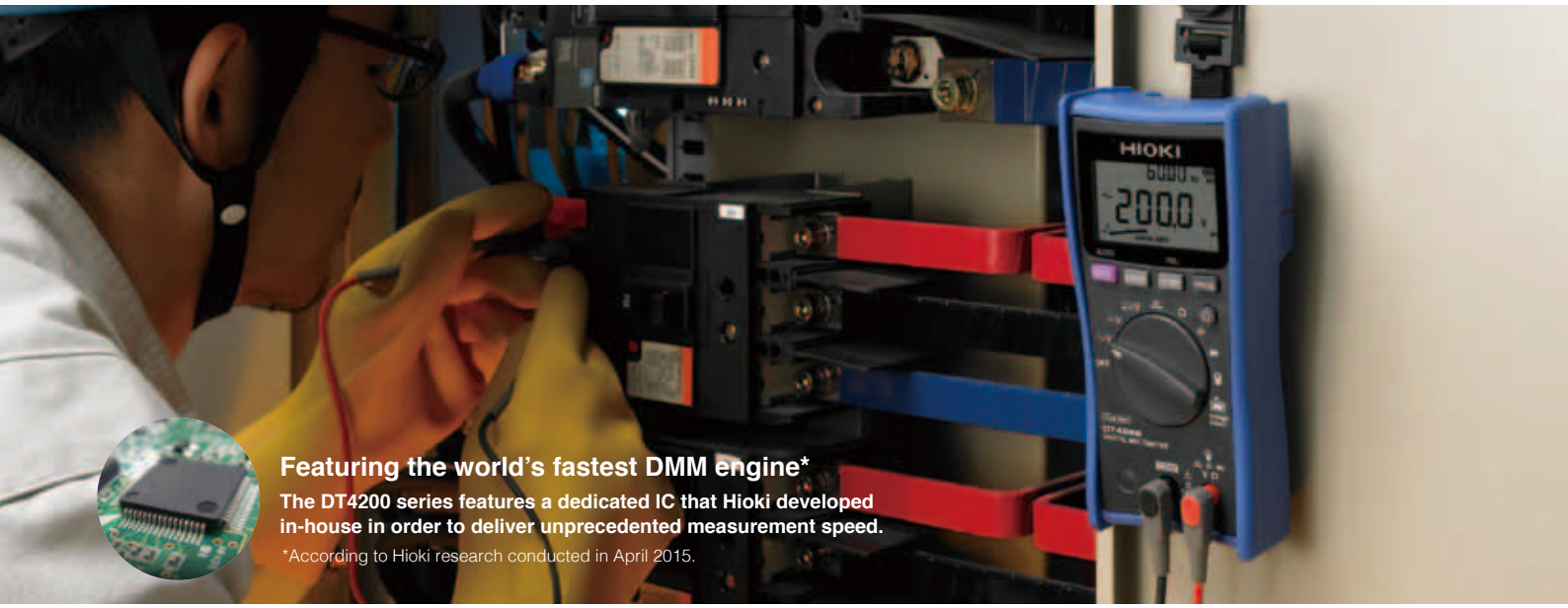


Relative display

View relative values using the display value

Decibel conversion

Convert the results of AC voltage measurement to a



Featuring the world's fastest DMM engine*

The DT4200 series features a dedicated IC that Hioki developed in-house in order to deliver unprecedented measurement speed.

*According to Hioki research conducted in April 2015.

Standard models

Introducing a line of field-optimized instruments that can be chosen based on the application at hand

DCV typical accuracy: ±0.3% rdg. ±3 dgt.
Measurement categories: CAT III (1000 V) / CAT IV (600 V)

For laboratory and research use

DT4252

For laboratories and R&D applications where you wish to measure a wide variety of parameters.

DC voltage	600.0 mV to 1000 V
AC voltage	6.000 V to 1000 V
DC + AC voltage	DT4281/4282 only
DC current	6.000 A to 10.00 A
AC current	6.000 A to 10.00 A
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic	Voltage detection

For instrumentation 4-20mA

DT4253

Measure instrumentation, air-conditioning equipment, and gas-burning devices.

DC voltage	600.0 mV to 1000 V
AC voltage	6.000 V to 1000 V
DC + AC voltage	DT4281/4282 only
DC current	60.00 µA to 60.00 mA
AC current	n/a
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic	Voltage detection

Voltage measurement only model

DT4254

Measure photovoltaic modules and other high-voltage targets at up to 1700 V DC.

DC voltage	600.0 mV to 1500 V
AC voltage	6.000 V to 1000 V
DC + AC voltage	DT4281/4282 only
DC current	n/a
AC current	n/a
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic	Voltage detection

For electrical work in the field

DT4255

Designed for maximum safety with voltage measurement terminals that are protected by a fuse.

DC voltage	600.0 mV to 1000 V
AC voltage	6.000 V to 1000 V
DC + AC voltage	DT4281/4282 only
DC current	n/a
AC current	n/a
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic	Voltage detection

Multifunction model

DT4256

Delivers maximum functionality for use in a wide range of settings.

DC voltage	600.0 mV to 1000 V
AC voltage	6.000 V to 1000 V
DC + AC voltage	DT4281/4282 only
DC current	60.00 mA to 10.00 A
AC current	600.0 mA to 10.00 A
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance
AC/DC automatic	Voltage detection

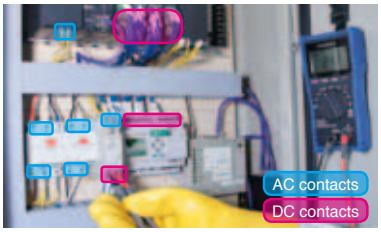
*The range figures given indicate the instrument's measurement ranges (not the range of measurable values).

Applications

Magnetic strap and auto-hold function free up hands for easier work

Using the magnetic strap (option)

By using the magnetic strap to secure the instrument to the wall and the auto-hold function to automatically stop display values, you can free your hands, making it easier to record measured values and significantly boosting work efficiency.



Automatic switching of measurement in locations where AC and DC voltages are mixed

AC/DC voltage automatic detection (DT4253/54/55/56 only)

When making measurements in locations with both AC and DC voltages, automatic switching eliminates the need to operate the rotary switch and helps prevent measurement mistakes.

Use a computer in the field to save and check measured values

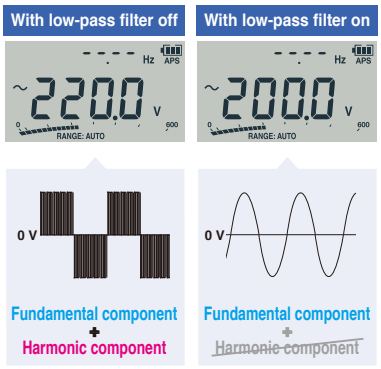
With the Communication Package DT4900-01 (option)

Measured values can be displayed in real time on a computer, and displayed values can be saved to a file (text format) or graphed at a user-specified interval.

*The computer and multimeter are electrically isolated by means of optical communications so that data can be sent with peace of mind.

Measure output voltage on the secondary sides of inverters

Accurately measure the fundamental wave by eliminating harmonic components with the DMM's low-pass filter function.



Test no-load voltage at megasolar installations

1700 V DC measurement (DT4254 only)

Model DT4254 can measure DC voltages up to 1700 V, enabling you to make no-load voltage inspections of megasolar installations.

Polarity detection and notification

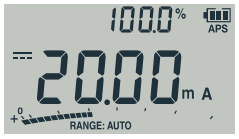
Certain standard models can detect a load voltage in excess of -10 V and notify the operator with a red LED and beep.

*DT4254/4255/4256 only.

Percentage display for instrumentation signal measurement

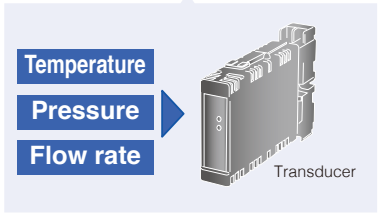
4 to 20 mA percentage-equivalent display (DT4253 only)

The standard models' dual display function lets you to simultaneously check measured values and percentage-equivalent values at a glance.



Output	Display
4 mA	0%
20 mA	100%

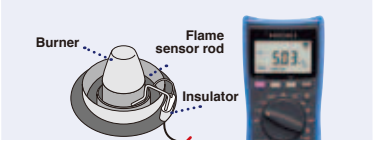
Values are converted to percentages and displayed.

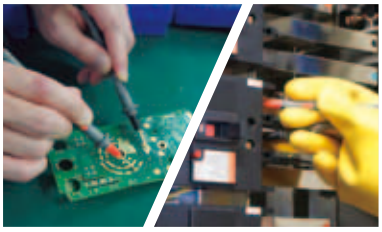


Measure very low currents used by gas-burning devices

DC µA range (DT4253 only)

Model DT4253 provides a DC 60.00 µA range for measuring burner flame currents.





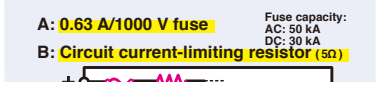
Intuitive notification of continuity check results and excessively high input with a red LED and beep

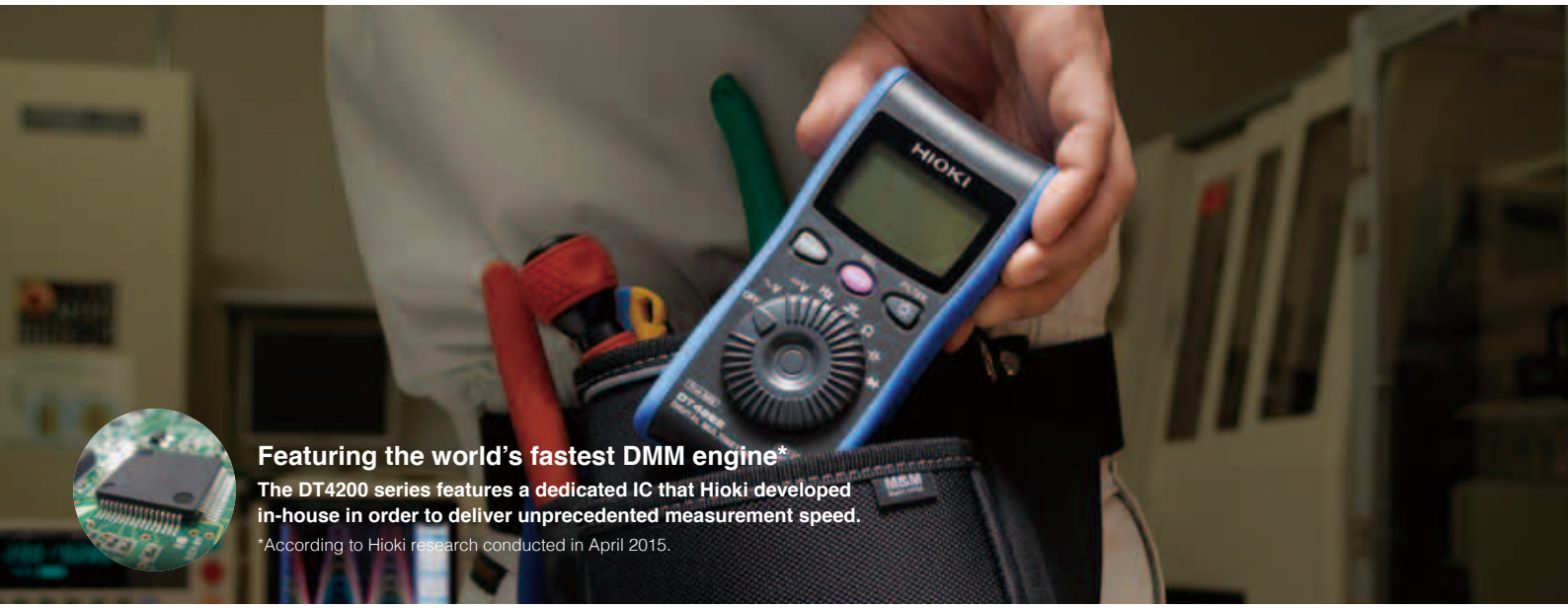
Standard models notify the operator of continuity check results and excessively high input with a red LED and beep, making it possible to check measurement results intuitively.

Thorough prevention of short-circuit accidents

Voltage measurement terminal fuse (DT4255 only)

When using the resistance measurement function, a protective circuit functions to prevent a short-circuit accident in the event of erroneous operation such improperly supplying voltage input. Even if a short-circuit occurs inside the tester, a current-limiting resistor will limit any short-circuit current while a fast-blow fuse quickly and reliably disconnects the tester circuitry, preventing a short-circuit accident.





Featuring the world's fastest DMM engine*

The DT4200 series features a dedicated IC that Hioki developed in-house in order to deliver unprecedented measurement speed.

*According to Hioki research conducted in April 2015.

Pocket models

Featuring a compact body for ergonomic hold and a reliable, safe design

DCV typical accuracy: ±0.5% rdg. ±5 dgt.
Measurement categories: CAT III (600 V) / CAT IV (300 V)

For electrical work in the field
DT4221

Delivering maximum field safety for workers whose principal use is voltage measurement.

DC voltage	600.0 mV to 600.0 V
AC voltage	6.000 V to 600.0 V
DC + AC voltage	DT4281/4282 only
DC current	n/a
AC current	n/a
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance

For multiple applications
DT4222

For laboratories and R&D applications to measure a wide variety of parameters.

DC voltage	600.0 mV to 600.0 V
AC voltage	6.000 V to 600.0 V
DC + AC voltage	DT4281/4282 only
DC current	n/a
AC current	n/a
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance

Circuit breaker false trip prevention built-in

For electrical work in the field
DT4223

Delivering maximum field safety for workers whose principal use is voltage measurement.

DC voltage	600.0 mV to 600.0 V
AC voltage	6.000 V to 600.0 V
DC + AC voltage	DT4281/4282 only
DC current	n/a
AC current	n/a
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance

For multiple applications
DT4224

For laboratories and R&D applications to measure a wide variety of parameters.

DC voltage	600.0 mV to 600.0 V
AC voltage	6.000 V to 600.0 V
DC + AC voltage	DT4281/4282 only
DC current	n/a
AC current	n/a
AC clamp-on measurement	Frequency
Resistance	Continuity check
Temperature	Diode test
Capacitance	Conductance

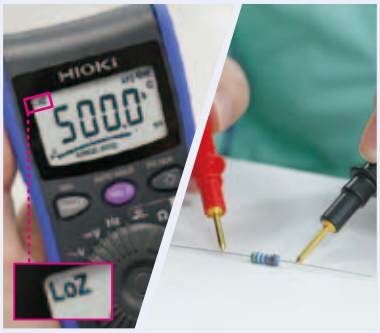
*The range figures given indicate the instrument's measurement ranges (not the range of measurable values).

Applications

New DT4223 and DT4224 feature circuit breaker false trip prevention

Prevent potential accidents during incorrect input

The measurement circuit switches only after detecting the appropriate signal. This way, even if you mistakenly input voltage, accidents due to tripped breakers or arcs will not happen. (see page 2)



LoZ icon identifies switched measurement circuit

When the instrument detects resistance, continuity, capacitance, or diode input, the LoZ icon is shown on the display, allowing you to identify at a glance which measurement circuit has been selected.

Warning function notifies you of incorrect input.

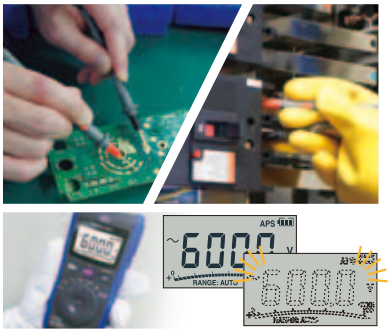
The instrument's display flashes red to warn you when voltage has been mistakenly input while the instrument is set to the resistance range.

Compact and lightweight design for outstanding ease of use

The small form factor fits in your hand perfectly and is easily stowable, making it convenient to transport to and from the field and boosting work efficiency. The lightweight design also ensures that pocket models are easy to work with.

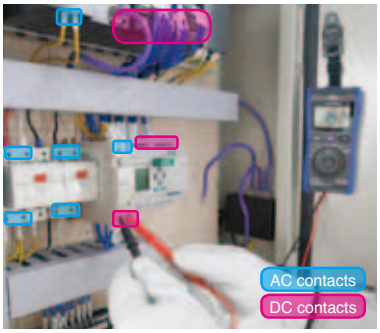
Safe enough for measuring voltage at distribution panels and service wires

Despite a compact body, the pocket models can be used to measure voltage at distribution panels and service wires in CAT III (600 V)/CAT IV (300 V) situations.



Intuitive notification of excessively high input with flashing screen

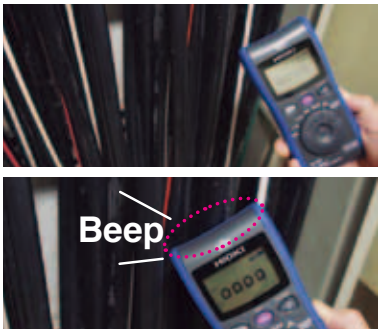
The pocket digital multimeters notify the operator of excessively high input by flashing the screen, making it possible to check measurement results intuitively.



Automatic switching of measurement in locations where AC and DC voltages are mixed

AC/DC voltage automatic detection (DT4221, DT4223 only)

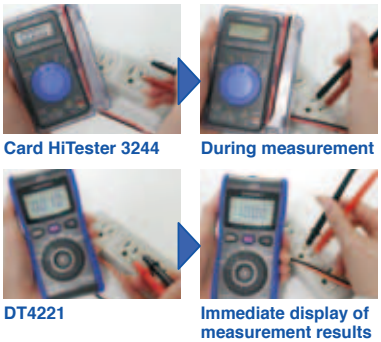
When making measurements in locations with both AC and DC voltages, automatic switching eliminates the need to operate the rotary switch and helps prevent measurement mistakes.



Detect voltage simply by holding the instrument against a wire

Voltage detection function (DT4221, DT4223 only)

Easily detect voltage with the built-in sensor. Results are communicated with a beep.



Card HiTester 3244 | During measurement

DT4221 | Immediate display of measurement results

Fast measurement for outstanding ease of use

Measured values are displayed quickly to facilitate quick testing. The difference is clear when you compare the measurement speed with that of the Hioki Card HiTESTER 3244-60.

DT4200 Series Basic Comparison

	DT4281	DT4282	DT4252	DT4253	DT4254	DT4255	DT4256	DT4221	DT4222	DT4223	DT4224
Basic Characteristics											
True RMS	Yes		Yes					Yes			
DCV basic accuracy	±0.025 %rdg. ±2 dgt.		±0.3 %rdg. ±5 dgt.		±0.3 %rdg. ±3 dgt.			±0.5 %rdg. ±5 dgt.			
Measurement items (Typical ranges are indicated; may not reflect maximum or minimum measurable signal)											
DC voltage	60 mV to 1000 V		600 mV to 1000 V		600 mV to 1500 V	600 mV to 1000 V		600 mV to 600 V			
AC voltage	60 mV to 1000 V		6 V to 1000 V					6 V to 600 V			
DCV + ACV	6 V to 1000 V		n/a					n/a			
DCA current	600 µA to 600 mA	600 µA to 10 A	6 A to 10 A	60 µA to 60 mA	n/a		60 mA to 10 A	n/a			
ACA current	600 µA to 600 mA	600 µA to 10 A	6 A to 10 A	n/a			600 mA to 10 A	n/a			
AC clamp	10 A to 1000 A	n/a	n/a	10 A to 1000 A	n/a	10 A to 1000 A	10 A to 1000 A	n/a			
Resistance	60 Ω to 600 MΩ		600 Ω to 60 MΩ		n/a	600 Ω to 60 MΩ		n/a	600 Ω to 60 MΩ		
Temperature	-40°C to 800°C		n/a	-40°C to 400°C	n/a			n/a			
Capacitance	1 nF to 100 mF		1 µF to 10 mF		n/a	1 µF to 10 mF		n/a	1 µF to 10 mF	n/a	1 µF to 10 mF
Frequency	99 Hz to 500 kHz		99 Hz to 99 kHz					99 Hz to 9.9 kHz			
Continuity check	Yes		Yes		n/a	Yes		Yes			
Diode check	Yes		Yes		n/a	Yes		n/a	Yes	n/a	Yes
Conductance	n/a	Yes	n/a					n/a			
Voltage detection	n/a		n/a		Yes			Yes	n/a	Yes	n/a
Additional Functions											
AUTO AC/DCV	n/a		n/a	Yes				Yes	n/a	Yes	n/a
Peak measurement	DC/AC		n/a					n/a			
Low-pass filter	Analog filter Cut-off : 630 Hz		Digital filter Pass-band : 100Hz/500Hz					Digital filter Pass-band : 100Hz/500Hz			
Display update setting	Yes		n/a					n/a			
Hold display value	AUTO / MANUAL		AUTO / MANUAL					MANUAL	AUTO / MANUAL		
Max/Min value display	Yes		Yes					n/a			
Relative display	Yes		Yes					Yes			
Decibel conversion	Yes		n/a					n/a			
Percentage conversion display	Yes		n/a	Yes	n/a		n/a	n/a			
DC voltage polarity check	n/a		n/a		Yes			n/a			
Data storage											
Capacity	Max 400 data		n/a					n/a			
USB communication*1	Yes		Yes					n/a			
Operating time											
Continuous operating time	Approx. 100 hours*2		Approx. 130 hours					Approx. 40 hours	Approx. **35** hours		
Power supply	Alkaline (LR6) battery x4 / Manganese(R6P) battery x4		Alkaline (LR03) battery ×4					Alkaline (LR03) battery ×1			
Display											
Back light	Yes		Yes					Yes			
Dual display	Yes		Yes					n/a			
Bar graph display	n/a		Yes					Yes			
Safety											
Safety standard categories	CATIII1000 V/ CATIV600 V		CATIII1000 V/ CATIV600 V					CATIII600 V/ CATIV300 V			
Mis-insertion prevention shutters	Yes		n/a					n/a			
Circuit breaker false trip prevention	n/a		n/a					n/a	Yes		

*1. Requires optional DT4900-01 Communication Package

*2. When using four AA alkaline batteries

Glossary

Auto AC/DCV : Automatically detects and measures AC and DC voltage. I **Peak measurement** : After starting PEAK value measurement, check maximum and minimum instantaneous voltage and current values. I **Low-pass filter** : Cuts high frequency content to provide stable numerical values for measurement. I **Display update setting** : Reduces the display value update rate to stabilize measurements. I **Hold display value** : Manual: press the button to freeze the display. Auto: the display freezes automatically when the measurement value is stable. I **Max/Min value display** : Pressing the MAX/MIN button displays the maximum and minimum displayed

signals converted to 0 to 100% values. For the DT4253, only 4 to 20 mA.

High-End DT4281/DT4282

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

DC Voltage

Range	Accuracy	Input Impedance
60.000 mV	±0.2 %rdg. ±25 dgt.	1 GΩ or more //100 pF or less
600.00 mV	±0.025 %rdg. ±5 dgt.	
6.0000 V	±0.025 %rdg. ±2 dgt.	11.0 MΩ± 2% //100 pF or less
60.000 V		10.3 MΩ±2% //100 pF or less
600.00 V	±0.03 %rdg. ±2 dgt.	10.2 MΩ± 2% //100 pF or less
1000.0 V		

AC Voltage

Range	Accuracy					
	20 to 45 Hz	45 to 65 Hz	65 to 1 kHz	1 k to 10 kHz	10 k to 20 kHz	20 k to 100 kHz
60.000 mV	±1.3 %rdg. ±60 dgt.	±0.4 %rdg. ±40 dgt.	±0.6 %rdg. ±40 dgt.	±0.9 %rdg. ±40 dgt.	±1.5 %rdg. ±40 dgt.	±20 %rdg. ±80 dgt.
600.00 mV						±8 %rdg. ±80 dgt.
6.0000 V	±1 %rdg. ±60 dgt.	±0.2 %rdg. ±25 dgt.	±0.3 %rdg. ±25 dgt.	±0.4 %rdg. ±25 dgt.	±0.7 %rdg. ±40 dgt.	±3.5 %rdg. ±40 dgt.
60.000 V	Undefined					
600.00 V					Undefined	Undefined
1000.0 V						

DCV + ACV Measurement

Range	Accuracy					
	20 to 45 Hz	45 to 65 Hz	65 to 1 kHz	1 k to 10 kHz	10 k to 20 kHz	20 k to 100 kHz
6.0000 V	±1.2 %rdg. ±65 dgt.	±0.3 %rdg. ±30 dgt.	±0.4 %rdg. ±30 dgt.	±0.4 %rdg. ±30 dgt.	±1.5 %rdg. ±45 dgt.	±3.5 %rdg. ±125 dgt.
60.000 V	Undefined					
600.00 V					Undefined	Undefined
1000.0 V				±0.4 %rdg. ±45 dgt.		

Input impedance	1MΩ ± 4 %//100pF or less
Crest factor	3 or less (1.5 or less for the 1000.0V range)
Accuracy specification range	5% or more of each range
	With the filter ON, accuracy is defined only for frequencies 100Hz or less. Furthermore, 2% rdg. is added

DCA Measurement

*1 : DT4282 only

Range	Accuracy / Display update : SLOW	Accuracy / Display update : NORMAL	Shunt Resistance
600.00 µA	±0.05 %rdg. ±5 dgt.	±0.05 %rdg. ±25 dgt.	101 Ω
6000.0 µA		±0.05 %rdg. ±5 dgt.	
60.000 mA		±0.05 %rdg. ±25 dgt.	1 Ω
600.00 mA	±0.15 %rdg. ±5 dgt.	±0.15 %rdg. ±5 dgt.	
6.0000 A*1	±0.2 %rdg. ±5 dgt.	±0.2 %rdg. ±25 dgt.	10m Ω
10.000 A*1		±0.2 %rdg. ±5 dgt.	

ACA Measurement

*1 : DT4282 only

Range	Accuracy				
	20 to 45 Hz	45 to 65 Hz	65 to 1 kHz	1 k to 10 kHz	10 k to 20 kHz
600.00 µA	±1.0 %rdg. ±20 dgt.	±0.6 %rdg. ±20 dgt.	±0.6 %rdg. ±20 dgt.	±2 %rdg. ±20 dgt.	±4 %rdg. ±20 dgt.
6000.0 µA	±1.0 %rdg. ±5 dgt.	±0.6 %rdg. ±5 dgt.	±0.6 %rdg. ±5 dgt.	±2 %rdg. ±5 dgt.	±4 %rdg. ±5 dgt.
60.000 mA	±1.0 %rdg. ±20 dgt.	±0.6 %rdg. ±20 dgt.	±0.6 %rdg. ±20 dgt.	±1 %rdg. ±20 dgt.	±2 %rdg. ±20 dgt.
600.00 mA	±1.0 %rdg. ±5 dgt.	±0.6 %rdg. ±5 dgt.	±0.6 %rdg. ±5 dgt.	±1.5 %rdg. ±10 dgt.	Undefined
6.0000 A*1	Undefined	±0.8 %rdg. ±20 dgt.	±0.8 %rdg. ±20 dgt.	Undefined	Undefined
10.000 A*1	Undefined	±0.8 %rdg. ±5 dgt.	±0.8 %rdg. ±5 dgt.	Undefined	Undefined

Shunt resistance	µA Range 101Ω/ mA Range 1Ω/ A Range 10mΩ
Crest factor	3 or less (Note that it applies to 1/2 of the range.)
Accuracy specification range	Accuracy is not defined for measurements below 5% of range

Continuity Check

Range	Accuracy	Measurement Current	Open-terminal Voltage
600.0 Ω	±0.5 %rdg. ±5 dgt.	640 µA ±10%	DC2.5 V or less

Continuity threshold	20Ω (default) /50Ω/ 100Ω/ 500Ω

Diode Check

Range	Accuracy	Measurement Current	Open-terminal Voltage
3.600 V	±0.1 %rdg. ±5 dgt.	1.2 mA or less	DC4.5 V or less

Forward threshold	0.15V/ 0.5V (default)/1V/ 1.5V/ 2V/ 2.5V/ 3V
	If the reading is lower than the threshold during the forward connection, a buzzer sounds and the red backlight turns on.

AC Clamp (AC Current) DT4281 only

Range	Accuracy	
	40 to 65 Hz	65 to 1 kHz
10.00 A	±0.6 %rdg. ±2 dgt.	±0.9 %rdg. ±2 dgt.
20.00 A	±0.6 %rdg. ±4 dgt.	±0.9 %rdg. ±4 dgt.
50.00 A	±0.6 %rdg. ±10 dgt.	±0.9 %rdg. ±10 dgt.
100.0 A	±0.6 %rdg. ±2 dgt.	±0.9 %rdg. ±2 dgt.
200.0 A	±0.6 %rdg. ±4 dgt.	±0.9 %rdg. ±4 dgt.
500.0 A	±0.6 %rdg. ±10 dgt.	±0.9 %rdg. ±10 dgt.
1000 A	±0.6 %rdg. ±2 dgt.	±0.9 %rdg. ±2 dgt.

The optional 9010-50, 9018-50, or 9132-50 CLAMP ON PROBE is used.
Accuracy does not include the error of the clamp-on probe.

Crest factor	3 or less

Accuracy is not defined for measurements below 15% of range

Resistance Measurement

Range	Accuracy	Measurement Current	Open-terminal Voltage
60.000 Ω	±0.3 %rdg. ±20 dgt.	640 µA ±10%	DC2.5 V or less
600.00 Ω	±0.03 %rdg. ±10 dgt.		
6.0000 kΩ	±0.03 %rdg. ±2 dgt.	96 µA ±10%	
60.000 kΩ		9.3 µA ±10%	
600.00 kΩ		0.96 µA ±10%	
6.0000 MΩ	±0.15 %rdg. ±4 dgt.	96 nA ±10%	
60.00 MΩ	±1.5 %rdg. ±10 dgt.		
600.0 MΩ	±3.0 %rdg. ±20 dgt.		
	±8.0 %rdg. ±20 dgt.		

Conductance (nS) DT4282 only

Range	Accuracy	Measurement Current	Open-circuit Voltage
600.00 nS	±1.5 %rdg. ±10 dgt.	96 nA ±10%	DC2.5 V or less

Accuracy is defined for humidity 60% RH or less. Accuracy is defined for the range 20nS or more. In the case of 300 nS or more, ±20 dgt. is added

Capacitance Measurement

Range	Accuracy	Measurement Current	Open-circuit Voltage
1.000 nF	±1 %rdg. ±20 dgt.	32 µA ±10%	DC2.5 V or less
10.00 nF	±1 %rdg. ±5 dgt.		
100.0 nF			
1.000 µF			
10.00 µF	±2 %rdg. ±5 dgt.	680 µA ±20%	DC3.1 V or less
100.0 µF			
1.000 mF			DC2.1 V or less
10.00 mF			
100.0 mF	±2 %rdg. ±20 dgt.		

Temperature

Thermocouple Type	Range	Accuracy
K	-40.0 to 800.0 °C (-40.0 to 1472.0°F)	±0.5 %rdg. ±3 °C (5.4°F)

The optional K Thermocouple DT4910 is used. Accuracy does not include the error of the K thermocouple

Frequency (For AC V, DC+AC V, AC µA, AC mA, AC A)

Range	Accuracy
99.999 Hz	±0.005 %rdg. +3 dgt.
999.99 Hz	
9.9999 kHz	
99.999 kHz	±0.005 %rdg. +3 dgt.
500.00 kHz	

Measurement range	0.5Hz or more ([----] is displayed when frequency is less than 0.5Hz)
Pulse width	1µs or more (DUTY ratio is 50%)

With the filter ON, accuracy is defined only for frequencies 100Hz or less. (For ACV, DC+ACV)

Peak Measurement (For AC V, DC V, DC+AC V, Clamp, DC µA, DC mA, DC A, AC µA, AC mA, AC A)

Main measurement	Signal width	Accuracy
DCV	4ms or more (single)	±2.0 %rdg. ±40 dgt.
	1ms or more (repeated)	±2.0 %rdg. ±100 dgt.
Other than DCV	1ms or more (single)	±2.0 %rdg. ±40 dgt.
	250µs or more (repeated)	±2.0 %rdg. ±100 dgt.

Decibel Conversion Measurement : Standard impedance (dBm)

4/8/16/32/50/75/93/110/125/135/150/200/250/300/500/600/800/900/1000/1200 Ω
(default : 600 Ω)

General Specifications

Durability	
Drop proof	YES
Operating temperature and humidity*1	-15°C to 55°C
Storage temperature and humidity*2	-30°C to 60°C
Applicable standards	Safety : EN61010, EMC: EN61326, Waterproof and dustproof: IP40

*1 : -15°C to 55°C (5°F to 131°F), Up to 40°C (104°F): at 80%RH or less (non-condensating),
40°C to 45°C (104°F to 113°F): at 60%RH or less (non-condensating),
45°C to 55°C (113°F to 131°F): at 50%RH or less (non-condensating)
*2 : 80%RH or less (non-condensating)

Safety	
Maximum rated voltage between input terminals and ground	CATIII1000 V/ CATIV600 V
Maximum rated voltage between terminals	Between the V and COM terminals : 1000 V DC/AC
Maximum rated current between terminals	Between the mA and COM terminals : 600mA DC/600mA AC Between the A and COM terminals : 10A DC/10A AC

Dimensions/Mass

93mm(W)×197mm(H)×53mm(D)(3.66"W 7.76"H 2.09"D Inch) / 650g (including batteries) (23 oz.)

Accessories

TEST LEAD L9207-10 , Instruction Manual, LR6 alkaline battery×4

Standard

DT4252/DT4253/DT4254/DT4255/DT4256

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

DC Voltage *1 : DT4252 only *2 : DT4254 only

Range	Accuracy	Input Impedance
High precision 600mV range*1	±0.2 %rdg. ±5 dgt.	10.2 MΩ ± 1.5 %
600.0 mV	±0.5 %rdg. ±5 dgt.	11.2 MΩ ± 2.0 %
6.000 V	±0.3 %rdg. ±3 dgt.	
60.00 V		10.3 MΩ ± 2.0 %
600.0 V		10.2 MΩ ± 1.5 %
1000 V		
1500 V*2	±0.3 %rdg. ±3 dgt.	

AC Voltage

Range	Accuracy		Input Impedance
	40 to 500 Hz	500 or more to 1kHz	
6.000V	±0.9 %rdg. ±3 dgt.	±1.8 %rdg. ±3 dgt.	11.2 MΩ ± 2.0%//100 pF or less
60.00V			10.3 MΩ ± 2.0%//100 or less
600.0V			10.2 MΩ ± 1.5%//100 or less
1000V			

AUTO V (Identification) DT4253, DT4254, DT4255, DT4256 only

Range	Accuracy		Input Impedance
	DC,40 to 500 Hz	500 or more to 1kHz	
600.0 V	±2.0 %rdg. ±3 dgt.	±4.0 %rdg. ±3 dgt.	900 kΩ ± 20% 1800 kΩ ± 20%*1

Crest factor	3 up to 4000 counts and reduces linearly to 2 at 6000 counts.
Accuracy specification range	For ACV, minimum 1% of range; add ±5 dgt. when measuring at or below 5% of range
	With the filter ON,the accuracy is not specified at 100Hz/500Hz or more

*1 : DT4254

DCA Measurement DT4252, DT4253, DT4256 only

Range	Accuracy	Input Impedance
● 60.00 µA	±0.8 %rdg. ±5 dgt.	1 kΩ±5 %
● 600.0 µA	±0.8 %rdg. ±5 dgt.	1 kΩ±5 %
● 6.000 mA	±0.8 %rdg. ±5 dgt.	15 Ω±40 %
● ● 60.00 mA	±0.8 %rdg. ±5 dgt.*1	15 Ω±40 %*1
● 600.0 mA	±0.9 %rdg. ±5 dgt.	35 mΩ±30 %
● ● 6.000 A	±0.9 %rdg. ±3 dgt.*2	35 mΩ±30 %
● ● 10.00 A	±0.9 %rdg. ±3 dgt.*2	35 mΩ±30 %

●: DT4252 ●: DT4253 ●: DT4256

*1 : DT4256 : ±1.8 %rdg. ±15 dgt. Input Impedance : 35 mΩ±30 %
*2 : DT4252 : ±0.9 %rdg. ±5 dgt.

ACA Measurement DT4252, DT4256 only

Range	Accuracy		Input Impedance
	40 to 500 Hz	500 or more to 1kHz	
600.0 mA*1	±1.4 %rdg. ±5 dgt.	±1.8 %rdg. ±5 dgt.	35 mΩ±30 %
6.000 A	±1.4 %rdg. ±3 dgt.	±1.8 %rdg. ±3 dgt.	35 mΩ±30 %
10.00 A	±1.4 %rdg. ±3 dgt.	±1.8 %rdg. ±3 dgt.	35 mΩ±30 %

Crest factor	3 up to 4000 counts and reduces linearly to 2 at 6000 counts.
Accuracy specification range	Minimum 1% of range; add ±5 dgt. when measuring 300 counts or less

*1 : DT4256 only

Electric Charge DT4254, DT4255, DT4256 only

Range	Detection voltage range	Detection Target Frequency

Continuity Check DT4252, DT4253, DT4255, DT4256 only

Range	Accuracy	Measurement Current	Open-terminal Voltage
600.0 Ω	±0.7 %rdg. ±5 dgt.	Approx.200 µA	DC1.8 V or less

Continuity ON threshold	Approx. 25Ω or less (continuous buzzer sound, red LED lights)
Continuity OFF threshold	Approx.245Ω or more

Diode Check DT4252, DT4253, DT4255, DT4256 only

Range	Accuracy	Measurement Current	Open-terminal Voltage
1.500 V	±0.5 %rdg. ±5 dgt.*1	Approx. 0.5 mA	DC5.0 V or less

Forward threshold	Buzzer sounds intermittently at 0.15V to 1.5V, the red LED flashes

*1 : DT4255 : ±0.5 %rdg. ±8 dgt.

AC Clamp (AC Current) DT4253, DT4255, DT4256 only

Range	Accuracy
	40 to 1 kHz
10.00 A	±0.9 %rdg. ±3 dgt.
20.00 A	
50.0 A	
100.0 A	
200.0 A	
500 A	
1000 A	

The optional 9010-50, 9018-50, or 9132-50 CLAMP ON PROBE is used.
Accuracy does not include the error of the clamp-on probe.

Crest factor	3 or less
Accuracy specification range	Minimum 1% of range; add ±5 dgt. when measuring at or below 5% of range

Resistance Measurement DT4252, DT4253, DT4255, DT4256 only

Range	Accuracy	Measurement Current	Open-terminal Voltage
600.0 Ω	±0.7 %rdg. ±5 dgt.	Approx. 200 µA	DC1.8 V or less
6.000 kΩ	±0.7 %rdg. ±3 dgt.*1	Approx. 100 µA	
60.00 kΩ		Approx. 10 µA	
600.0 kΩ		Approx. 1 µA	
6.000 MΩ	±0.9 %rdg. ±3 dgt.*1	Approx. 100 nA	
60.00 MΩ	±1.5 %rdg. ±3 dgt.*1	Approx. 10 nA	

Accuracy guarantee condition	After zero adjustment has been performed

*1 : DT4252/4253 : ±5dgt.

Capacitance Measurement DT4252 ,DT4253, DT4255, DT4256 only

Range	Accuracy	Measurement Current	Open-terminal Voltage
1.000 µF	±1.9 %rdg. ±5 dgt.	Approx. 10 n/100 n/1 µA	DC1.8 V or less
10.00 µF		Approx. 100 n/1 µ/10 µA	
100.0 µF		Approx. 1 µ/10 µ/100 µA	
1.000 mF		Approx. 10 µ/100 µ/200 µA	
10.00 mF	±5.0 %rdg. ±20 dgt.	Approx. 100 µ/200 µA	

Temperature DT4253 only

Thermocouple Type	Range	Accuracy
K	-40.0 to 400.0 °C	±0.5 %rdg. ±2 °C

The optional K Thermocouple DT4910 is used. Accuracy does not include the error of the K thermocouple

Frequency

Range	Accuracy
99.99 kHz (V AC Only)	

General Specifications

Durability	
Drop proof	YES
Operating temperature and humidity*1	-25°C to 65°C(DT4254/4255/4256) -10°C to 50°C(DT4252/4253)
Storage temperature and humidity*2	-30°C to 70°C(DT4254/4255/4256) -30°C to 60°C(DT4252/4253)
Applicable standards	Safety : EN61010, EMC: EN61326, Waterproof and dustproof: IP42

*1 : -10°C to 50°C(14°F to 122°F), Up to 40°C(104°F): at 80%RH or less(non-condensating),
40°C to 45°C (104°F to 113°F): at 60%RH or less(non-condensating),
45°C to 55°C (113°F to 131°F): at 50%RH or less (non-condensating)
*1 : Up to 40°C(104°F): at 80%RH or less(non-condensating),
40°C to 65°C (104°F to 149°F): reduces linearly 80%rh to 25%rh or less
*2 : 80%RH or less (non-condensating)

Safety	
Maximum rated voltage between input terminals and ground	CATIII1000 V/ CATIV600 V
Maximum rated voltage between terminals	Between the V and COM terminals : DC1000 V/ AC1000 V*1
Maximum rated current between terminals	Between the A and COM terminals : DC10 A/ AC10 A (DT4252/DT4256) Between the µA ,mAand COM terminals : DC60 mA (DT4253 only)

*1 : DT4254 ---- DC1700 V/AC1000 V

Dimensions/Mass
84mm(W)×174mm(H)×52mm(D)(3.31"W 6.85"H 2.05"D)
390g (including batteries and holster) (13.8 oz.)

Accessories

TEST LEAD L9207-10 / Instruction Manual / LR03 Alkaline battery×4
Holster (attached to the instrument, with a test lead holder)

Pocket DT4221/DT4222 /DT4223 /DT4224

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

DC Voltage		
Range	Accuracy	Input Impedance
600.0 mV	±0.5 %rdg. ±5 dgt.	11.2 MΩ ± 2.0 %
6.000 V		
60.00 V		10.3 MΩ ± 2.0 %
600.0 V		10.2 MΩ ± 1.5 %

AC Voltage			
Range	Accuracy		Input Impedance
	40 to 500Hz	500 or more to 1kHz	
6.000 V	±1.0 %rdg. ±3 dgt.	±2.5 %rdg. ±3 dgt.	11.2 MΩ ± 2.0%//100 pF or less
60.00 V		±2.0 %rdg. ±3 dgt.	10.3 MΩ ± 2.0 %//100 pF or less
600.0 V			10.2 MΩ ± 1.5 %//100 pF or less
Crest factor	3 up to 4000 counts and reduces linearly to 2 at 6000 counts.		
Accuracy specification range	For ACV, minimum 1% of range; add ±5 dgt. when measuring at or below 5% of range		
	With the filter ON,the accuracy is not specified in 100Hz/500Hz or more		

AUTO V (Identification) DT4221, DT4223 only			
Range	Accuracy		Input Impedance
	DC, 40 to 500 Hz	500 or more to 1kHz	
600.0 V	±2.0 %rdg. ±3 dgt.	±4.0 %rdg. ±3 dgt.	900 kΩ ± 20 %
Crest factor	3 up to 4000 counts and reduces linearly to 2 at 6000 counts.		
Accuracy specification range	For ACV, minimum 1% of range; add ±5 dgt. when measuring at or below 5% of range		
	With the filter ON,the accuracy is not specified in 100Hz/500Hz or more		

Electric Charge DT4221, DT4223 only	
Detection Voltage Range	Detection Target Frequency
AC80 V to AC600 V	50 Hz / 60 Hz

During voltage detection, a continuous buzzer sounds.

Continuity Check			
Range	Accuracy	Measurement Current	Open-terminal Voltage
600.0 Ω	±1.0 %rdg. ±5 dgt.	Approx. 200 µA	DC1.8 V or less (DT4221 / DT4222) DC2.0 V or less (DT4223 / DT4224)
Continuity ON threshold	Approx. 25Ω or less (continuous buzzer sound)		
Continuity OFF threshold	Approx.245Ω or more		

Diode Check DT4222, DT4224 only			
Range	Accuracy	Measurement Current	Open-terminal Voltage
1.500 V	±0.9 %rdg. ±5 dgt.	Approx.0.5 mA (DT4222) Approx.0.2 mA (DT4224)	DC2.5 V or less

Resistance Measurement DT4222, DT4223, DT4224 only			
Range	Accuracy	Measurement Current	Open-terminal Voltage
600.0 Ω	±0.9 %rdg. ±5 dgt.	Approx.200 µA	DC1.8 V or less (DT4222) DC2.0 V or less (DT4223 / DT4224)
6.000 kΩ		Approx.100 µA	
60.00 kΩ		Approx.10 µA	
600.0 kΩ		Approx.1 µA	
6.000 MΩ		Approx.100 nA	
60.00 MΩ	±1.5 %rdg. ±5 dgt.	Approx.10 nA	
Accuracy guarantee condition	After zero adjustment has been performed		

Capacitance Measurement DT4222, DT4224 only			
Range	Accuracy	Measurement Current	Open-terminal Voltage
1.000 µF	±1.9 %rdg. ±5 dgt.	Approx.10 n/100 n/1 µA	DC1.8 V or less (DT4222) DC2.0 V or less (DT4223 / DT4224)
10.00 µF		Approx.100 n/1 µ/10 µA	
100.0 µF		Approx.1 µ/10 µ/100 µA	
1.000 mF		Approx.10 µ/100 µ/200 µA	
10.00 mF	±5.0 %rdg. ±20 dgt.	Approx.100 µ/200 µA	

Frequency	
Range	Accuracy
99.99 Hz	±0.1 %rdg. +2 dgt.
999.9 Hz	
9.999 kHz	

General Specifications

Durability	
Drop proof	YES
Operating temperature and humidity*1	-10°C to 50°C (DT4221, DT4222) -10°C to 65°C (DT4223, DT4224)
Storage temperature and humidity*2	-30°C to 60°C (DT4221, DT4222) -30°C to 70°C (DT4223, DT4224)
Applicable standards	Safety : EN61010, EMC: EN61326, Waterproof and dustproof: IP42

*1 : -10°C to 50°C(14°F to 122°F), Up to 40°C(104°F): at 80%RH or less(non-condensating),
40°C to 45°C (104°F to 113°F): at 60%RH or less(non-condensating),
45°C to 65°C (113°F to 122°F): at 50%RH or less (non-condensating)
*2 : 80%RH or less (non-condensating)

Safety	
Maximum rated voltage between input terminals and ground	CAT Ⅲ 600V/ CAT Ⅳ300V
Maximum rated voltage between terminals	Between the V and COM terminals : 600 V DC/AC

Accessories

L9207-10 / DT4911 Options

DT4280/DT4250 Series
(Bundled accessory)

TEST LEAD L9207-10

Cable length 90 cm (2.9527 ft)
with one each red and black caps

with cap
CAT III 1000V/CAT IV 600V
without cap
CAT II 1000V

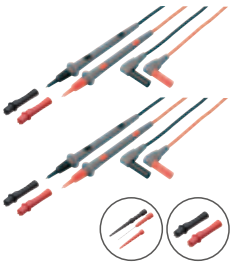
DT4220 Series
(Bundled accessory)

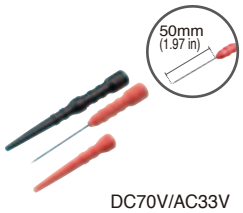
TEST LEAD DT4911

Cable length 54cm (1.77 ft)
with one each red and black caps

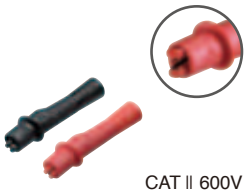
with cap
CAT IV 300V/ CAT III 600V
without cap
CAT II 600V

L4933 and L4934 probe tips (at right) can be used on L9207-10/DT4911 test leads.





DC70V/AC33V
CONTACT PIN SET L4933



CAT II 600V
CAT III 300V
SMALL ALLIGATOR CLIP SET L4934

L4930 Options

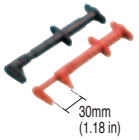
Compatible DMMs:
DT4250 Series / DT4280 Series

Length : 1.2m (3.937 ft)
CONNECTION CABLE L4930

Probe tips (at right) can be used on L4930 connection cables.

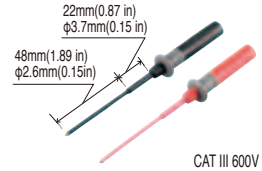
with one each red and black caps
CAT III 600V (with cap)
CAT II 600V (without cap)
TEST PIN SET L4938

CAT III 1000V
CAT IV 600V
ALLIGATOR CLIP SET L4935

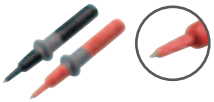


CAT III 600V
BUS BAR CLIP SET L4936

CAT III 1000V
MAGNETIC ADAPTER SET L4937



CAT III 600V
BREAKER PIN L4939



CAT III 1000V /CAT IV 600V
with one each red and black caps
TEST PIN SET L4932

CAT III 1000V
GRABBER CLIP 9243

CAT III 1000V
CAT IV 600V
Length : 1.5m (4.9212 ft)
With coupling connectors
EXTENSION CABLE SET L4931

AC CLAMP ON PROBES for DT4281, DT4253, DT4255, DT4256 (Adapter 9704 required for connection)

Product appearance	 CAT III 600V	 CAT III 600V	 CAT III 600V
Model number	9010-50	9018-50	9132-50
Rated current	AC 10/20/50/100/200/500 A		AC 20/50/100/200/500/1000A
Amplitude accuracy (45 to 66Hz)	±2% rdg. ±1% f.s.	±1.5% rdg. ±0.1% f.s.	±3% rdg. ±0.2% f.s.
Frequency characteristics	40Hz to 1kHz:±6% rdg.	40Hz to 3kHz:±1% rdg.	40Hz to 1kHz:±1% rdg.
Output rate	AC 0.2 V f.s. (For each range)		
Max. circuit voltage	AC600 V (50/60Hz)		
Diameter	φ46mm (1.81 in) or less		φ55mm (2.17 in) or less, 80×20mm (3.15×0.79 in)
Dimensions, mass	78W×188H×35D mm (3.07W × 7.40H × 1.38D in) 420g (14.8oz.),cord length 3m (9.84 ft)		100W×224H×35D mm(3.94W ×8.82 H × 1.38D in) 600g(21.1oz.), cord length 3m(9.84 ft)

Adapter Model 9704 is required to connect AC CLAMP ON PROBES 9010-50, 9018-50 and 9132-50 to the DT4281, DT4253, DT4255, DT4256.

CONVERSION ADAPTER 9704

Other options

THERMOCOUPLES (K) DT4910

- Thermal junction form: exposed weld
- Sensor length: approx. 800 mm
- Measurement temperature range –40 to 260°C
- Allowable tolerance:±2.5°C

COMMUNICATION PACKAGE (USB) DT4900-01

- Communication cable
- Communication adapter
- PC software
- Instruction manual

OS: Windows 8.1/8/7, Vista (SP1 or later)

MAGNETIC STRAP Z5004

MAGNETIC STRAP Z5020

CARRYING CASE C0200
DT4220 Series

CARRYING CASE C0202
DT4250/DT4280 Series

CARRYING CASE C0201
DT4250 Series

CARRYING CASE 3853
DT4250 Series

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All information correct as of July 8, 2016. All specifications are subject to change without notice.
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