# DIGITAL MULTIMETER DT4200 Series

HIOKI ETTT 193 Gal



TIMETER

Defy conventional wisdom for achieving testing safety with a new and proprietary circuit breaker false trip prevention function



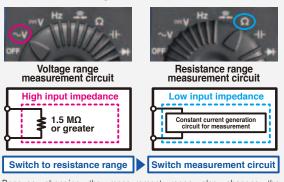


Mistakenly tripped circuit breakers and arcs due to careless input of voltage to the resistance range can be extremely hazardous.



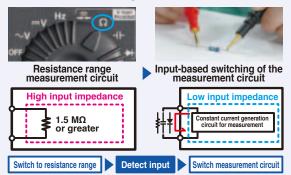
# The DT4223 and DT4224 feature a new proprietary function that prevents accidents resulting from breakers that mistakenly trip due to incorrect input

Conventional digital multimeters



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.

#### DT4223 / DT4224 Digital Multimeter



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.



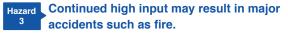
# Safe testers that protect workers from dangerous accidents

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.





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.





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

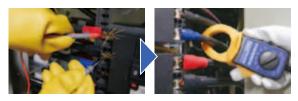
\*Red screen available on high-end models and DT4223/DT4224 only.

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



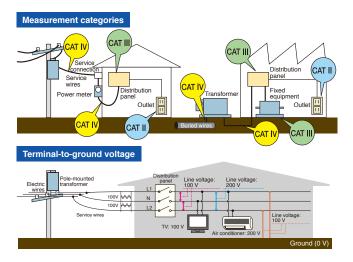
The DT4281 and DT4282 use terminal shutters to keep probes from being inserted into the wrong inlets. The shutters block whichever terminal is not being used based on the selected measurement function.

Hazard 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 sensorbased current measurement functionality instead of using conventional probes.





# 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



#### 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 most advanced technological capabilities enable us to deliver products of the highest possible quality.





# Field-Proven Strength and Usability DT4200 series

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



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 tester

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



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.

# 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.

#### 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 dustproof part known as an O-ring where the rotary switch is mounted to improve the device's dust resistance.

# True RMS measurement for accurate measurement of even distorted current waveforms



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.

# 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 highend 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 that can't be reached with other probes



For clamping around the target busbar

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 required in order to use the probes shown at the left.



# 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
AC clamp-on measurement Resistance	Frequency Continuity check
	1 2
Resistance	Continuity check



### 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 6.000 V to 1000.0 V 600.00 μA to 10.000 A 600.00 μA to 10.000 A				
DC + AC voltage					
DC current					
AC current					
AC clamp-on measurement	Frequency				
Resistance	Continuity check				
Temperature	Diode test				
Capacitance	Conductance				

Supported measurement parameter
Supported measurement parameter (with model-specific variations)
Unsupported measurement parameter
\*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

APS (k+4)

With low-pass filter off

Funda

Harmonic co

115

ental component

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

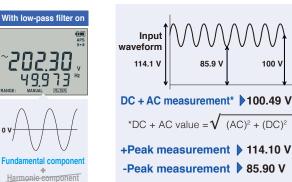
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**Ripple voltage confirmation of DC** charging systems Peak value measurement / DC + AC voltage measurement

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

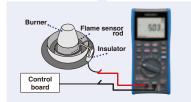
100 V





#### 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.

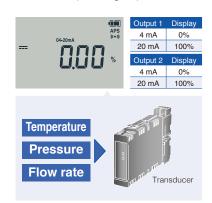


Continuous state Excessively high input



Percentage display for instrumentation signal measurement 4 to 20 mA / 0 to 20 mA percentageequivalent display

You can check percentage-equivalent values.





#### SLOW ANGE: AUTO **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

values shown on the display after pressing the MAX/MIN button.



### **Relative display**

View relative values using the display value before the relative function was enabled as the reference.

Check the maximum and minimum measured



#### **Decibel conversion**

Convert the results of AC voltage measurement to a decibel value relative to a reference value and display the results (dbm/ dbv).



# 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
	Frequency Continuity check
measurement	
measurement Resistance	Continuity check



For instrumentation 4-20mA

#### DT4253 Measure instrumentation, aironditioning equipmer

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					
	n/a					
AC clamp-on measurement	Frequency					
measurement	riequency					
Resistance	Continuity check					
Resistance	Continuity check					



Voltage measurement only model DT4254

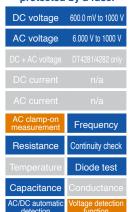
Measure photovoltaic modules and other high-voltage targets at up to 1700 V DC.

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 detection	Voltage detection function					



For electrical work in the field

DT4255 Designed for maximum safety with voltage measurement terminals that are protected by a fuse.





### 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				
	Frequency Continuity check				
measurement	1 2				
measurement Resistance	Continuity check				

Supported measurement parameter Supported measurement parameter (with model-specific variations) Unsupported measurement parameter \*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



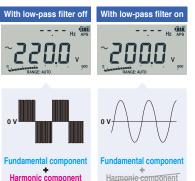
Use a computer in the field to save and check measured values With the Communication Package DT4900-01 (option)

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.



#### 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

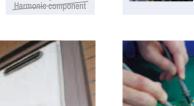
#### 1700 V DC measurement (DT4254 only) Model DT4254 can measure DC voltages up

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

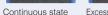




#### Intuitive notification of continuity check results and excessively high input with a red LED and beep

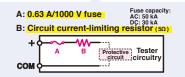
Standard models notify the operator of continuity check results and excessively high input with a red LED and beep, making it possible to check measurement results intuitively.





#### Thorough prevention of shortcircuit 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.



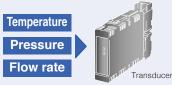




Percentage display for instrumentation signal measurement 4 to 20 mA percentage-equivalent display (DT4253 only) The standard models' dual display function

lets you to simultaneously check measured values and percentage-equivalent values at a alance.

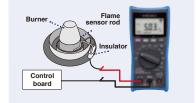






#### Measure very low currents used by gas-burning devices DC µA range (DT4253 only)

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





Excessively high input



#### 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				
	Voltage detection function				



### 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					
AC current	n/a				
AC clamp-on measurement	Frequency				
AC clamp-on measurement Resistance	Frequency Continuity check				
	1 2				
Resistance	Continuity check				

### 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					
AC/DC automatic detection	Voltage detection function					



### 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	_					
AO Gamp-on measurement	Frequency					
Resistance	Frequency Continuity check					
	1 2					
Resistance	Continuity check					

Supported measurement parameter 
Supported measurement parameter (with model-specific variations)
Unsupported measurement parameter
\*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.



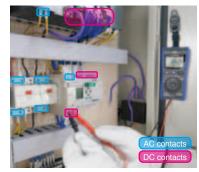
#### Safe enough for measuring voltage at distribution panels and service wires

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





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

		Eggst .	5000	6000.	6000	6000	6000	SDD0	6000	6000	5000
	24		and the		0	O the	0.00	0	9	Q	$\odot$
	DT4281	DT4282	DT4252	DT4253	DT4254	DT4255	DT4256	DT4221	DT4222	DT4223	DT4224
Basic Characteris	stics										
True RMS	Ye	es			Yes				Y	es	
DCV basic accuracy	±0.025 %rc		±0.3 %rd			±0.3 %rdg. ±3 dgt			±0.5 %rd	g. ±5 dgt.	
Measurement item											
DC voltage	60 mV to		600 mV t	o 1000 V	600 mV to 1500 V	600 mV t	to 1000 V			to 600 V	
AC voltage	60 mV to				6 V to 1000 V					600 V	
DCV + ACV	6 V to 1		0.4 + 40.4	00 ··· 4 to 00 ··· 4	n/a	10	00 40 40 40	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		/a	60 mA to 10 A				
ACA current	600 μA to 600 mA 10 A to 1000 A	600 μA to 10 A	6 A to 10 A	10 A to 1000 A	n/a n/a	10 A to 1000 A	600 mA to 10 A 10 A to 1000 A			/a /a	
AC clamp Resistance	60 Ω to 6	n/a	n/a 600 Ω to				0 60 MΩ	n/o		600 Ω to 60 MΩ	
Temperature	-40°C to		n/a	-40°C to 400°C	n/a	n/a	0 00 IVI22	n/a	n	/a	
Capacitance	1 nF to 1			10 mF	n/a	1 µF to	10 mF	n/a	Π 1 μF to 10 mF	n/a	1 μF to 10 mF
Frequency	99 Hz to 5		i pi to		99 Hz to 99 kHz	1 1 10	10 111	11/a		9.9 kHz	i μι ιστο πι
Continuity check	Ye		Y	es	n/a	V4	es			es	
Diode check	Ye	-		es	n/a		es	n/a	Yes	n/a	Yes
Conductance	n/a	Yes			n/a			104		/a	100
Voltage detection	n/a		n	/a	104	Yes		Yes	n/a	Yes	n/a
Additional Function											
AUTO AC/DCV	n/	a	n/a		Y	es		Yes	n/a	Yes	n/a
Peak measurement	DC/	AC			n/a				'n	/a	
Low-pass filter	Analog Cut-off :			Pass-	Digital filter band : 100Hz/	500Hz		Digital filter Pass-band : 100Hz/500Hz			
Display update setting	Ye	es			n/a			n/a			
Hold display value	AUTO / N	ANUAL		A	UTO / MANUA	NL.		MAN	IUAL	AUTO /	MANUAL
Max/Min value display	Ye	s			Yes			n/a			
Relative display	Ye	es			Yes				Y	es	
Decibel conversion	Ye	-			n/a				n	/a	
Percentage conversion display	Ye		n/a	Yes	n	/a	n/a			/a	
DC voltage polarity check	n/	а	n	a		Yes			n	/a	
Data storage					,					,	
Capacity	Max 40				n/a			n/a			
USB communication*1	Ye	es		_	Yes	_		_	n	/a	_
Operating time	Annual 10	0.6.0		0.	oprox. 130 hou			<b>A m m m</b>	40 h euro	<b>A</b> mmmore	05 hours
Continuous operating time Power supply	Approx. 10 Alkaline (LR6) battery x4 / M				ne (LR03) batt			Approx.	40 hours	)3) battery ×1	35 hours
Display	Aikaiine (LHO) Dailei y X4 / M	anyanese(nor) battery x4		Aikaili	ie (LH03) ball	ery x4			Alkaline (LRC	(13) Dattery XT	
Back light	Ye	20			Yes				V	es	
Dual display	Ye				Yes					/a	
Bar graph display	n/				Yes					es	
Safety											
Safety standard categories	CATIII1000 V	/ CATIV600 V		CAT	III1000 V/ CATIV	600 V			CATIII600 V	/ CATIV300 V	
Mis-insertion prevention shutters	Ye				n/a					/a	
Circuit breaker false trip prevention	n/				n/a			n	/a	1	es
uh hieveuriou	10										

### Glossary

\*1. Requires optional DT4900-01 Communication Package

Auto AC/DCV : Automatically detects and measures AC and DC voltage. | Peak measurement : After starting PEAK value measurement, check maximum and minimum instantaneous voltage and current values. | Low-pass filter : Cuts high frequency content to provide stable numerical values for measurement. | Display update setting : Reduces the display value update rate to stabilize measurements. | Hold display value : Manual: press the button to freeze the display. Auto: the display freezes automatically when the measurement value is stable. | Max/Min value display : Pressing the MAX/MIN button displays the maximum and minimum displayed measurement values. | Relative display : Pressing the REL button displays subsequent measurements as values relative to that displayed when the button was pressed. | Decibel conversion : Displays AC voltage measurements converted to decibel values (dbm/dbv) | Percentage conversion display : Displays 4 to 20 mA (or 0 to 20 mA) signals converted to 0 to 100% values. For the DT4253, only 4 to 20 mA.

<sup>\*2.</sup> When using four AA alkaline batteries

High-End DT4281/DT4282 (Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

DC Voltag	e	
Range	Accuracy	Input Impedance
60.000 mV	±0.2 %rdg. ±25 dgt.	
600.00 mV	±0.025 %rdg. ±5 dgt.	1 GΩ or more //100 pF or less
6.0000 V	±0.025 %rdg. ±2 dgt.	11.0 MΩ± 2% //100 pF or less
60.000 V	±0.025 %rug. ±2 ugi.	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	±0.03 %rug. ±2 ugi.	10.2 MO2± 2% // 100 pr 01 less

#### AC Voltage

Range	Accuracy					
nanye	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.	±0.4 %rdg.	±0.6 %rdg.	±0.9 %rdg.	±1.5 %rdg.	±20 %rdg. ±80 dgt.
600.00 mV	±60 dgt.	±40 dgt.	±40 dgt.	±40 dgt.	±40 dgt.	±8 %rdg. ±80 dgt.
6.0000 V	±1 %rdg. ±60 dgt.				±0.7 %rdg. ±40 dqt.	±3.5 %rdg. ±40 dqt.
60.000 V		±0.2 %rdg. ±0.3 %rdg. ±25 dgt. ±25 dgt.	U U	±0.4 %rdg. ±25 dgt.	±40 ugi.	±40 üği.
600.00 V	Undefined		±25 ugi.		Undefined	Undefined
1000.0 V					Undenned	Undenned

#### DCV + ACV Measurement

Danga		Accuracy				
Range	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.			±0.4 %rdg.	±1.5 %rdg. ±45 dqt.	±3.5 %rdg. ±125 dgt.
60.000 V		±0.3 %rdg.	±0.4 %rdg.	±30 dgt.	±40 ugi.	±125 ugi.
600.00 V	Undefined	±30 dgt. ±30 dgt.				
1000.0 V	Ondenned			±0.4 %rdg. ±45 dgt.	Undefined	Undefined
Input impe	edance	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 Meas	DCA Measurement				
Range	Accuracy / Display update : SLOW	Accuracy / Display update : NORMAL	Shunt Resistance		
600.00 μA		±0.05 %rdg. ±25 dgt.	101 Q		
6000.0 μA	±0.05 %rdg. ±5 dgt.	±0.05 %rdg. ±5 dgt.	101 22		
60.000 mA		±0.05 %rdg. ±25 dgt.	10		
600.00 mA	±0.15 %rdg. ±5 dgt.	±0.15 %rdg. ±5 dgt.	1 1 1 2		
6.0000 A <sup>*1</sup>	±0.2 %rdg. ±5 dgt.	±0.2 %rdg. ±25 dgt.	10m Q		
10.000 A*1	±0.2 /0109. ±3 091.	±0.2 %rdg. ±5 dgt.	1011122		

ACA Measurement *1 : DT4282					: DT4282 only
Danga			Accuracy		
Range	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 <sup>*1</sup>	Undefined	±0.8 %rdg. ±20 dgt.	±0.8 %rdg. ±20 dgt.	Undefined	Undefined
10.000 A <sup>*1</sup>	Undefined	±0.8 %rdg. ±5 dgt.	±0.8 %rdg. ±5 dgt.	Undefined	Undefined
Shunt resist	ance	$\mu A$ Range 101 $\Omega$ / mA Range 1 $\Omega$ / A Range 10m $\Omega$			
Crest factor		3 or less (Note that it applies to 1/2 of the range.)			)
Accuracy spec	cification range	Accuracy is not o	defined for meas	urements 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/ 1	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				
Range	Acc	uracy		
nange	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.		
he 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	Resistance Measurement					
Range	Accuracy	Measurement Current	Open-terminal Voltage			
60.000 Ω	±0.3 %rdg. ±20 dgt.	- 640 μA ±10%				
600.00 Ω	±0.03 %rdg. ±10 dgt.	040 μA ±10%				
6.0000 kΩ		96 μA ±10%				
60.000 kΩ	±0.03 %rdg. ±2 dgt.	9.3 μA ±10%				
600.00 kΩ		0.96 μA ±10%	DC2.5 V or less			
6.0000 MΩ	±0.15 %rdg. ±4 dgt.					
60.00 MΩ	±1.5 %rdg. ±10 dgt.	96 nA ±10%				
600.0 MQ	±3.0 %rdg. ±20 dgt.	90 TA ±10%				
0.0010122	±8.0 %rdg. ±20 dgt.					

Conductanc	e (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,  $\pm 20$  dgt. is added

Capacitance Measurement					
Range	Accuracy	Measurement Current	Open-circuit Voltage		
1.000 nF	±1 %rdg. ±20 dgt.				
10.00 nF		32 μA ±10%	DC2.5 V or less		
100.0 nF	±1 %rdg. ±5 dgt.	32 μA ±10%	DO2.3 V 01 1633		
1.000 μF					
10.00 μF			DC3.1 V or less		
100.0 μF	±2 %rdg. ±5 dgt.		DOS.1 V OI less		
1.000 mF	±2 %iug. ±5 ugi.	680 μA ±20%			
10.00 mF			DC2.1 V or less		
100.0 mF	±2 %rdg. ±20 dgt.				

Temperature		
Thermocouple Type	Range	Accuracy
К	-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				
999.99 Hz		±0.005 %rdg. +3 dgt.		
9.9999 kHz				
99.999 kHz		0.005 %		
500.00 kHz	±0.005 %rdg. +3 dgt.			
Measurement r	Measurement range 0.5Hz or more ([] is displayed when frequency is less than 0.5Hz			
Pulse width	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	ent 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 impedan	ce (dBm)
---	----------

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

# **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: IP			
*1 : -15°C to 55°C (5°E to 131°E). Up to 40°C (104°E): at 80% BH or less (pon-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)

#### Dimensions/Mass

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

#### DT4252/DT4253/DT4254/DT4255/DT4256 Standard (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 <sup>*1</sup>	±0.2 %rdg. ±5 dgt.	10.2 MΩ ± 1.5 %
600.0 mV	±0.5 %rdg. ±5 dgt.	11.2 MQ ± 2.0 %
6.000 V		11.2 MΩ2 ± 2.0 %
60.00 V	±0.3 %rdg. ±3 dqt.	10.3 MΩ ± 2.0 %
600.0 V	±0.3 %iug. ±3 ugi.	
1000 V		10.2 MΩ ± 1.5 %
1500 V <sup>*2</sup>	±0.3 %rdg. ±3 dgt.	]

AC Voltage						
Range	Accu	iracy	In must lange a damage			
haliye	40 to 500 Hz	500 or more to 1kHz	Input Impedance			
6.000V			11.2 M $\Omega$ ± 2.0%//100 pF or less			
60.00V	±0.9 %rdg. ±3 dgt.	±1.8 %rdg. ±3 dqt.	10.3 MΩ ± 2.0%//100 or less			
600.0V		±1.6 %iug. ±5 ugi.	10.2 MΩ ± 1.5%//100 or less			
1000V			10.2 W122 ± 1.5%//100 OF IESS			

AUTO V (Identification)			DT4253, DT4254, DT4255, DT4256 only		
Danara		Accuracy		Input Impedance	
Range	DC,	40 to 500 Hz	500 or more to 1kHz	input impedance	
600.0 V	±2.0 %rdg. ±3 dgt.		±4.0 %rdg. ±3 dgt.	900 kΩ ± 20% 1800 kΩ ± 20% <sup>*1</sup>	
Crest factor 3 up to 4000			s and reduces linearly to 2 at 600	00 counts.	
Accuracy		For ACV, minimum 1% of range; add ±5 dgt. when measuring at or below 5% of range			
specification rar	nge	With the filter ON, the accuracy is not specified at 100Hz/500Hz or more			

\*1 : DT4254

D	CA Measurem	ent	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. <sup>*1</sup>	15 Ω±40 % <sup>-1</sup>
•	600.0 mA	±0.9 %rdg. ±5 dgt.	35 mΩ±30 %
••	6.000 A	±0.9 %rdg. ±3 dgt. <sup>2</sup>	35 mΩ±30 %
••	10.00 A	±0.9 %rdg. ±3 dgt. <sup>2</sup>	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 on				
Danca	Acci	Accuracy		
Range	40 to 500 Hz	500 or more to 1kHz	Input Impedance	
600.0 mA <sup>*1</sup>	±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 400	O counte and reduces line	early to 2 at 6000 counts	

s linearly to a 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	
Hi	AC40 V to AC600 V	50 Hz / 60 Hz	
Lo	AC80 V to AC600 V	50 HZ / 60 HZ	
During voltage detection a continuous human counds and the red LED lights up			

During voltage detection, a continuous buzzer sounds and the red LED lights up.

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

### Accessories

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

Continuity Check		DT4252, DT4253, I	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 I		ess (continuous buzzer	sound, red LED lights)	
Continuity OFF threshold Ap		Approx.245Ω o	or more	

Diode Check		DT4252, DT4253, DT4255, DT4256 only			
Range	Accuracy	Measurement Current	Open-terminal Voltage		
1.500 V	±0.5 %rdg. ±5 dgt. <sup>*1</sup>	Approx. 0.5 mA	DC5.0 V or less		
Forward thresho	d 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		
nanye	40 to 1 kHz		
10.00 A			
20.00 A			
50.0 A			
100.0 A	±0.9 %rdg. ±3 dgt.		
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 Currer		Open-terminal Voltage	
±0.7 %rdg. ±5 dgt.	Approx. 200 µA		
	Approx. 100 µA		
±0.7 %rdg. ±3 dgt."	Approx. 10 µA	DC1.8 V or less	
	Approx. 1 µA	DC1.8 V OF less	
±0.9 %rdg. ±3 dgt. <sup>*1</sup>	Approx. 100 nA		
±1.5 %rdg. ±3 dgt."	Approx. 10 nA		
	Accuracy ±0.7 %rdg. ±5 dgt. ±0.7 %rdg. ±3 dgt. <sup>*1</sup> ±0.9 %rdg. ±3 dgt. <sup>*1</sup>	Accuracy     Measurement Current       ±0.7 %rdg. ±5 dgt.     Approx. 200 μA       4pprox. 100 μA     Approx. 100 μA       ±0.7 %rdg. ±3 dgt. <sup>*1</sup> Approx. 10 μA       ±0.9 %rdg. ±3 dgt. <sup>*1</sup> Approx. 100 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		Approx. 10 n/100 n/1 µA	
10.00 μF	±1.9 %rdg. ±5 dgt.	Approx. 100 n/1 µ/10 µA	
100.0 μF		Approx. 1 μ/10 μ/100 μA	DC1.8 V or less
1.000 mF		Approx. 10 μ/100 μ/200 μA	
10.00 mF	±5.0 %rdg. ±20 dgt.	Approx. 100 μ/200 μA	

Temperature DT42			
Thermocouple Type	Range	Accuracy	
К	-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 Hz			
999.9 Hz	0.10/24-0.14		
9.999 kHz	±0.1 %rdg. +1 dgt.		
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)

#### 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.)

#### DT4221/DT4222 /DT4223 /DT4224 Pocket (Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

DC Voltage				
Range	Accuracy	Input Impedance		
600.0 mV		11.2 MQ ± 2.0 %		
6.000 V	OF 9 ( refer to F cleat	11.2 IVI2 ± 2.0 %		
60.00 V	±0.5 %rdg. ±5 dgt.	10.3 MΩ ± 2.0 %		
600.0 V		10.2 MΩ ± 1.5 %		

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

AUTO V (Identification)		DT422	21, DT4223 only
Pango	Accuracy		Input Impedance
Range	DC, 40 to 500 Hz	500 or more to 1kHz	input impedance
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		
specification 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.		Approx. 250	or less (continuous	buzzer sound)	
Continuity OFF threshold Approx.24		Approx.2459	Ω or more		

# **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)

#### Dimensions/Mass

72mm(W)×149mm(H)×38mm(D) (2.83"W 5.87"H 1.50"D) 190g (including batteries and holster) (6.7 oz.)

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 $V^{\star1}$
Maximum rated current between terminals	Between the A and COM terminals : DC10 A/ AC10 A (DT4252/DT4256) Between the $\mu A$ ,mAand COM terminals : DC60 mA (DT4253 only)

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

### Accessories

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

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		Approx.200 µA	DOLON I
6.000 kΩ		Approx.100 µA	DC1.8 V or less (DT4222)
60.00 kΩ	±0.9 %rdg. ±5 dgt.	Approx.10 µA	(014222)
600.0 kΩ		Approx.1 µA	DC2.0 V or less
6.000 MΩ		Approx.100 nA	(DT4223 / DT4224)
60.00 MΩ	±1.5 %rdg. ±5 dgt.	Approx.10 nA	
Accuracy quarantee	Accuracy guarantee condition After zero adjustment has been performed		

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
10.00 µF		Approx.100 n/1 μ/10 μA	(DT4222)
100.0 µF		Approx.1 μ/10 μ/100 μA	
1.000 mF		Approx.10 μ/100 μ/200 μA	DC2.0 V or less (DT4223 / DT4224)
10.00 mF	±5.0 %rdg. ±20 dgt.	Approx.100 μ/200 μA	(D14223 / D14224)

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

#### Safety

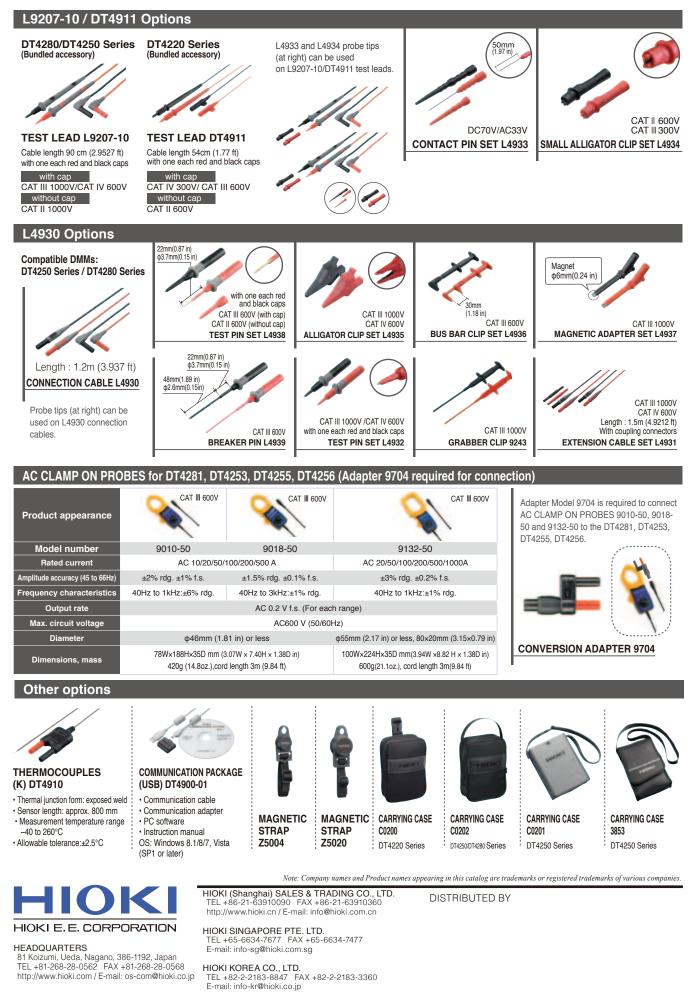
Maximum rated voltage between input terminals and ground

CAT III 600V/ CAT N300V

Maximum rated voltage between terminals Between the V and COM terminals : 600 V DC/AC

### Accessories

TEST LEAD DT4911 / Instruction Manual / LR03 Alkaline battery×1 Holster (attached to the instrument, with a test lead holder.)



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

series DT4200E9-67B Printed in Japan