

# HIOKI

## DIGITAL MULTIMETER DT4200 Series

NEW



# DT 4200 SERIES

MADE IN JAPAN



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



# 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						
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 x4				Alkaline (LR03) battery x1					
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. | **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.

# 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.	±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.	±0.2 %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	Undefined	Undefined	Undefined	Undefined
1000.0 V	Undefined					

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	Undefined	Undefined	Undefined	Undefined
1000.0 V	Undefined					

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	±0.15 %rdg. ±5 dgt.	±0.05 %rdg. ±25 dgt.		1 Ω
600.00 mA	±0.2 %rdg. ±5 dgt.	±0.15 %rdg. ±5 dgt.	10m Ω	
6.0000 A <sup>1</sup>		±0.2 %rdg. ±25 dgt.		
10.000 A <sup>1</sup>	±0.2 %rdg. ±5 dgt.	±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 <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 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
6000.00 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	±2 %rdg. ±5 dgt.	680 μA ±20%	DC3.1 V or less
10.00 μF			
100.0 μF			DC2.1 V or less
1.000 mF			
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)

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

## 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 <sup>1</sup>	±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.		10.3 MΩ ± 2.0 %
60.00 V			
600.0 V			
1000 V		10.2 MΩ ± 1.5 %	
1500 V <sup>2</sup>	±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% <sup>1</sup>
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. <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 only			
Range	Accuracy		Input Impedance
	40 to 500 Hz	500 or more to 1kHz	
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 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
Hi	AC40 V to AC600 V	50 Hz / 60 Hz
Lo	AC80 V to AC600 V	

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

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. <sup>1</sup>	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
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. <sup>1</sup>	Approx. 100 μA	
60.00 kΩ		Approx. 10 μA	
600.0 kΩ		Approx. 1 μA	
6.000 MΩ	±0.9 %rdg. ±3 dgt. <sup>1</sup>	Approx. 100 nA	
60.00 MΩ	±1.5 %rdg. ±3 dgt. <sup>1</sup>	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 Hz	±0.1 %rdg. +1 dgt.
999.9 Hz	
9.999 kHz	
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.)

## 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		10.3 MΩ ± 2.0 %
60.00 V		10.2 MΩ ± 1.5 %
600.0 V		

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		

## 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*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

## 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	±0.9 %rdg. ±5 dgt.	Approx.200 μA	DC1.8 V or less (DT4222)
6.000 kΩ		Approx.100 μA	
60.00 kΩ		Approx.10 μA	DC2.0 V or less (DT4223 / DT4224)
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)
10.00 μF		Approx.100 n/1 μ/10 μA	
100.0 μF		Approx.1 μ/10 μ/100 μA	DC2.0 V or less (DT4223 / DT4224)
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	

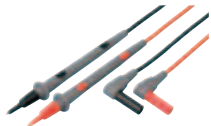
Safety	
Maximum rated voltage between input terminals and ground	CAT III 600V/ CAT IV300V
Maximum rated voltage between terminals	Between the V and COM terminals : 600 V DC/AC

## Accessories

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

## 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)

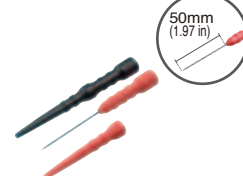
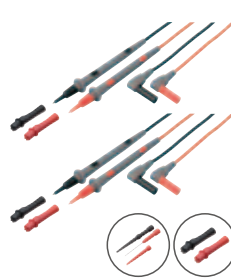


#### TEST LEAD DT4911

Cable length 54 cm (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

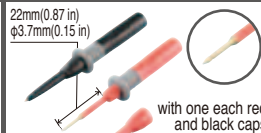
### Compatible DMMs: DT4250 Series / DT4280 Series



Length : 1.2m (3.937 ft)

#### CONNECTION CABLE L4930

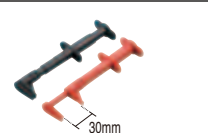
Probe tips (at right) can be  
used on L4930 connection  
cables.



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**



30mm  
(1.18 in)  
CAT III 600V  
**BUS BAR CLIP SET L4936**

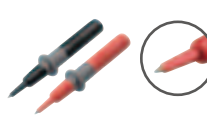


Magnet  
φ6mm(0.24 in)

CAT III 1000V  
CAT IV 600V  
**MAGNETIC ADAPTER SET L4937**



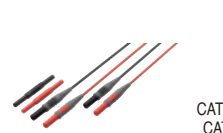
CAT III 600V  
**BREAKER PIN L4939**



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, 80x20mm (3.15x0.79 in)	
Dimensions, mass	78Wx188Hx35D mm (3.07W x 7.40H x 1.38D in) 420g (14.8oz.), cord length 3m (9.84 ft)	100Wx224Hx35D mm (3.94W x 8.82 H x 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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# HIOKI

HIOKI E. E. CORPORATION

#### HEADQUARTERS

81 Koizumi, Ueda, Nagano, 386-1192, Japan  
TEL +81-268-28-0562 FAX +81-268-28-0568  
http://www.hioki.com / E-mail: os-com@hioki.co.jp

#### HIOKI USA CORPORATION

TEL +1-609-409-9109 FAX +1-609-409-9108  
http://www.hiokiusa.com / E-mail: hioki@hiokiusa.com

HIOKI (Shanghai) SALES & TRADING CO., LTD.  
TEL +86-21-63910090 FAX +86-21-63910360  
http://www.hioki.cn / E-mail: info@hioki.com.cn

#### DISTRIBUTED BY

HIOKI SINGAPORE PTE. LTD.  
TEL +65-6634-7677 FAX +65-6634-7477  
E-mail: info-sg@hioki.com.sg

HIOKI KOREA CO., LTD.  
TEL +82-2-2183-8847 FAX +82-2-2183-3360  
E-mail: info-kr@hioki.co.jp