



*Quality and reliability is our tradition*

# KYORITSU



Test and Measuring Instruments  
General Catalogue 2023-2024

*Japan*  
QUALITY



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## SYMBOLS

	TRUE RMS
	CAT IV 600V
	DC/AC V
	DC/AC A
	DC Voltage
	AC Voltage
	DC Current (A)
	AC Current (A)
	DC+AC measurement
	Power
	MAX MIN AVG
	MAX MIN
	Resistance
	Continuity buzzer
	Diode
	Capacitance
	Temperature
	Frequency
	Power factor
	Harmonics
	Phase rotation
	Decibel
	Duty cycle ratio
	Non Contact Voltage
	Back light
	Water proof
	Peak hold
	Data hold
	Auto power off
	Auto power save
	Output
	Filter
	Relative
	External Power Supply
	USB
	Low power Ω
	Bluetooth®

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## Safety Warnings

Please read the "Safety Warnings" in the instruction manual supplied with the instrument thoroughly and completely for safety use. Failure to follow the safety rules can cause fire, trouble, electrical shock, etc. Therefore, make sure to operate the instrument on a correct power supply and voltage rating marked on each instrument.

MULTIMETERS

CLAMP METERS

INSULATION TESTERS

EARTH TESTERS

LOOP/PSC/RCD TESTERS

PORTABLE APPLIANCE TESTERS

MULTIFUNCTION TESTERS

POWER METERS

LOGGERS

SENSORS

INTELLIGENT SOCKET TESTERS

OTHERS

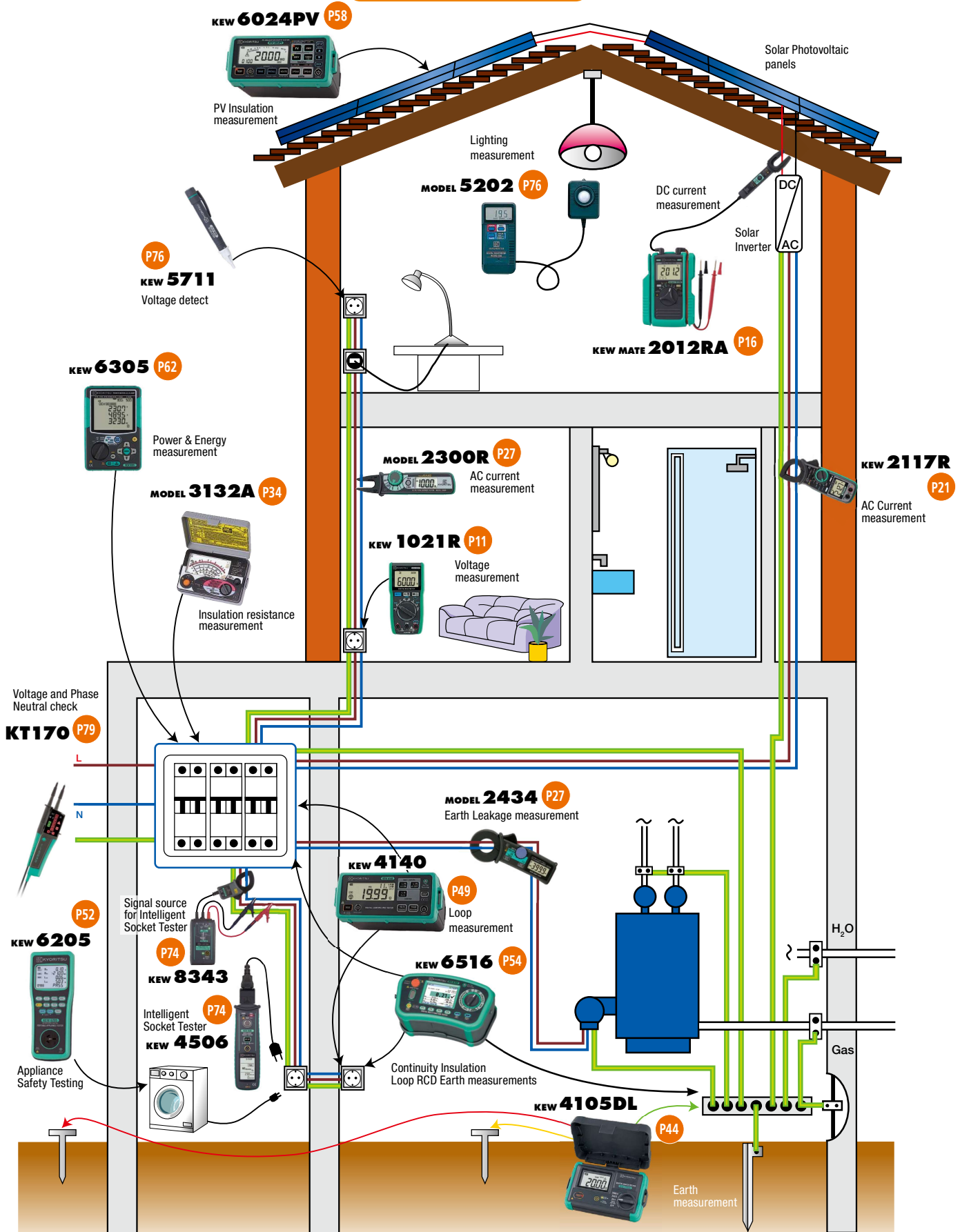
KEWTECH

ACCESSORIES

GLOSSARY/PRODUCT INDEX/QUALITY CONTROL CONCEPT



# RESIDENTIAL



# EARTH TESTERS

EARTH TESTERS

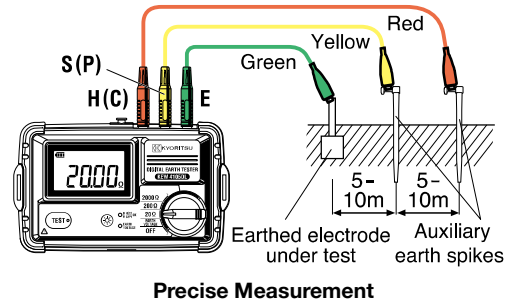


# EARTH TESTERS

## Measurement of the earth electrode resistance (3-Pole method)

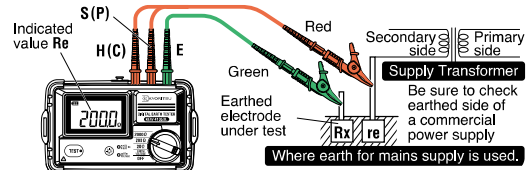
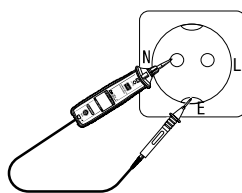
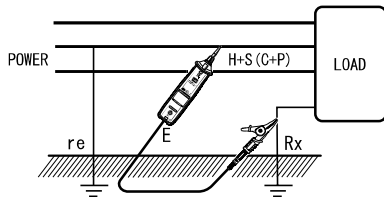
[MODEL 4102A/KEW 4105A/KEW 4105DL]

The international standard IEC 60364-6 provides information regarding the measurement of the resistance of an earth electrode for TT, TN and IT systems. This measurement shall be made by the Volt-Amperometric method using two auxiliary earth electrodes. The instrument that covers this requirement is the Earth Tester.



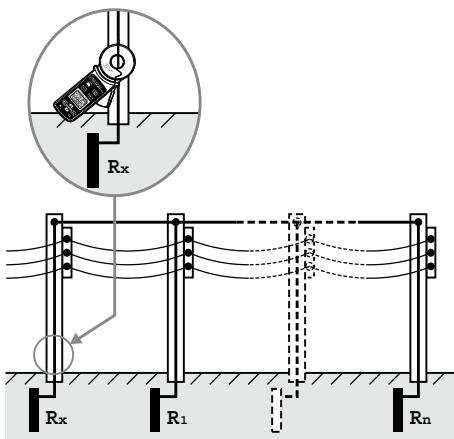
## Measurement of the simplified earth resistance (2-Pole method)

[KEW 4300/MODEL 4102A/KEW 4105A/KEW 4105DL]



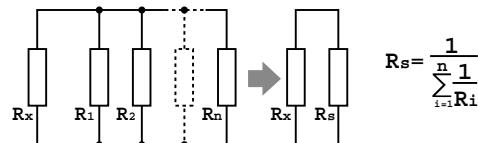
## Measurement of the earth resistance with Earth Clamp (Why earth measurements can be found by only clamping it?)

[MODEL 4200/KEW 4202]



$R_x$  is defined as earth resistance under test, and  $R_1, R_2, \dots, R_n$  are defined as earth resistance of other measuring objects.

These earth resistances,  $R_1, R_2, \dots, R_n$  can be considered that they are connected in parallel. And They can be regarded as a combined resistance  $R_s$ . The  $R_s$  can be regarded small enough against  $R_x$  since a combined resistance consists of several resistances. Following is an equivalent circuit diagram of this circuit.

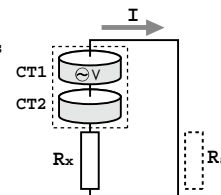


Voltage  $V$  is applied to the object (Resistance  $R_x$ ) measured from the voltage injection transformer CT1, and the current  $I$  corresponding to the earth resistance is flowed.

$$\frac{V}{I} = R = R_x + R_s$$

$$R_x \gg R_s = \frac{1}{\sum_{i=1}^n \frac{1}{R_i}}$$

$$\frac{V}{I} = R_x$$



The current  $I$  is detected with detection transformer CT2, and object (Resistance  $R_x$ ) measured can be put out by the calculation. (refer to the right diagram)

# EARTH TESTERS

## KEW 4105DL



EARTH TESTERS



- 3pole and 2pole Earth Resistance measurement (0.01Ω-2000Ω)
- Waterproof design (IP67)
- Rotary Switch makes the user interface very intuitive
- Large LCD Display with Backlight
- LED to monitor correct / non correct auxiliary earth spike resistance
- Earth Voltage Measurement (AC/DC 0-300V)
- CAT IV 100V

Water and dust proof: after use you can wash it to remove the mud and dust!



Adapter to enable use of other test leads



	4105DL/4105DL-H		
Earth resistance measurement	20Ω	200Ω	2000Ω
Measuring range	0.00 - 2000 Ω		
Display range	0.00 - 20.99 Ω	0.0 - 209.9 Ω	0 - 2099 Ω
Accuracy*1	±1.5%rdg±0.08 Ω*2		
Auxiliary earth resistance*3	<10 kΩ	<50 kΩ	<100 kΩ
Comparator reference value	10 Ω	100 Ω	500 Ω
Earth voltage measurement			
Measuring range	0 - 300 V AC (45 - 65Hz)	±0 - ±300 V DC	
Display range	0.0 - 314.9 V	0.0 - ±314.9 V	
Accuracy	±1%rdg±4dgt		
Overload protection	Earth resistance:360V AC(10 Seconds) Earth Voltage:360V AC(10 Seconds)		
Applicable Standards	IEC 61010-1, CAT IV 100 V/CAT III 150 V/CAT II 300 V Pollution degree 3 IEC 61010-2-030,IEC 61010-031, IEC 61557-1, 5 IEC 60529 IP67, IEC 61326-1, -2-2		
Power source	LR6(AA)(1.5V) × 6		
Dimensions	121(L) × 188(W) × 59(D) mm (including case lid)		
Weight	Approx. 690g (including batteries and case lid)		
Accessories for 4105DL	7127B(Simplified measurement probe) 8041(Auxiliary earth spikes[2 spikes/1set]) 9121(Shoulder strap) 7267(Cable reel for Earth resistance tester (red)) 7268(Cable reel for Earth resistance tester (yellow)) 7271(Earth resistance test leads) 9190(Carrying case) , LR6(AA) × 6, Instruction manual		
Accessories for 4105DL-H	7127B(Simplified measurement probe) 8041(Auxiliary earth spikes[2 spikes/1set]) 9121(Shoulder strap) 7266(Earth resistance test leads[red-20m, yellow-10m, green-5m/1set]) 9191(Hard case) , LR6(AA) × 6, Instruction manual		
Optional	7272(Precision measurement cord set), 8259(Adapter for measurement terminal)		

\*1 For precision measurement, auxiliary earth resistance should be 100 Ω ±5% or less.  
\*2 At simplified measurement add ±0.10 Ω to the specified accuracy.  
\*3 Accuracy within the auxiliary earth resistance: ±5% rdg ±10 dgt.

KEW 4105DL Cable reel set model  
KEW 4105DL-H Hard case model

Innovative Cable reel with wire guide system to facilitate rewinding



## Optional Accessories



**MODEL 7272**  
Precision measurement cord set  
(7267, 7268, 7271, 8041, 9192)

### < MODEL 7272 Precision measurement cord set >



**MODEL 7267**  
Cable reel for Earth resistance tester (red)



**MODEL 7268**  
Cable reel for Earth resistance tester (yellow)



**MODEL 7271**  
Earth resistance test lead



**MODEL 8041**  
Auxiliary earth spikes [2spikes/1set]



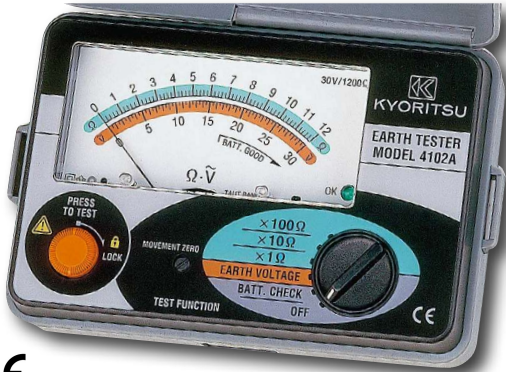
**MODEL 9192**  
Carrying case



**MODEL 8259**  
Adapter for measurement terminal  
[red, yellow, green/1 set]

# EARTH TESTERS

## MODEL 4102A



CE

4102A/4102A-H				
Earth resistance measurement	$\times 1\Omega$ Range	$\times 10\Omega$	$\times 100\Omega$	
	Measuring range	0 - 12 $\Omega$	0 - 120 $\Omega$	0 - 1200 $\Omega$
	Accuracy	$\pm 3\%$ of full scale		
Earth voltage measurement				
Measuring range	0 - 30 V AC (50,60Hz)			
	Accuracy			$\pm 3\%$ of full scale
Overload protection				
Earth resistance : 276V AC/DC (10 seconds)				
Earth voltage : 276V AC/DC (10 seconds)				
Applicable Standards				
IEC 61010-1 CAT III 300 V Pollution degree 2				
IEC 61010-2-030, IEC 61557-1, -5, IEC 60529 IP54				
Power source				
R6(AA)(1.5V) $\times 6$				
Dimensions				
105(L) $\times$ 158(W) $\times$ 70(D) mm (including case lid)				
Weight				
Approx. 600g (including batteries and case lid)				
Accessories				
7095A(Earth resistance test leads [red-20m, yellow-10m, green-5m/1set])				
7127B(Simplified measurement probe),				
8032(Auxiliary earth spikes[2 spikes/1set]), 9121(shoulder strap),				
R6(AA) $\times 6$ , Instruction manual				
Carrying case : 9084[Soft] : 9164[Hard]				
Optional				
7245A(Precision measurement cord set),				
8259(Adapter for measurement terminal)				

MODEL 4102A Soft case model

MODEL 4102A-H Hard case model

## KEW 4105A



CE

4105A/4105A-H			
Earth resistance measurement	20 $\Omega$	200 $\Omega$	2000 $\Omega$
	Measuring range	0.00 - 1999 $\Omega$	
	Display range	0.00 - 19.99 $\Omega$	0.0 - 199.9 $\Omega$
Accuracy	$\pm 2\%$ rdg $\pm 0.1$ $\Omega$		$\pm 2\%$ rdg $\pm 3$ dgt
Earth voltage measurement			
Measuring range	0 - 200 V AC (50,60Hz)		
	Display range		
Accuracy	$\pm 1\%$ rdg $\pm 4$ dgt		
Overload protection			
Earth resistance : 280V AC (10 seconds)			
Earth voltage : 300V AC (1 minute)			
Applicable Standards			
IEC 61010-1 CAT III 300 V Pollution degree 2			
IEC 61010-2-030, IEC 61557-1, -5, IEC 60529 IP54			
Power source			
R6(AA)(1.5V) $\times 6$			
Dimensions			
105(L) $\times$ 158(W) $\times$ 70(D) mm (including case lid)			
Weight			
Approx. 550g (including batteries and case lid)			
Accessories			
7095A(Earth resistance test leads [red-20m, yellow-10m, green-5m/1set])			
7127B(Simplified measurement probe),			
8032(Auxiliary earth spikes[2 spikes/1set]), 9121(shoulder strap),			
R6(AA) $\times 6$ , Instruction manual			
Carrying case : 9084 [Soft] : 9165[Hard]			
Optional			
7245A(Precision measurement cord set),			
8259(Adapter for measurement terminal)			

KEW 4105A Soft case model

KEW 4105A-H Hard case model

- In addition to the facility for precision measurement, test leads for simplified two wire measuring system also supplied as standard accessories. (unit can be hung from the neck for simplified measurement)
- The latest circuit design permits the instrument to operate with the minimum of influence from earth voltage and earth resistance of auxiliary earth spikes.
- Dust and drip proof. (designed to IEC 60529 IP54)
- Earth resistance value can be read directly from the scale.
- Designed to meet IEC 61010-1 safety standard.
- Capable of measuring earth voltage.
- Small and lightweight. Shock resistant new case material.
- 2mA measuring current permits earth resistance tests without tripping earth leakage current breakers in the circuit under test.
- Lead wire connection to C and P terminals and proper auxiliary earth resistance can be checked by "OK" lamp. Lead wire connection to C and E terminals is good when "OK" lamp is illuminated. (4102A)

## Optional Accessories



MODEL 7245A  
Precision measurement cord set  
(7228A, 8032, 8200-03, 9142)

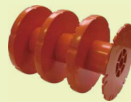
### < MODEL 7245A Precision measurement cord set >



MODEL 7228A  
Earth resistance test leads



MODEL 8032  
Auxiliary earth spikes  
[2 spikes/1set]



MODEL 8200-03  
Cord reels[3 pcs]



MODEL 9142  
Carrying case



MODEL 8259  
Adapter for measurement terminal  
[red, yellow, green/1 set]



Soft case model



Hard case model

EARTH TESTERS



# EARTH TESTERS

## KEW 4106



CE

EARTH TESTERS

- Earth resistance measurement with six ranges covering measurements from 0.001 Ω to 200 kΩ.
- Earth resistivity (ρ) measurement is automatically calculated after having set the distance between Auxiliary Earth Spikes (Wenner method).
- Automatic and Manual selection of the Test Current Frequency in four bands of 94/105/111/128Hz. In Automatic mode KEW 4106 will select the most suitable Frequency.
- Advanced Filtering method (based on FFT Fast Fourier Transform) reduces noise interference for obtaining stable measurements.
- Up to 800 measurement results can be saved in the memory and recalled on the display.
- The stored results can be transferred to a PC via USB adaptor (Model 8212-USB) by using software "KEW Report" which are included.
- Robust design with IP54 protection.

4106				
Function	Range	Resolution	Measuring range	Accuracy
Earth resistance Re (Rg at ρ measurement)	2Ω	0.001Ω	0.03 - 2.099Ω	±2%rdg.±0.03Ω
	20Ω	0.01Ω	0.03 - 20.99Ω	
	200Ω	0.1Ω	0.3 - 209.9Ω	
	2000Ω	1Ω	3 - 2099Ω	±2%rdg.±5dgt
	20kΩ	10Ω	0.03k - 20.99kΩ	
	200kΩ	100Ω	0.3k - 209.9kΩ	
Auxiliary earth resistance Rh, Rs				8% of Re+Rh+Rs
Earth resistivity ρ	2Ω	0.1Ω - 1Ω - m Autoranging	0.2 - 395.6Ω·m	ρ=2×π×a×Rg
	20Ω		0.2 - 3956Ω·m	
	200Ω		20 - 39.56kΩ·m	
	2000Ω		0.2 - 395.6kΩ·m	
	20kΩ		2.0 - 1999kΩ·m	
	200kΩ			
Series interference voltage Ust (A.C only)	50V	0.1V	0 - 50.9Vrms	±2%±2dgt
Frequency Fst	Autoranging	0.1Hz, 1Hz	40Hz - 500Hz	±1%±2dgt
Test Current	80mA(max)			
Memory capacity	800 data			
Communication interface	Model 8212-USB Optical Adaptor			
LCD	Dot-matrix 192 × 64, monochrome			
Over-range indication	"OL"			
Overload protection	between E-S(P) and between E-H(C) terminals AC280V / 10 sec			
Applicable Standards	IEC 61010-1 CAT IV 150V, CAT III 300V Pollution degree 2 IEC 61557-1,5, IEC 61326-1(EMC), IEC 60529(IP54)			
Power source	DC12V : sizeAA manganese dry battery (R6) × 8 (Auto power off: approx. 5 minutes)			
Dimensions	167(L) × 185(W) × 89(D)mm			
Weight	approx. 900g (including batteries)			
Accessories	7229A(Earth resistance test leads), 7238A(Simplified measurement test leads) 8032(Auxiliary earth spikes[2spikes/set]) × 2, 8200-04(Cord reels [4pcs]), 8212-USB(USB adaptor with "KEW Report(Software)") 8923(Fuse [0.5/250V]) × 1 (included), 1 (spares) 9121(Shoulder strap), 9125(Carrying case) R6 × 8, Instruction manual			

## KEW 4300

SIMPLIFIED EARTH TESTER



CE

4300	
Earth resistance ranges	200.0/2000Ω(Auto ranging) ±3%rdg±5dgt
Voltage ranges	AC:5.0 - 300.0V(45 - 65Hz) ±1%rdg±4dgt DC:±5.0 - 300.0V ±1%rdg±8dgt
Applicable Standards	IEC 61010-1 CAT III 300V pollution degree 2 IEC 61557-1,-5 IEC 61326-1,2-2, IEC 60529(IP40)
Power source	LR6(AA)(1.5V) × 2
Dimensions	232(L) × 51(W) × 42(D)mm
Weight	220g approx(including battery)
Accessories	7248(Test lead with Alligator clip and Flat test probe) 8072(CAT II Standard prod) 8253(CAT III Standard prod) 8017(Extension prod long) 9161(Carrying case) Instruction manual, LR6(AA) × 2

KEW4300 is simplified earth resistance tester (based on 2-pole method) that can be used for various distribution lines and electrical appliances and it also can measure AC/DC voltage. (As for AC voltages, true rms values can be obtained.)

- 200/2000Ω (2 ranges) : auto-ranging.
- Warning buzzer triggered at 100Ω or less.
- LED lights up when a large earth voltage is detected.
- Live circuit warning when 30V or higher voltage is detected. (KEW4300 detects voltage even when measuring resistances.)
- LED light for illuminating measurement points. (It turns on/off automatically in relation to the ambient brightness.)
- Small test current (max 2mA) not triggering RCD.

# EARTH CLAMP TESTERS

## MODEL 4200/KEW 4202



photo : 4202

Note: A single earthing can not be measured. (Only for Multiple Earthing system)

- The earth resistance from 0.05 to 1500Ω can be measured without the auxiliary earth spikes in multi-earthing systems
- True RMS leakage or phase current readings from 0.1mA to 30.0A provides vital additional information in earthing networks
- Filter function offers increased immunity to electrical noise and a Noise mark appears in excessively high noisy environments
- Memory function up to 100 data
- Bluetooth® communication (4202 only)

	4200	4202
Earth resistance	20.00/200.0/1500Ω	
Auto range	±1.5%±0.05Ω(0.00 - 20.99Ω)* ±2%±0.5Ω(16.0 - 99.9Ω) ±3%±2Ω(100.0 - 209.9Ω) ±5%±5Ω(160 - 399Ω) ±10%±10Ω(400 - 599Ω) Values are displayed, but accuracy isn't guaranteed(600 - 1580Ω)	
AC current (50Hz/60Hz)	100.0/1000mA/10.00/30.0A	
Auto range	±2%±0.7mA(0.0 - 104.9mA) ±2%(80mA - 31.5A)	
Operating indication	Earth resistance function : Constant voltage injection Current detection (Frequency : Approx. 2400Hz) Dual Integration AC current function : Successive approximation	
Over-range indication	"OL" is displayed when input exceeds the upper limit of a measuring range	
Response time	Approx. 7 seconds (Earth resistance) Approx. 2 seconds (AC current)	
Sample rate	Approx. 1 times per second	
Communication Interface	—	Bluetooth® Ver2.1 + EDR Class2
Power source	LR6/R6(AA)(1.5V) × 4	
Current consumption	Approx. 50mA (max.100mA)	Approx. 50mA (max.100mA)
Measurement time	Approx.12 hours (when R6 is used) Approx.24 hours (when LR6 is used)	Approx.5 hours (when R6 is used) Approx.21 hours (when LR6 is used)
Auto power-off	Turns power off about 10 minutes after the last button operation.	
Applicable Standards	IEC 61010-1 CAT IV 300V Pollution degree2 IEC 61010-2-032, IEC 61326 (EMC)	
Conductor size	Approx. φ32mm	
Dimension	246(L) × 120(W) × 54(D)mm	
Weight	Approx. 780g (including batteries)	
Accessories	R6(AA) × 4, Instruction manual 8304 (Resistor for operation check) 9166 (Carrying case[Hard])	LR6(AA) × 4, Instruction manual 8304 (Resistor for operation check) 9167 (Carrying case[Hard])

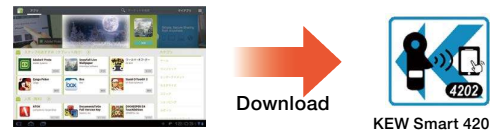
\*Crest factor ≤ 2.5 (50Hz/60Hz, peak value shall not exceed 60A)

\*4 counts or less are corrected to 0.

EARTH CLAMP TESTERS

Various useful functions are available on Android™ devices using Bluetooth® communication(4202 only)

Free Android software "KEW Smart 4202" is available on download site



※Communication charges may be incurred separately to download application

Recorded data can be transferred (up to 100 measurements)

Measurement results

Measured data with time and location info can be sent by E-mail

E-mail

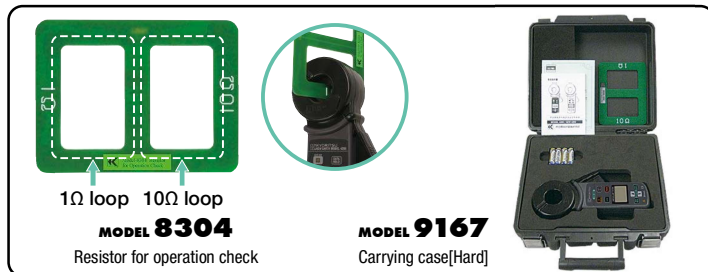
GPS data collection may be lost since the GPS signal differs depending on the location of satellites.  
To access GPS data and send emails, an Internet connection is required.  
Communication charges may be incurred separately for using these functions.

Comparator function informs when the measured value is lower/higher than the preset value

Beep!

Beep!

## Accessories



※ Available on the Android devices equipped with Bluetooth® / GPS / Data communication function.

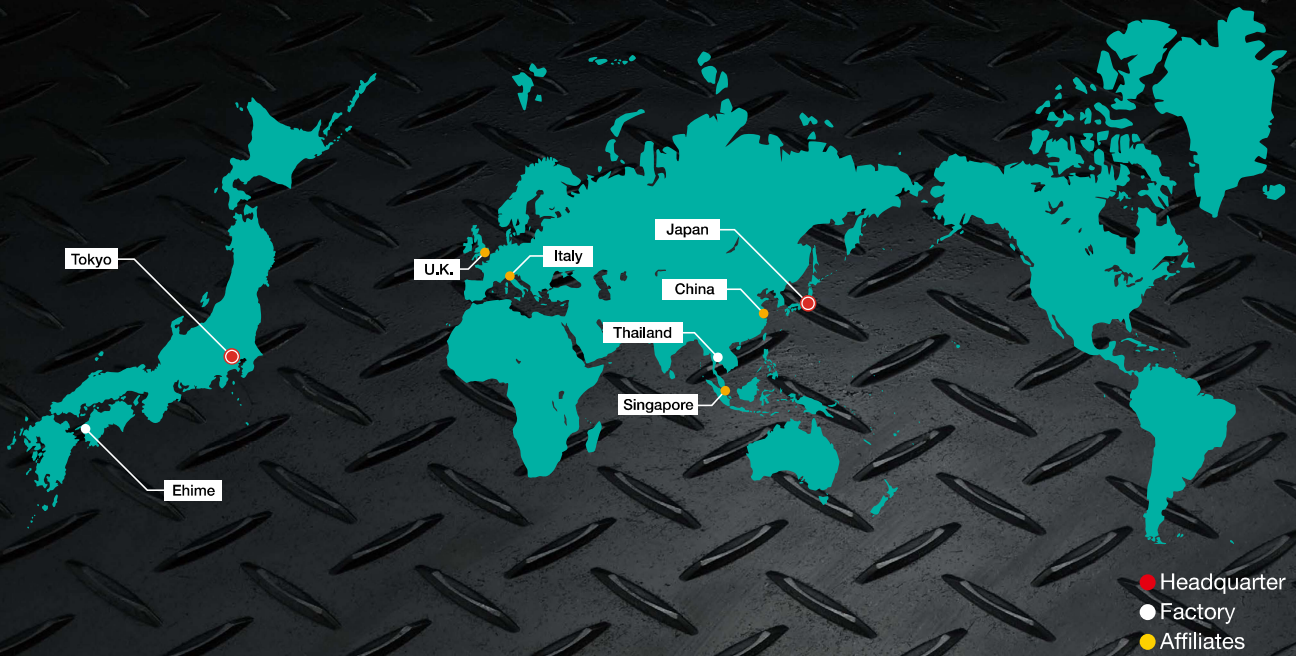
Max communication distance :10m

Bluetooth® is a registered trademark of the Bluetooth SIG, Inc.

Android is a registered trademark of the Google Inc.

## Earth Clamp Line up

	4200	4202
Comon functions	Earth resistance, AC current, Back light function, Data hold function, Auto power off, Memory function	
Individual functions	—	Bluetooth® communication



## KYORITSU GLOBAL NETWORK

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E-mail: [info@kew-ltd.com.cn](mailto:info@kew-ltd.com.cn)



  
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### Safety Warnings :

Please read the "Safety Warnings" in the instruction manual supplied with the instrument thoroughly and completely for correct use. Failure to follow the safety rules can cause fire, trouble, electrical shock, etc. Therefore, make sure to operate the instrument on a correct power supply and voltage rating marked on each instrument.

■ For inquires or orders :

