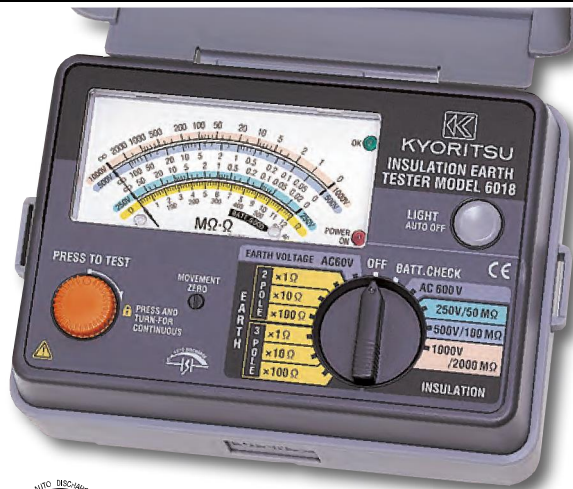


MULTI FUNCTION TESTERS

MODEL 6018



3 in 1

Insulation

250/500/1000V

ACV

600V

Earth

2/3 POLE 12/1201200Ω

	6018
Insulation testing	
Test voltage	250V/50MΩ 500V/100MΩ 1000V/2000MΩ
Accuracy	±5%/rdg
Earth resistance	
Simplified precision measurement	12Ω/120Ω/1200Ω
Accuracy	±3% of full scale value
AC voltage	
0 - 600V AC	±3% of full scale value
Earth voltage	
0 - 60V AC	±3% of full scale value
General	
Applicable standards	IEC 61010-1 CAT III 600V pollution degree 2 IEC 61010-031 IEC 61557
Power source	F6(AA) × 8
Dimensions	130(L) × 183(W) × 100(D)mm
Weight	1000g approx. (including batteries)
Accessories	7103A (Test leads with remote control switch) 7161A (Flat test prod) 7131B (Safety crocodile clips [black]) 8017 (Extension prod) 9092 (Card case) 9121 (Shoulder strap) F6(AA) × 8 Instruction manual
Optional	7100A (Precision measurement cord set) 7115 (Extension probe) 8016 (Hook type prod)

Accessories



MODEL 7103A
Test lead with remote control switch
Line 1,000mm / Earth 1,550mm



MODEL 7131B
Safety crocodile clip

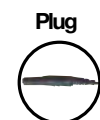


MODEL 7161A
Flat test prod



MODEL 8017
Extension prod

Optional Accessories



MODEL 7100A
Precision measurement cord set
(7095A, 8032, 8200-03, 9091)



MODEL 7115
Extension probe



MODEL 8016
Hook type prod

MULTI FUNCTION TESTERS

KEW 6010B



- Designed to IEC 61010-1, IEC 61557
- Data Memory : 300 measured results
- Download Results to PC by Using 8212 Data Communication Adaptor through Optical RS-232C Port

5 in 1

Continuity

20/200Ω

Loop

20/2000Ω

Uc

100V

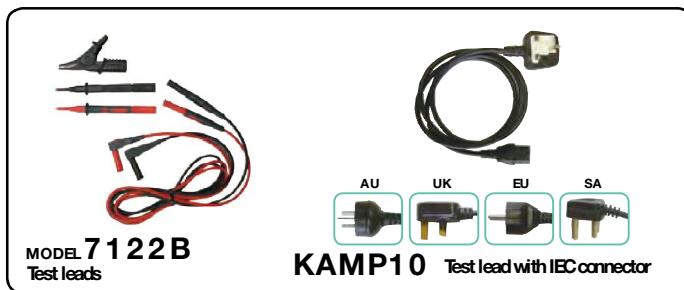
Insulation

500/1000V

RCD

10/30/100/300/500mA

Accessories



		6010B
Continuity testing		
Measuring range		20/200Ω (Auto-ranging)
Open circuit voltage		⊠6V
Short circuit current		⊠200mA
Accuracy		⊠(3%/rdg⊠3dgt)
Insulation resistance testing		
Measuring range		20/200MΩ (Auto-ranging)
Test voltage		500/1000V
Open circuit voltage		⊠20% -0%
Rated current		⊠1mA
Accuracy		⊠(3%/rdg⊠3dgt)
LOOP Impedance testing		
Impedance range		20Ω/2000Ω
Rated voltage		230V⊠10% -15% [50Hz]
Normal test current		20Ω: 25A/10ms 2000Ω: 15mA/350ms max.
Accuracy		⊠(3%/rdg⊠8dgt)
RCD testing		
Test current	⊠1/2, ⊠1	10, 30, 100, 300, 500mA (2000ms)
(Test current duration)	FAST	150mA (50ms)
	DC	10, 30, 100, 300mA (2000ms), 500mA (200ms)
	Auto ramp	Goes up by 10% from 20% to 110% of IΔn. 300ms ⊠ 10
Rated voltage		230V⊠10% -15% 50Hz
Accuracy	Test current	⊠1/2: -8% -2% ⊠ 1, Fast: ⊠2% ⊠8% DC: ⊠10% Auto ramp: ⊠4%
	Trip time	⊠(1%/rdg⊠3dgt)
Uc testing		
Measuring range		100V
Rated voltage		230V⊠10% -15% [50Hz]
Test current		5mA at IΔn⊠10mA 15mA at IΔn⊠30/100mA 150mA at IΔn⊠300/500mA
Accuracy		⊠5% ⊠15%/rdg ⊠8dgt
General		
Applicable standards		IEC 61010-1 CAT III 300V Pollution degree 2 IEC 61557-1, 2, 3, 4, 6, 10, IEC 60529 (IP40)
Power source		F6 or LF6 ⊠ 8
Dimensions		175(L) ⊠ 115(W) ⊠ 86(D) mm
Weight		840g approx.
Accessories		7122B (Test leads) KAMP10 (Test lead with IEC connector)⊠ 9092 (Cord case) 9148 (Shoulder strap) Shoulder pad Instruction manual F6(AA)⊠ 8
Optional		7133B (Distribution board test leads) 8212-RS232C (RS232C adaptor with "KEWReport (Software)") 8212-USB (USB adaptor with "KEWReport (Software)")

⊠ KAMP10 (EU): European SHUKO plug KAMP10 (UK): British plug (13A)
KAMP10 (AU): Australian plug KAMP10 (SA): South african plug

Optional Accessories

MODEL 8212-USB
USB adaptor with "KEWReport (Software)"



MODEL 8212-RS232C
RS232C adaptor with "KEWReport (Software)"



MODEL 7133B
Distribution board test leads



Specifications

	MODEL 8212-USB	MODEL 8212-RS232C
Communication method	USB Ver.1.1	-
Driver type	Virtual COM port	-
Communication speed	19200bps max.	9600bps max.
Dimensions	Adaptor: 53(L)⊠36(W)⊠19(D)mm Cable: 2m approx.	Adaptor: 61(L)⊠36(W)⊠19(D)mm Cable: 1.6m approx.
Operating temperature and humidity	-10-⊠50°C 85% RH or less with no condensation	0-⊠40°C 85% RH or less with no condensation
Storage temperature and humidity	-20-⊠60°C 85% RH or less with no condensation	

System Requirements

OS: Windows® Vista/7(32/64bit)/8(32/64bit) Hard-disk: Space required 20Mbyte or more
Display: XGA (Resolution 1024 x 768 dots) or more Others: With CD-ROM drive and USB port

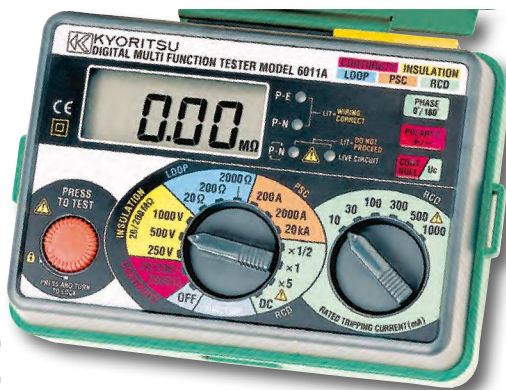
⊠Windows® is a registered trade mark of Microsoft in the United States.



"KEW Report" Software for report
"KEW Report" transfers measurement data from the KEW6010B to a PC via MODEL 8212-USB or MODEL 8212-RS232C.

MULTI FUNCTION TESTERS

MODEL 6011A



CE

The Model 6011A can perform FIVE separate test functions: insulation, continuity, earth loop impedance, prospective short circuit current and RCD trip testing in full compliance with IEC61557.

5 in 1

Continuity

20/200/2000Ω

Loop

20/200/2000Ω

PSC

200/2000/20kA

Insulation

250/500/1000V

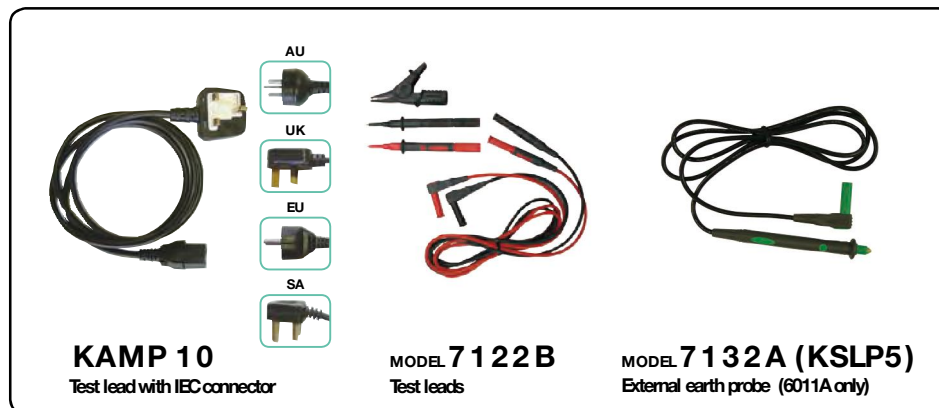
RCD

10/30/100/300/500/1000mA

	6011A
Continuity testing	
Measuring ranges	20/200/2000Ω(Autoranging)
Open circuit voltage	⊠6V
Short circuit current	⊠200mADC
Accuracy	⊠(1.5%/rdg⊠3dgt)
Insulation testing	
Measuring ranges	20/200MΩ(Autoranging)
Test voltage	250/500/1000V DC
Output voltage on open circuit	250V⊠40% -0% 500V⊠30% -0% 1000V⊠20% -0%
Rated current	⊠1mA
Accuracy	⊠(1.5%/rdg⊠3dgt)
Loop impedance testing	
Rated voltage	230V AC⊠10% -15%⊠50Hz
Voltage measuring range	100 - 250V AC⊠50Hz
Impedance ranges	20/200/2000Ω
Nominal test current	25A(20Ω range) 15mA(200Ω range) 15mA(2000Ω range)
Accuracy	20Ω range ⊠(3%/rdg⊠4dgt) 200Ω range ⊠(3%/rdg⊠8dgt) 2000Ω range ⊠(3%/rdg⊠4dgt)
PSC testing	
Rated voltage	230V AC⊠10% -15%⊠50Hz
PSC ranges	200A(15mA Test current) 2000A(25A Test current) 20kA(25A Test current)
Accuracy	PSC accuracy derived from measured loop impedance specification and measured voltage specification
RCD testing	
Rated voltage	230V AC⊠10% -15%⊠50Hz
Trip current settings	RCD x 1/2 : 10,30,100,300,500,1000mA RCD x 1 : 10,30,100,300,500,1000mA RCD x 5 : 10,30,100,300mA (on x 5 range max current 1A)
Trip current duration	RCD x 1/2 x 1 : 2000ms RCD fast : 50ms
Accuracy	Trip current ⊠10% -0% of test current at 230V Trip time ⊠(1%/rdg⊠3dgt)
General	
Applicable standards	IEC 61010-1 CAT III 300V pollution degree 2 IEC 61557 IEC 60529(IP54)
Power source	F6 or LF6 x 8
Dimensions	130(L) x 183(W) x 100(D)mm
Weight	1100g approx.
Accessories	KAMP10(Test lead with IEC connector)⊠ 7122B(Test leads), 7132A(KSLP5)(External earth probe) 9092(Card case), 9121(Shoulder strap) F6(AA) x 8, Instruction manual
Optional	7133B(Distribution board test leads)

⊠KAMP10(EU): European SHUKO plug KAMP10(UK): British plug(13A)
KAMP10(AU): Australian plug KAMP10(SA): South african plug

Accessories



Optional Accessory

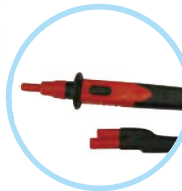


MULTI FUNCTION TESTERS

KEW **6016**



A single rotary dial to make your selection.



Slim remote probe with test button as well as a lockdown option on the instrument for the most convenient hands free testing.



10 in 1

Continuity 20/200/2000Ω	Insulation 250/500V	Loop 20/200/2000Ω
PSC 2000A/20kA	PFC 2000A/20kA	RCD 10/30/100/300/500/1000mA
Earth 20/200/2000Ω	ACV 500V	
Phase rotation	Frequency	

Continuity Measurement

Continuous testing can be carried out by use of the test button lockdown feature. A selectable buzzer gives instantaneous indication of continuity. Null facility eliminates the test lead resistance from the results, the nulled value is retained even if the instrument is switched off. Live circuit warnings are given by a flashing LED, buzzer and indication on the display.

Insulation Measurement

Three selectable test voltages 250V, 500V and 1000V. An auto-discharge function ensures that circuits are not hazardous after testing. A red LED gives warning of high voltage output during testing and discharging of the circuit. In case of connecting to a live circuit, a live circuit warning is given by flashing LED, buzzer and indication on the display.

Loop Impedance Measurement

A patented (ATT) low current loop impedance test enables high accuracy loop measurements (up to 0.01 ohm) and quick testing without tripping RCDs. A high current alternative is selectable for even higher accuracy and instantaneous results. The subsequent test will default to the low current test, this saves any inadvertent tripping of the RCD. The KEW6016 allows also for phase to phase loop tests.

PSC / PFC Measurement

The Prospective Short Circuit Current (PSC) and Prospective Fault Current (PFC) are automatically calculated and shown on the display. As loop testing, the function has low and high test current options with the default to low current to avoid inadvertent tripping of RCDs.

RCD Measurement

The KEW 6016 has a comprehensive RCD test feature for RCD type AC (Alternative Currents), RCD type A (Pulsating Direct Currents), General and Selective (delayed). Measures at 1/2 x, 1x, 5x of nominal RCD current. It also has Ramp Test and Auto test where all results are shown on one screen. Touch voltage limit can be selected for 25V or 50V depending on application.

Earth Measurement

Using the classical Volt-Amper method with two auxiliary earth spikes and without external power source. All test leads and spikes are supplied as standard accessories.

Phase rotation

KEW6016 can check the phase rotation of three phase lines with clear indication of the sequence on the display.

Voltage Measurement

In addition to the voltage measurement, this function gives also the Frequency of the voltage under test.

Memory Function

Save and display up to 1000data.

Hands Free Testing



The instrument features a test button in the probe and a lockdown test button for hands free operation.

RCD (ELCB)-Auto Test

Function	Test Parameters
F1	AUTO
F2	30 mA
F3	5ms
F4	15ms

Auto test enables complete testing of RCD (6 tests) while the operator simply stands by and resets the RCD. All the results are displayed on one screen no need to scroll.

MULTI FUNCTION TESTERS


6016

Continuity	
Range	20/200/2000Ω (Auto-ranging)
Open circuit voltage (DC)	5V±20% ⁽¹⁾
Short circuit current	200mA
Accuracy	±0.1Ω (0 - 0.19Ω) ±2%rdg+8dgt (0.2 - 2000Ω)
Insulation resistance	
Range	20/200/2000MΩ (Auto-ranging)
Open circuit voltage (DC)	20/200MΩ 250V+25%-0%
	20/200/2000Ω 500V+25%-0%, 1000V+20%-0%
Rated current	20/200MΩ 1mA cr 250kΩ
	20/200/2000Ω 1mA cr 500kΩ, 1MΩ
Accuracy	20/200MΩ ±2%rdg+6dgt (0 - 19.99MΩ)
	20/200/2000Ω ±2%rdg+6dgt (20 - 200MΩ) ±2%rdg+6dgt (0 - 199.9MΩ) ±5%rdg+6dgt (200 - 2000MΩ)
Loop impedance	
Function	L-PE, L-PE (ATT), L-N / L-L
Rated voltage	L-PE, L-PE (ATT): 100 - 260V (50/60Hz)
	L-N: 100 - 300V (50/60Hz)
	L-L: 300 - 500V (50/60Hz)
Nominal test current at Ω external loop:	20Ω: 6A/20ms
	200Ω: 2A/20ms
Mgitude/Duration at 230V	2000Ω: 15mA/500ms
	L-N: 6A/60ms N-PE: 10mA/approx. 5s
Range	20/200/2000Ω Auto-Ranging (L-N 20Ω)
Accuracy	L-PE, L-N/L-L: ±3%rdg+4dgt ⁽²⁾ ±3%rdg+8dgt ⁽³⁾ L-PE (ATT): ±3%rdg+6dgt ⁽²⁾ ±3%rdg+8dgt ⁽³⁾
PSC (L-N/L-L) / PFC (L-PE)	
Function	PSC, PFC, PFC (ATT)
Rated voltage	PSC: 100 - 500V 50/60Hz
	PFC, PFC (ATT): 100 - 260V 50/60Hz
Nominal test current at Ω external loop:	PSC: 6A/20ms
Mgitude/Duration at 230V	PFC: 6A/20ms, 2A/20ms, 15mA/500ms
	PFC (ATT): L-N: 6A/60ms, N-PE: 10mA/approx. 5s
Range	2000A/20kA Auto-Ranging
Accuracy	PSC/PFC accuracy is derived from measured loop impedance specification and measured voltage specification
RCD	
Function	X1/2, X1, X5, Ramp, Auto, Uc
Trip current setting	X1/2, X1, Uc: 10/30/100/300/500/1000mA
	X5: 10/30/100mA Ramp: 10/30/100/300/500mA


Trip current Duration	X1/2:	2000ms
	X1:	G:550ms / S:1000ms
	X5:	410ms
Rated voltage	Ramp:	Goes up by 10% from 20% to 110% G:300ms/S:500msX10 times
	X1/2, X1, X5, Ramp, Uc:	230V+10%-15% 50/60Hz
Accuracy	Auto:	Depending on the accuracy at each function. Measurement sequence: X1/20°→X1/2180°→X10°→X1180°→X50°→X5180° Measurements with X5 are not carried out for RCDs with nominal current of 100mA or more
	ACType AType	X1/2: -8% - 2%, X1, X5: +2% - +8%, Ramp: ±4% Uc: +5% - +15%rdg±8dgt
Earth		
Range	20/200/2000Ω Auto-Ranging	
Accuracy	20Ω:	±3%rdg+0.1Ω
	20/200Ω:	±3%rdg+3dgt (Auxiliary earth resistance 100±5%)
Phase Rotation		
Rated Voltage	50-500V 50/60Hz	
Remarks	Correct phase sequence: are displayed "1.2.3" and Reversed phase sequence: are displayed "3.2.1" and	
Volts		
Function	Volts	Frequency
Rated voltage	25 - 500V 45 - 65Hz	
Measuring range	25 - 500V	45 - 65Hz
Accuracy	±2%rdg+4dgt	±0.5%rdg+2dgt
General		
Applicable standards	IEC61010-1 CAT III: 300V(500V L to L) Pollution degree 2 IEC61557-1,2,3,4,5,6,7,10 IEC60529 (IP40), IEC61326 (EMC)	
Power source	LP6 × 8	
Dimensions	136(L) × 235(W) × 114(D)mm	
Weight	1350g (including batteries)	
Accessories	Minitest lead ⁽¹⁾ 7196A (Test leads with remote control switch)	
	7188A (Distribution board fused test leads)	
	8032 (Auxiliary earth spikes) [2 spikes/set]	
	8212-USB (USB adaptor with KEW Report (Software))	
	9014 (Card case), 9142 (Carrying Case), 9121 (Shoulder strap), Buckle Battery Instruction manual	
	Optional 8212-RS232C (RS232C adaptor with KEW Report (Software))	

- ⁽¹⁾: Voltages are output when measurement resistance is under 2100 ohm
- ⁽²⁾: 230V±10%-15%
- ⁽³⁾: Other voltages except for ⁽²⁾
- ⁽⁴⁾: 7187A: British plug, 7218A: (EU) European SHUKO plug, 7221A: (SA) South african plug, 7222A: (AU) Australian plug


Accessories




MODEL 7188A
Distribution board fused test leads



MODEL 7196A
Test leads with remote control switch




Main test lead




7187A
7221A
7218A
7222A


Plug



MODEL 7228A
Earth resistance test leads



MODEL 8032
Auxiliary earth spikes
[2 spikes/set]



MODEL 9142
Carrying Case

Optional Accessories



MODEL 8212-USB
USB adaptor with "KEW Report (Software)"



MODEL 8212-RS232C
RS232C adaptor with "KEW Report (Software)"

"KEW Report" Software for report
"KEW Report" transfers measurement data from the KEM6016 to a PC via MODEL8212-USB or MODEL8212-RS232C



System requirements
OS: Windows® Vista/7(32/64bit)/8(32/64bit)
Display: ≥GA (Resolution 1024 x 768 dots) or more
Hard-disk: Space required 20Mbyte or more
Others: With CD-ROM drive and USB port
®Windows® is a registered trademark of Microsoft in the United States.

MULTI FUNCTION TESTERS