

## Multifunction Tester KEW 6016

## The most User Friendly Multifunction Tester complete with Anti-Trip Technology



KYORITSU ELECTRICAL INSTRUMENTS WORKS,LTD. http://www.kew-ltd.co.jp

# KEV/6016

# **KEW 6016 Multifunction tester makes 'Ease of Use' it's top priority with such features as:**



Advanced Anti-Trip Technology (ATT) to avoid RCDs to trip during loop testing.



The most User

A single rotary dial to make your selection and a fine Dot Matrix display gives multiple information on one screen.





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

### Auto test (RCD Measurement)

Auto test enables complete testing of RCD (6 tests) while you simply stand by and reset the RCD. All the results are displayed on one screen. No need to scroll.

#### Null facility (Continuity Measurement)

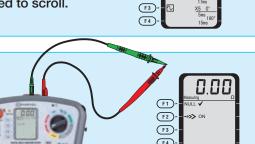
When you press Null (F1) button, the test leads resistance will be eliminated and the display will read zero ohm. The nulled value will be stored, even if the instrument is switched off, unless the nulling is cancelled.

#### **MEMORY and PC SOFTWARE**

KEW6016 has a memory of up to 1000 results and it is supplied with a comprehensive PC software that allows preparing complete reports with 3 levels of description for every stored result such as Circuit number, Board number and Site number.







(F1)

F2



### Friendly Multifunction Tester complete with Anti-Trip Technology

#### **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. Live circuit warnings are given by a flashing LED, buzzer and indication on the display. 200mA test current complies with IEC61557.

#### Insulation Measurement

3 selectable test voltages : 250V, 500V, 1000V. Measurement up to 2000MΩ (auto ranging) with quick testing. 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. Live circuit warnings are given by a flashing LED, buzzer and indication on the display. High test current complies with IEC61557.

#### Loop Impedance Measurement

A patented (ATT) low current loop impedance test enables high accuracy loop measurements (resolution  $0.01\Omega$ ) and quick testing without tripping RCDs rated at 30mA or more.

A high current alternative is selectable for even higher accuracy and instantaneous results. The KEW6016 allows also for phase to phase loop tests from 100 to 500V and 2-wire or 3-wire measurements.

#### **PSC / PFC Measurement**

Prospective Short Circuit Current (PSC) and Prospective Fault Current (PFC) are automatically calculated and shown on the display in auto ranging. As loop testing, the function has low and high test current options, phase to phase tests from 100 to 500V and 2-wire or 3-wire measurements.

#### (RCD Measurement)

KEW6016 has a comprehensive RCD test feature for RCD type AC (Alternative Current), 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 functions 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 from 25 to 500V AC and DC, this function gives also the Frequency of the voltage under test.

#### WE OFFER MORE.....

#### Demo Panel KEW 8205A

This panel demonstrates all the functions of KEW6016. Also, other Kyoritsu single function testers like Insulation, Continuity, Loop, RCD or Earth testers can be demonstrated with this panel. Useful for trainings, seminars, exhibitions and schools of electrical engineers.

#### A PRACTICAL GUIDE

#### TO THE MEASUREMENTS ON ELECTRICAL INSTALLATIONS

In accordance with IEC 60364-6 standard

With KEW6016 and the practical guide, you can test in accordance with IEC 60364-6. You may download the guide from Kyoritsu web-site: http://www.kew-ltd.co.jp

#### **Multi Languages**

6 languages (English, French, Italian, Spanish, Russian, Polish) are available for LCD display, Instruction manual and PC software.





#### **KEW 6016 SPECIFICATIONS**

Continuity			
Range		20/200/2000Ω (Auto-ranging)	
Open circuit voltage (DC)		5V+20% <sup>(*1)</sup>	
Short circuit current		> 200mA	
		±0.1Ω (0~0.19Ω )	
Accuracy		$\pm 2\%$ rdg+8dgt (0.2~2000 $\Omega$ )	
nsulation resistance			
Range		20/200/2000MΩ (Auto-ranging)	
Open circuit voltage (DC)	20/200MΩ	250V+25% -0%	
	20/200/2000MΩ	500V+25% -0%, 1000V+20% -0%	
	20/200MΩ	1mA or > @ 250kΩ	
Rated current	20/200/2000MΩ	1mA or > @ 500k $\Omega$ , @ 1M $\Omega$	
	20/200/2000MΩ	±2%rdg+6dgt (0~19.99MΩ)	
		$\pm 5\%$ rdq+6dqt (20~200M $\Omega$ )	
Accuracy		±2%rdg+6dgt (0~199.9MΩ)	
	20/200/2000MΩ	$\pm 5\%$ rdg+6dgt (200~2000M $\Omega$ )	
_oop impedance			
Function		L-PE, L-PE (ATT), L-N / L-L	
	L-PE, L-PE (ATT):	100~260V (50/60Hz)	
Rated voltage	L-N:	100~300V (50/60Hz)	
	L-L:	300~500V (50/60Hz)	
	20Ω:	6A/20ms	
Nominal test current at 0Ω	200Ω:	2A/20ms	
external loop:	2000Ω:	15mA/500ms	
Magnitude/Duration(*2)	L-N:	6A/60ms	
	N-PE:	10mA/approx. 5s	
Range		$20/200/2000\Omega$ Auto-Ranging (L-N < $20\Omega$ )	
	L-PE, L-N/L-L:	±3%rdg+4dgt* <sup>3</sup> ±3%rdg+8dgt* <sup>4</sup>	
Accuracy	L-PE (ATT):	±3%rdq+6dqt* <sup>3</sup> ±3%rdq+8dqt* <sup>4</sup>	
PSC (L-N/L-L) / PFC (L-PE)	/		
Function		PSC, PFC, PFC (ATT)	
Detections	PSC:	100~500V 50/60Hz	
Rated voltage	PFC, PFC (ATT):	100~260V 50/60Hz	
Nominal test current at $0\Omega$	PSC:	6A/20ms	
external loop:	PFC:	6A/20ms, 2A/20ms, 15mA/500ms	
Magnitude/Duration(*5)	PFC (ATT):	L-N: 6A/60ms, N-PE: 10mA/approx. 5s	
Range		2000A/20kA Auto-Ranging	
Acouroov		PSC/PFC accuracy is derived from measured loop impedance	
Accuracy		specification and measured voltage specification	
RCD			
Function		X1/2, X1, X5, Ramp, Auto,Uc	
	X1/2, X1,Uc:	10/30/100/300/500/1000mA	
Trip current setting	X5:	10/30/100mA	
	Ramp:	10/30/100/300/500mA	

RCD							
		)		2000ms			
	Trip current Duration		X1:	G:550ms / S: 1000ms			
			X5:	410ms			
			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			
			Auto:	Depending on the accuracy at each function. Measurement sequence: $X1/2 \ 0^\circ \rightarrow X1/2 \ 180^\circ \rightarrow X1 \ 0^\circ \rightarrow X1 \ 180^\circ \rightarrow X5 \ 0^\circ \rightarrow X5 \ 180^\circ$ Measurements with x5 are not carried out for RCDs with nominal current of 100mA or more.			
	Accuracy Trip current		AC Type	X1/2: -8%~-2%, X1, X5: +2%~+8%, Ramp: ±4%			
			А Туре	X1/2: -10%~0%, X1, X5: 0%~+10%, Ramp: ±10% Uc: +5%~+15%rdg±8dgt			
Earth							
	Range			20/200/2000 $\Omega$ Auto-Ranging			
	Accuracy		20Ω:	±3%rdg+0.1dgt			
	Accuracy		200/2000Ω:	±3%rdg+3dgt (Auxiliary earth resistance 100±5%)			
Ph							
	Rated Voltage		50-500V 50/60Hz				
	Remarks		Correct phase sequence: are displayed "1.2.3" and $\phi$ mark Reversed phase sequence: are displayed "3.2.1" and $\phi$ mark				
Volts							
	Function		Volts	Frequency			
	Rated voltage		25~500V, 45~65Hz				
	Measuring range		25~500V	45~65Hz			
	Accuracy		±2%rdg+4dgt	±0.5%rdg+2dgt			
Ge	neral						
	Applicable standards			IEC 61010-1 CAT.III 300V(500V L to L) Pollution degree 2 IEC 61010-031, IEC 61557-1,2,3,4,5,6,7,10 IEC 60529(IP40), IEC 61326(EMC)			
	Power source Dimensions Weight		LR6×8				
			136(L) × 235(W) × 114(D)mm				
			1350g (including batteries.)				
	Accessories			7218(Mains cord) <sup>(*6)</sup> 7196(Remote test lead) 7188(Distribution board fused test leads) 7228(Earth test leads) 8032(Auxiliary earth spikes) 8212-USB(USB adaptor with KEW Report(Software)) Cord case, 9142(Carrying Case), 9121(Shoulder strap), Buckle, Battery, Instruction manual			
	Optional			8212-RS232C(RS232C adaptor with KEW Report(Software))			
*1							
	*1: Voltages are output when measurement resistance is under 2100 ohm.						

\*2. at 230V \*4: Other voltages except for \*3

230V+10%-15%

\*3: \*5: at 230V \*6: 7187(Main cord [UK]), 7221(Main cord [SA]), 7222(Main cord [AU])

#### **EVERYTHING YOU NEED ....**

KEW6016 comes complete with everything you need for testing an electrical installation according to the IEC 60364-6.

A full set of new fused test leads is included. The practical slim leads offer hands free operation via a test button located within the probe itself. The safety test leads have an overmould for maximum grip and are extremely robust.

Two auxiliary spikes and test leads for earth measurements, PC software for downloading and interpreting of data and interface cable are included.

The instrument also comes in a soft carry case, a quick reference guide locates inside the integrated case lid, and it is supplied with a calibration certificate.





Please read the "Safety Warnings" in the instruction manual supplied with the instrument thoroughly and completely Safety Warnings : 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 :



#### **KYORITSU ELECTRICAL INSTRUMENTS** WORKS, LTD.

No.5-20, Nakane 2-chome, Meguro-ku, Tokyo, 152-0031 Japan Phone:81-3-3723-0131 Fax:81-3-3723-0152

E-mail:info@kew-ltd.co.jp Factory: Ehime

#### http://www.kew-ltd.co.jp

