

# KEW MULTI FUNCTION TESTERS

## MODEL 6020/6030



Model 6020 and 6030 are a heavy duty multifunction tester primarily developed to meet the demand from the power companies and safety control and maintenance industry. These instruments are fully water proof to IP57 rating with best consideration given to the possible use at restoration work in the rain following disaster caused by a typhoon. They are designed to withstand use under the most rigorous environmental conditions. Model 6020 and 6030 perform four test functions - insulation resistance (3 test voltages), earth resistance, voltage testing and phase check.

## Features

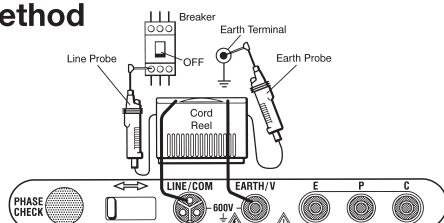
- Water resistant (IEC60529 IP57)
- Test leads are stored in a cord reel module
- Easy-to-read large digital display
- The instrument automatically turns itself off in about 30 minutes to conserve battery life, if no push buttons are pressed.
- Illumination on test probes for work at night or in dimly lit locations
- Display back-light to improve legibility in poor lighting conditions
- Autoranging; three ranges for insulation resistance, two ranges for earth resistance and two AC voltage ranges
- The instrument and all accessories in one carrying case
- AC voltage range;
  - True RMS sensing permits accurate measurement of voltage with distortion and harmonics generated by equipment using SCRs or TRIACs.
- Insulation resistance range;
  - Three test voltages; Model 6020 (125V, 250V, 1000V)
  - Three test voltages; Model 6030 (250V, 500V, 1000V)
  - 1mA test current at the minimum load.
  - Automatically releases electric charges stored in the circuit under test.
  - Remaining charges can be observed on AC voltage range
  - Remote control switch on a test probe
- Earth resistance range;
  - Checks resistance of auxiliary earth bars
  - Can make both simplified and normal measurement
- Phase test;
  - LEDs indicate whether phase sequence is correct or reversed as well as open phase, if any.
  - Rated voltage from 100V to 600V AC

## Specifications

### INSULATION TEST SPECIFICATIONS

| MODEL                                      | Model 6020                                                                            | Model 6030 | Model 6020/6030                         |
|--------------------------------------------|---------------------------------------------------------------------------------------|------------|-----------------------------------------|
| Test Voltage                               | 125V/250V                                                                             | 250V/500V  | 1000V                                   |
| Measuring Ranges (MΩ)                      | 0~1.999MΩ<br>1.00~19.99MΩ<br>10.0~199.9MΩ<br>(3 auto ranges)                          |            | 0~19.99MΩ<br>10.0~199.9MΩ<br>100~1999MΩ |
| Accuracy                                   | ±2%rdg ±3dgt ±10%rdg (on 1000-2000MΩ)                                                 |            |                                         |
| Open Circuit Voltage                       | +20% -0% of Rated Test Voltage                                                        |            |                                         |
| Rated Test current                         | 1mA DC +20%-0%                                                                        |            |                                         |
| Short Circuit current                      | 1.3mA DC approx.                                                                      |            |                                         |
| Effect of AC Component of Terminal Voltage | Within ±10% of reading when 5uF capacitor is connected in parallel on insulation test |            |                                         |
| Overload Protection                        | 1200V (DC + ACp-p) for 10 seconds                                                     |            |                                         |

### Measuring Method

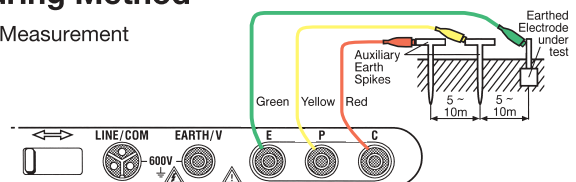


### EARTH RESISTANCE TEST SPECIFICATIONS

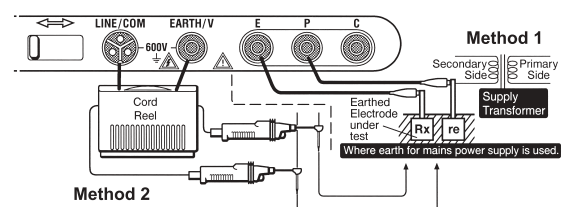
|                      |                                                        |
|----------------------|--------------------------------------------------------|
| Measuring Ranges (Ω) | 0~199.9Ω<br>100~1999Ω (2 auto ranges)                  |
| Accuracy             | ±2%rdg ±3dgt<br>(at 500Ω auxiliary earth resistance)   |
| Measuring Method     | By constant current inverter 820Hz approx. 2mA approx. |
| Overload Protection  | 200V AC for 10 seconds between measuring terminals     |

### Measuring Method

#### Precision Measurement



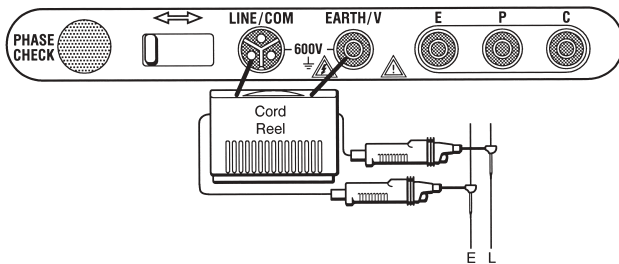
#### Simplified Measurement



## VOLTAGE TEST SPECIFICATIONS

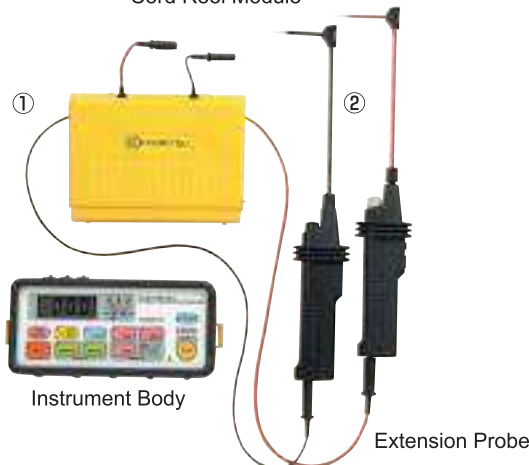
|                      |                                       |
|----------------------|---------------------------------------|
| Measuring Ranges (V) | 0~199.9/100~600V (2 auto ranges)      |
| Accuracy             | $\pm 1\% \text{rdg} \pm 4 \text{dgt}$ |
| Sensing              | True RMS                              |
| Input Impedance      | 2M $\Omega$                           |
| Overload Protection  | 900V AC for 1 minute                  |

## Measuring Method



## Accessories

Cord Reel Module



Assorted Test Leads



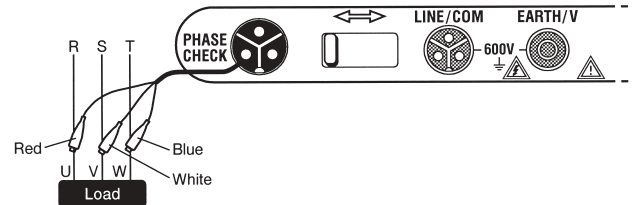
|   | Description                                               | Model No. | Quantity |
|---|-----------------------------------------------------------|-----------|----------|
| ① | Cord Reel Module                                          | 7092      | 1pce     |
| ② | Extension Probe                                           | 8082      | 1set     |
| ③ | Test Leads (large)                                        | 7089      | 1set     |
| ④ | Test Leads (small)                                        | 7090      | 1set     |
| ⑤ | Test Leads for Earth Test (red-20m, yellow-10m, green-5m) | 7091      | 1set     |
| ⑥ | Test Leads for Phase Check                                | 7088      | 1set     |
| ⑦ | Auxiliary Earth Spikes                                    | 8083      | 2pcs     |
|   | Carrying Case                                             | 9081      | 1pce     |
|   | Belt for Carrying Case                                    | —         | 2pcs     |
|   | Instruction Manual                                        | —         | 1copy    |
|   | LR6 1.5V Alkaline Battery or equivalent                   | —         | 9pcs     |
|   | 0 Ring Set                                                | —         | 1set     |

(Model 6020 and 6030 include all of the above accessories)

## PHASE CHECK SPECIFICATIONS

|                 |                                                                               |
|-----------------|-------------------------------------------------------------------------------|
| Measuring Range | 10~600V (50Hz/60Hz)<br>(for checking correct or reverse phase and open phase) |
|-----------------|-------------------------------------------------------------------------------|

## Measuring Method



## General Specifications for Model 6020,6030

- Display 3 1/2(1999)digit large LCD
- Response Time Approx. 4 seconds for AC voltage and earth resistance tests Approx. 5 seconds for insulation resistance tests.
- Withstand Voltage 5550V AC for one minute
- Effect of Drop No electrical and mechanical damage shall occur when the unit is dropped from a height of 1 m onto the concrete floor.
- Effect of Temperature Readings shall not differ greater than specified below when taken at a reference temperature of 23°C and varied temperature of 0°C and 40°C.  
AC Voltage 3%  $\pm 2$  dgt insulation resistance and earth resistance 5%  $\pm 2$  dgt
- Operating Temperature Range 0~40°C
- Dimensions 130x238x207mm  
(main body plus cord reel module)  
105x238x207mm (main body only)
- Weight Approx. 1.6kg (main body only)  
Approx. 750g (cord reel module only)
- Power Supply 1.5V LR6 alkaline battery or equivalentx8  
(for main body only)  
1.5V LR6 alkaline battery or equivalentx1  
(probe only)
- Safety Standard IEC 61010-1 CAT.Ⅲ 600V Pollution Degree 2

A full set (deluxe version complete with aluminum carrying case and leakage clamp meter) is available as Model 6020T or 6030T.

## Optional Accessories

- Model 2417 Water Proof Leakage Clamp Meter(→ page 10)  
40 mm jaw diameter True RMS 200mA/ 2000mA/ 20A/ 200A/ 500A
- Model 7093 Cord for Extension Probe  
This is used to connect the extension probe directly to the instrument.  
You can then use the instrument without the cord reel module.
- Model 9080 Aluminum Carrying Case  
This is a hard case of rugged construction. Mainly available with the top grade version of the multifunction tester that comes with the leakage clamp meter Model 2417.

| Description                     | Model No. |
|---------------------------------|-----------|
| Water Proof Leakage Clamp Meter | 2417      |
| Aluminum Carrying Case          | 9080      |
| Cord for Extension Probe        | 7093      |