

PARTS IDENTIFICATION AND FUNCTION

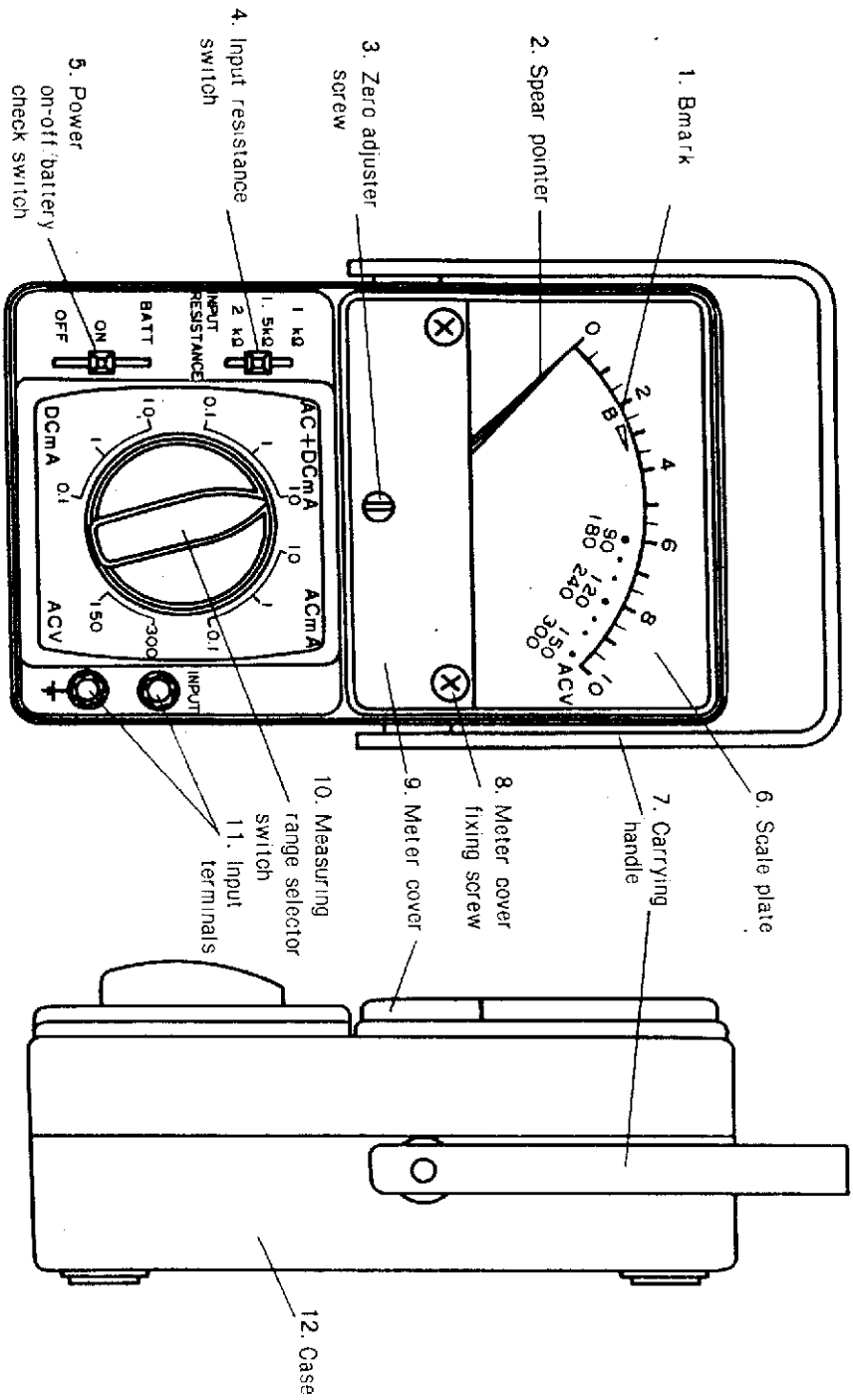


Fig. 1 Parts Identification

1. **B mark**
The battery is usable if the meter pointer is within this range when the BATT/ON/OFF switch is set to the BATT position.
2. **Spear pointer**
3. **Zero adjuster screw:**
To be turned with a screwdriver for re-adjusting zero indication of the pointer.
4. **Input resistance switch:**
Selects one of the three input resistances according to the applicable standard.
5. **Power on-off/battery check switch**
6. **Scale plate:**
The scale is double graduated in mA and AC V.
7. **Carrying handle**
8. **Meter cover fixing screw**
9. **Meter cover**
10. **Measuring range selector switch:**
To be set to an appropriate position according to the measuring item and range.
11. **Input terminals:**
Accessory H-lead is to be connected to the "INPUT" terminal, and L-lead to the "⊥" (ground) terminal.
12. **Case**

OPERATION

Precautions:

1. The most accurate measurement is attained when **Model 3226** is placed horizontally.
2. After placing **Model 3226** at the position of use, check that the meter pointer coincides with the zero point of the scale, if not, adjust it accurately by turning the zero adjuster screw.
3. When the approximate value of the leakage current to be measured is unpredictable, measure by first setting the measuring range selector switch to the 10mA position.
4. Before measurement, be sure to check that the measuring range selector switch is in a position proper for the measurement. Do not operate the switch while the meter pointer is deflecting.
5. When storing of carrying **Model 3226** after use, set power on-off/battery check switch.
6. Both surfaces of the meter cover are coated with anti-static agent. Do not wipe them hard or clean them with wet cloth, because such may deteriorate the anti-static effect. Use dry, soft cloth, and wipe them lightly with it.

7. The case and meter cover are made of thermoplastic material. Be careful not to touch them with a soldering iron or other hot object. Do not clean them with a large quantity of lacquer thinner, benzine or alcohol.

Model 3226 has an AC + DCmA range, This is used mainly for the instrument which is operated by DC after rectifying, AC to DC. Therefore, measured value on this range means the sum of DC and AC components.

Operating procedure:

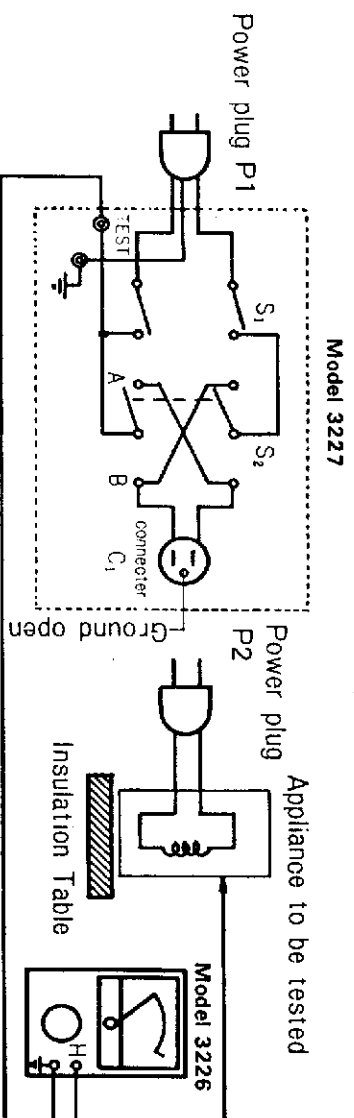


Fig 2 Connection Diagram

When using **Model 3227** Test Box:

1. Set the power on-off/battery check switch to the "BATT" position, and check the battery condition. If the meter pointer is within the battery check line range, set the switch to the "ON" position.
2. Select the input resistance as required by using the input resistance switch.
3. Close the switches S1 and S2 (A or B) of **Model 3227**, connect the ground terminal of **Model 3226** to the TEST terminal of **Model 3227**, con-

- nect the "INPUT" terminal of **Model 3226** to the connector of **Model 3227** (C), and measure the power voltage to check that the voltage is as rated.
4. Open the switch S2 of **Model 3227**, connect all the simultaneously accessible exposed conductive surfaces of the to-be-tested appliance together, connect it to **Model 3226**, connect **Model 3226** to the ground of the power supply.
5. Connect the power plug of the appliance to the

connector of **Model 3227**, and turn on all the switches of the appliance.

6. Set the switch S2 of **Model 3227** to the "A" position, and read the meter of **Model 3226**. Set the switch S2 of **Model 3227** to the "B" position, and read the meter of **Model 3226**. Take the greater one of the above meter readings, as the leakage current value of the tested appliance.

7. Operate the appliance. When the appliance has reached the steady operating condition, measure its leakage current in the same manner as in Item 6 above.

o When not using **Model 3227** Test Box.

Compose a circuit similar to that shown in Fig. 1, and measure in the same manner as for the measurement using **Model 3227** Test Box.

MAINTENANCE

For accurate measurement at all times, **Model 3226** must be kept in the best condition. For this purpose, avoid using **Model 3226** at a place subject to:

- (1) Severe vibration
- (2) Fill of dust or corrosive gas
- (3) Direct sunlight
- (4) Much moisture
- (5) Large variation of ambient temperature
- (6) Strong external magnetic field

CALIBRATION

1. Instruments necessary for calibration

Instrument	Requirements.	YOKOGAWA equivalent
Standard DC power supply	Output: 10mA Accuracy: 0.5%	Model 2552
Standard AC power supply	Output: 10mA Accuracy: 0.5%	Model 2558

2 Procedure

- (1) Set the input resistance to $1\text{K}\Omega$ by using the input resistance switch of **Model 3226**.
- (2) Set the power on-off/battery check switch to the "ON" position, and adjust the meter pointer to the zero point of the scale by using the variable resistor RV2 inside the case.
- (3) Set the measuring range selector switch to the DC 1mA position, supply 1mA from the standard DC power supply, and adjust the meter indicates the full scale.
- (4) Conduct adjustment in the same manner as above, while the measuring range selector switch is set to DC 10mA, AC 1mA and AC
- (5) Repeat the foregoing, with the input resistance set to 1.5 and $2\text{K}\Omega$ in sequence.

OPERATION PRINCIPLE

This tester consists of amplifier, and circuits for range selection, input resistance selection, overload protection, and battery check.

Select the appropriate range according to measuring leakage current.

Input impedance selecting circuit is a voltage divider. Input impedance is converted to voltage in range selecting circuit and fed to amplifier through input impedance selecting circuit. (Amplifier input is kept constant on full scale value).

DC voltage is amplified by the amplifier and indicated on the indicator scale. AC voltage is rectified to indicate on the scale. On AC + DC mA range, AC component is separated from DC component, then rectified. The rectified component is added to DC to indicate on moving coil type ammeter.

Since the overload protection circuit is incorporated, this tester protects the circuit and pointer from the overload. Battery voltage can be checked on the scale, by means of battery check circuit.

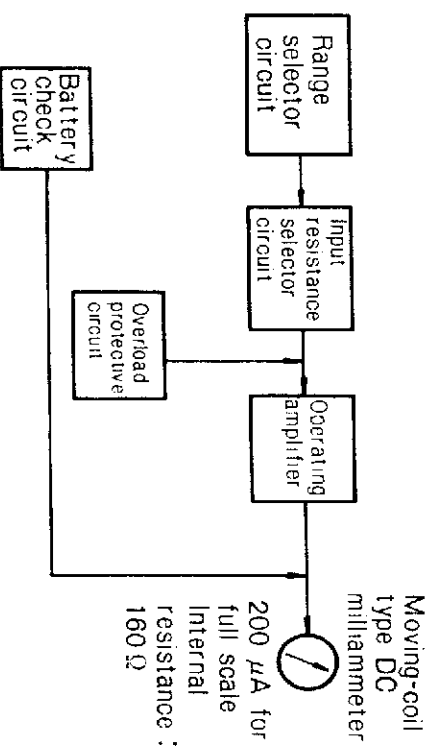


Fig. 3 Block Diagram

SPECIFICATIONS

Measuring ranges:

DC current: 0.1, 1 and 10 mA

AC current: 0.1, 1 and 10 mA

DC + AC current: 0.1, 1 and 10 mA

AC voltage: 150 and 300 V

(50 or 60Hz)

Withstand voltage:

1500 V AC (50Hz) for 1 minute between electric circuit and case.

Power source:

Two 9 V dry batteries 6F22.

Usable for approx: 290 hour.

Input resistance:

Current measuring range: 1, 1.5 and 2 K Ω

Voltage measuring range: Higher than

100K Ω

Outside dimensions:

Approx. 190 X 124 X 90mm (7-1/2 X 4-7/8 X 3-9/16"), excluding carrying handle.

Weight: Approx. 1 kg (2.2lbs)

Accessories: Measuring lead, Model 2898-03 1

Carrying bag, Model 3224 (black)

Instruction manual 1

Overload protection:

Withstands 30mA AC for 10 minutes for each current measuring range.

Optional accessories:

Test Box, Model 3227

Effect of temperature:

Less than $\pm 0.2\%$ /°C with respect to rated value (within 20 \pm 10°C)

Insulation resistance:

Higher than 100M Ω at 1000V DC between electric circuit and case.

Model 3227 Test Box

A switch box to facilitate measurement of leakage current. Simple switch operation reverses the polarity of the voltage applies to the appliance being tested by Model 3226.

Specifications of Model 3227 are as follows:

Current capacity:	10 A AC (125 V)
Contact resistance:	Lower than 0.005 Ω
Insulation resistance:	Higher than 100 M Ω at 500 V DC between electric circuit and case
Withstand voltage:	1000 V AC for 1 minute between electric and case
Outside dimensions:	Approx. 70 X 155 X 65 mm (2-3/4 X 6-1/8 X 2-9/16")
Weight:	Approx. 560 g

WARNING

Before using this instrument, it is necessary to match its polarity and the polarity of the power plug. If you don't match the polarities, and you apply power from the power outlet to this instrument, an electric shock may occur.

● Matching the polarity

Connect the power cord to the power supply. Turn the power switch to ON and measure the voltage between the earth and the TEST terminal of this instrument using a Universal leakage voltage tester (3226 or similar). If the voltage between the earth and the TEST terminal of this instrument is

- AC30V or less: the instrument can be used;
- More than AC30V: use the accessory 3-2 pin adapter and re-connect the power plug opposite (i.e. turning 180degrees).

● Grounding

Make sure to ground the grounding terminal of the 3227.