



Data Sheet

RISHABH *iYoung / Young*



Measure



Control



Record



Analyze



Optimize

- * Direct and alternating voltages from 100 μ V ... 600V
- * Direct and alternating currents from 10 μ A ... 10.00A
- * Resistance from 1 Ω ... 40.00M Ω with zero correction
- * Capacitance from 1pF ... 200.00 μ F with zero correction
- * Frequencies from 10.00Hz ... 500kHz
- * Diode measurement and continuity testing
- * Data Hold.
- * Relative measurement
- * Duty cycle (%) measurement
- * Non Contact Voltage Detection

Application

RISHABH Young / *i*Young is suited for universal, general applications in the electrical and electronics fields, as well as in radio and television service, training and education.

It is of especially pocket size design, and thus fit into pocket. The protective cover, which is provided as standard equipment, can be opened at an angle for convenient reading from the workbench, and provides for easy transport.

Hold:

By pressing the HOLD key, the currently displayed measurement value can be held and "HOLD" is simultaneously displayed.

Relative measurement (REL):

By pressing the REL key, the zero correction is made. All functions can do zero correction except Hz/Duty.

Automatic/manual measuring range selection:

The measurement functions are chosen with the rotary selector switch. The measuring range is automatically adjusted to the measurement value. The measuring range can also be manually selected with the AUTO/MAN button.

Note : For Frequency (Hz) , Duty cycle (%) , and Capacitance (F) measuring range is AUTO . No Manual range selection is possible.

Hz/Duty:

The instrument can measure frequency (Hz) and duty cycle (%) of the AC Voltage by pressing Function (Yellow) key.

Non Contact Voltage Detection:

RISHABH Young / *i*Young allows you to detect the voltage presence in the live circuit without any electrical contact. NCV will be detected above 120V AC without safety cover.

Overload warning :

An acoustic signal occurs when measuring AC voltage >750V, DC Voltage >1000V, AC/DC mA current >400.0mA, AC/DC current >10.00A.



Energy saving circuit (Auto Power Off):

The instrument is switched off automatically, if none of the operating elements have been activated for about 15 minutes.

Protective cover for rough operating conditions:

A protective cover of Rubber Holster with a built-in stand protects the instrument against jolts and falls.

Diode and continuity testing:

This provides for the testing of the polarity of diodes, as well as inspection for short-circuits and circuit interruptions. In addition to the display, resistance of less than approx 60 \pm 5 Ω are indicated with an acoustic signal

Others:

It has provision of mounting clip for hands free operation in awkward situation .



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Reference conditions for Accuracy

| | |
|-------------------------------|--------------|
| Reference Temperature | 23°C ± 2K |
| Relative Humidity | 45%...55% RH |
| Waveform of measured quantity | Sinusoidal |
| Input frequency | 50 Hz |
| Battery Voltage | 3 V ± 0.1 V |

Applicable regulations and standards


| | |
|---------------------|---|
| EMC Immunity | IEC 61326-1:2012, Table A.1 * |
| Immunity | IEC 61000-4-2 : 8 KV atmosphere discharge, 4 KV contact discharge |
| | IEC 61000-4-3 : 3 V/m |
| Safety | IEC 61010-1-2010 |
| IP for water & dust | IEC 60529 |
| Pollution degree: | 2 |
| High Voltage Test | 3.6 kV |

* Short-term measured value deviation may occur during electro-magnetic interference thus reducing the specified operating quality.


Environmental Conditions

| | |
|-----------------------|--|
| Operating temperature | 0 to +50°C |
| Storage temperature | - 25 to +70°C (without battery) |
| Relative humidity | 45%.....75% |
| Terminal Protection | IP 52 for instrument and IP20 for terminals. |
| Altitude | Up to 2000 m |

Battery

| | |
|-----------------|---|
| Battery Voltage | 2 X 1.5 V Cells |
| Battery type | Alkaline manganese Dioxide cells. |
| Battery Life | Alkaline manganese dry cell: approx. 400 hours. |
| Battery test | Automatic display of  symbol when battery voltage drops below 2.4±0.1V |

Influence Quantity

| Influence Quantity | Range of Influence | Measured Quantity / Measuring Range ¹⁾ | Variation ± (... % of rdg. + ... digits) |
|--------------------------------|---|---|--|
| Temperature | 0 °C + 21 °C and +25 °C to 50 °C | | 1.5 × intrinsic error / 10K |
| Relative humidity | 75% 3 Days Meter off | V, A, Diode, F, Hz, %, OHM | 1 × intrinsic error |
| Frequency of Measured Quantity | 20 Hz....<50 Hz | 400mV~, 600V~ | 3.5 + 3 |
| | >50 Hz500 Hz | | |
| | 20 Hz....<50 Hz | 4V~, 40V~, 400V~ | |
| | >50 Hz750 Hz | | |
| Battery Variation | Upto Low Battery  | V, A, Diode, Hz, %, OHM | 20D |
| | | F | 70D |



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Specifications

| Measurement Function | Model | | Measuring Range | Resolution | Input Impedance | | Intrinsic Uncertainty under Reference Condition $\pm(\dots\%$ of the rdg. + ... Digits) | | Overload Capacity ¹⁾ | | |
|----------------------------|----------------|-------|------------------|---------------------------|----------------------|---------|---|---------------------|---------------------------------|-----------------|--|
| | <i>i</i> Young | Young | | | DC | AC/ACDC | DC | AC | Value | Time | |
| V | • | • | 400.0 mV | 100 μ V ⁴⁾ | >10 M Ω | | 1 + 9 | 2 + 9 ⁴⁾ | 1050 V | Continu- ous | |
| | • | • | 4.000 V | 1 mV | | | 1 + 9 | 1.5 + 9 | | | |
| | • | • | 40.00 V | 10 mV | | | 1 + 9 | 1.5 + 9 | | | |
| | • | • | 400.0 V | 100 mV | | | 1 + 9 | 1.5 + 9 | | | |
| | • | • | 600 V | 1 V | | | 1 + 9 | 1.5 + 9 | | | |
| | | | | | Voltage Drop. Approx | | | | | | |
| mA | • | | 40.00 mA | 10 μ A | 45 mV | | 1.5 + 9 | 1.5 + 9 | 480 mA | Continu- ous | |
| | • | | 400.0 mA | 100 μ A | 450 mV | | 1.5 + 9 | 1.5 + 9 | | | |
| A ⁷⁾ | • | | 4.000 A | 1 mA | 45 mV | | 2 + 5 | 2.5 + 9 | 12 A: = 30 s | | |
| | • | | 10.00 A | 10 mA | 120 mV | | 2 + 5 | 2.5 + 9 | | | |
| | | | | Input | Input Impedance | | | | | | |
| Ω | • | • | 400 Ω | 100 m Ω | approx. 0.45V | | 1 + 5 | | 500V DC/AC rms | 5 min | |
| | • | • | 4.000 k Ω | 1 Ω | | | 1 + 5 | | | | |
| | • | • | 40.00 k Ω | 10 Ω | | | 1 + 5 | | | | |
| | • | • | 400.0 k Ω | 100 Ω | | | 1.5 + 5 | | | | |
| | • | • | 4.000 M Ω | 1 k Ω | | | 2 + 5 | | | | |
| | • | • | 40 M Ω | 10 k Ω | | | 2.5 + 5 | | | | |
| Continuity | • | • | 400.0 Ω | 100 m Ω | | | 1.5 + 5 | | | | |
| Diode | • | • | 1.0V | 1 mV | approx. 1V | | 2.5 + 5 | | | | |
| F | • | • | 5.000 nF | 1 pF | | | 5 + 40 ²⁾ | | | | |
| | • | • | 50.00 nF | 10 pF | | | 3 + 10 ²⁾ | | | | |
| | • | • | 500.0 nF | 100 pF | | | 1.5 + 10 ²⁾ | | | | |
| | • | • | 5.000 μ F | 1 nF | | | 2 + 10 ²⁾ | | | | |
| | • | • | 50.00 μ F | 10 nF | | | 2 + 10 ²⁾ | | | | |
| | • | • | 200.0 μ F | 100 nF | | | 5 + 40 ³⁾ | | | | |
| | | | | | f_{min} | | | | | | |
| Hz ⁵⁾⁶⁾ | • | • | 9.999 Hz | 0.001Hz | 9 Hz | 0.5 + 5 | | 500V DC/AC rms | | 5 min | |
| | • | • | 99.99 Hz | 0.01Hz | 9 Hz | | | | | | |
| | • | • | 999.9 Hz | 0.1Hz | 9 Hz | | | | | | |
| | • | • | 9.999 kHz | 1Hz | 9 Hz | | | | | | |
| | • | • | 99.99 kHz | 10Hz | 9 Hz | | | | | | |
| | • | • | 500.0 kHz | 100Hz | 9 Hz | | | | | | |
| Duty Cycle ⁵⁾⁶⁾ | • | • | 2....98% | 0.10% | | | 10Hz....1kHz \pm 5D 1kHz...10kHz \pm 5D/kHz | | | | |

1) At 0°C to 50°C

2) With Zero Adjustment "REL"

3) Time required for Measurement approx, 60 sec

4) Specified Accuracy is valid as of 5% of the measuring range for 400.0mV AC

5) For Hz & Duty Cycle measurement, select proper range for VAC function

6) At input, \pm 5Vrms, Square Wave, Bipolar inputs.

7) 10A Max 5 Minute



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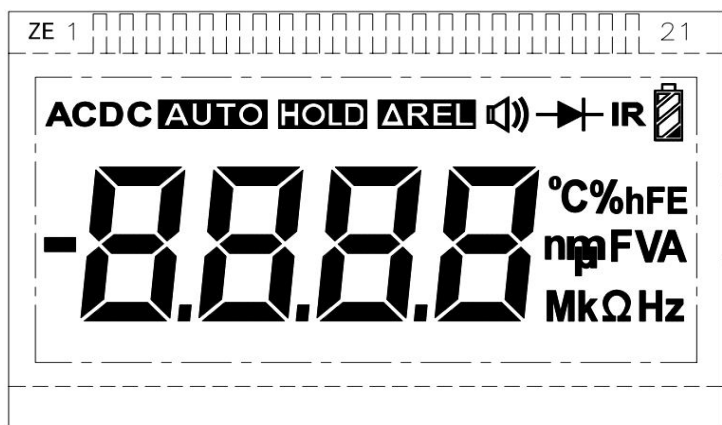
Display

LCD display field (49.7mm x 23.9mm) with digital display & display of unit of measure, current type & various special functions.

Digital

| | |
|-------------------------|---|
| Display | 7 segment |
| Character height | Main Display Character : 12.9 mm |
| Number of digits/Counts | 3 ¾ digits 3999 steps |
| Overrange display | "OL" is displayed. |
| Polarity display | "-" sign is displayed when positive pole at "⊥" |
| Sampling rate | 3 measurements/s for V, I, Ω, Capacitance, Frequency and Duty cycle measurement |

Analog



1. Digital display with dot and polarity.
2. Low Battery Indication.
3. Display for REL and HOLD.
4. Continuity test display:
Buzzer symbol appears on screen.
5. Display for diode measurement.
6. Measurement unit display.
7. Display for automatic measuring range selection.
8. Display for selected type of Voltage/Current (AC or DC).
9. Display for overload value "OL".

Fuse

| | |
|------------------------------|-----------------------------|
| Fuse for ranges up to 400 mA | 400 mA / 250V; 5 mm x 25 mm |
| Fuse for 10 A range | 12 A / 250V; 5 mm x 25 mm |

Standard Scope Of Supply

- 1 Multimeter
- 1 Cable set
- 1 Copy Operating Instructions
- 1 Protective Case (Holster).

Mechanical Design

| | |
|-----------------|--|
| Protection | Instruments: IP 52 Connector sockets: IP 20 |
| Dimensions | W x H x D: |
| With Holster | 74.3 mm x 154.1 mm x 47.6 mm |
| Without Holster | 68.3 mm x 142.9 mm x 39.3 mm |
| Weight | Approx. 0.350 Kg with battery |



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