

# Цифровые измерительные приборы



Цифровые измерительные приборы





RISH Multi Series DMM



Rishabh DMM 6012-6016



Rishabh DMM 612-616



RISH Insu 5000



RISH Clamp Power



RISH Insu Digital Insulation Tester

# Digital Clamp Meters

## RISH *Clamp* Digital Clamp Meters

### Features

- ◆ Basic accuracy 0.25%, High Accuracy Low current measurements
- ◆ Large jaw opening of 55mm for 1000A and 44mm for 300A AC, for AC/DC & Economic series 1000A AC 51mm, for AC/DC 300A and Economic series 400A AC 41 mm
- ◆ Jaw opening trigger at the rear side, Easier operation. Jaw can be rotated to take measurements in difficult accessing places
- ◆ Patented rotating jaw design.
- ◆ Narrow body, Firm grip
- ◆ User selectable Backlit (optional)
- ◆ Digital as well as analog display, Auto power off
- ◆ Data Hold, min-max function
- ◆ Low battery indication
- ◆ Null zero correction for resistance
- ◆ Complies IEC61326, IEC61010-1, CE, CAT IV 600V, IP50

RISH *Clamp*



CE

Parameters	RISH Clamp 1000A AC	RISH Clamp 300A	RISH Clamp 1000A AC/DC (TRMS)	RISH Clamp 300A AC/DC	RISH Clamp ES 1000 AC	RISH Clamp ES 400A AC
AC Current Measurement	2...1000 A	0.2...300 A	2...1000 A	0.2...300 A	4...400 A	4...400 A
Intrinsic Error A AC	1.5% of rdg. +5D	1.5% of rdg. +5D	1.5% of rdg. +5D	± 1.5% + 5D	± 1.5% + 5D	± 1.5% + 5D
Measurement Type A AC	Average	Average	TRMS	TRMS	Average	Average
AC Voltage Measurement	1000 V AC	1000 V AC	1000 V AC	1000 V	1000 V	1000 V
Intrinsic Error V AC	0.75% of rdg + 1D	0.75% of rdg + 1D	0.75% of rdg + 1D	± 0.75% + 2D	± 1% + 5D	± 1% + 5D
Measurement Type V AC	Average	Average	TRMS	TRMS	Average	Average
DC Voltage Measurement	1000 V DC	1000 V DC	1000 V DC	1000 V	1000 V	1000 V
Intrinsic Error V DC	0.25% of rdg+ 1D	0.25% of rdg+ 1D	0.25% of rdg+ 1D	± 0.25% + 1D	± 0.75% + 2D	± 0.75% + 2D
Resistance	30MΩ	30MΩ	30MΩ	30MΩ	40MΩ	40MΩ
Intrinsic Error Resistance	2% of rdg + 1D	2% of rdg + 1D	2% of rdg + 1D	± 4% + 1D	± 0.8 + 2D	± 0.8 + 2D
Continuity	0... 300Ω	0... 300Ω	0... 300Ω	0... 300Ω	0... 400Ω	0... 400Ω
Diode Test	0...2.0 V	0...2.0 V	0...2.0 V	0...2.0 V	0...1 V	0...1 V
DC Current Measurement	-	-	1000 A	0.2...300A	-	-
Intrinsic Error A DC	-	-	1.5% of rdg. +5D	± 1.5% + 5D	-	-
Frequency	100.0KHz	100.0KHz	100.0KHz	100.0KHz	500.0KHz	500.0KHz
Capacitance	30.00μF	30.00μF	30.00μF	30.00μF	200.00μF	200.00μF

### RISH Clip on *CT*

- ◆ Minimum transformation ration error
- ◆ Permanently connected safety cables
- ◆ Jaw Opening / conductor diameter: 43mm & 35mm
- ◆ Compact and Handy Design
- ◆ Accuracy Class 1
- ◆ Lead Cable length 1.5 meter

Type	RISH Clip ON CT 1000A / 1A	RISH Clip ON CT 1000A / 5A	RISH Clip ON CT 300 / 0.3A
Nominal Primary Current	1-1000 A AC	1-1000 A AC	4-300 A AC
Output signal	1 mA AC / A AC	1 mA AC / A AC	0.3 mA AC / A AC
Transformer ratio	1000 : 1	200 : 1	1000 : 1
Accuracy	Class 1 (2.5VA)	Class 1 (2.5VA)	Class 1 (2.5VA)
Frequency range	40 Hz... 1 kHz	40 Hz... 1 kHz	40 Hz... 1 kHz
Jaw Opening/Conductor Dia	43 mm / 43 mm	43 mm / 43 mm	35 mm / 35 mm
Lead cable length	1.5 meter	1.5 meter	1.5 meter
Weight	Approx 650 gms	Approx 650 gms	Approx 500 gms



CE

\* Can be used with RISH Multi 12S , RISH Mit 30, RISHABH 612, RISHABH 60K Series DMM

# Digital Clamp Meters

## RISH *Clamp* Power 1000A/400A AC-DC

### Introduction

Power Clamp meter is a Portable Digital Multi functional measuring instrument designed for Measuring selected power network parameters, AC/DC Voltage, AC/DC current, Resistance, Continuity, Diode and Frequency. Apart from basic quantities meter enables the measurement of additional quantities calculated from values of voltage and current. Power clamp meter is innovatively designed for increasing safety and comfort of user. Rotating clamp jaws facilitate the measurement at physically awkward position, vertical bus bars , conductors placed at position difficult to access. Clamp jaws can be opened or closed with the triggered placed at bottom side placed away from the jaws. This allows the user to place his/her hand at safer distance from live conductor. Location and design of trigger eliminates fatigues caused by single finger operation. It allows spreading the force required to open the jaws over more than one finger to ensure comfortable operation.

### Features

- ◆ AC & DC Voltage upto 1000V
- ◆ AC & DC Current upto 1000A/400 A
- ◆ Inrush/Peak Value Measurement
- ◆ Horse Power Measurement
- ◆ Three Phase Active, Reactive and Apparent Power
- ◆ Measurement without any manual calculation
- ◆ Energy Measurement
- ◆ Measure upto 49th Harmonics and THD as well NCV functions.
- ◆ Phase Angle, Power Factor, Crest Factor, DF
- ◆ LPF Mode for VFD Application
- ◆ Non Contact Voltage Detection.

### Applications

- ◆ Trouble-elimination: Fast measurement and display on screen for trouble-shooting
- ◆ Predictive maintenance: Test to avoid power quality problem before malfunction happens
- ◆ Service function: Measurement for power quality before user's lead-in

### Non Contact Voltage Detection

The clamp meter can detect the presence of AC Voltage between 100 to 1000 V 50hz/60Hz without any electrical connection and give acoustic signal as an indication.

### Three Phase Power Measurement

Clamp meter can measure power in 3 phase 3 wire or 3 phase 4 wire (Symmetric as well as Asymmetric) network without any manual calculation like other clamp meters.

### Dual Display

User friendly dual display shows the simultaneous parameters of measuring input quantity.

### LPF Mode

LPF mode is available for voltage and current for true measurement of VFD Application

### TRMS Measurement

In order to calculate true value of distorted waveform due to presence of high crest factor or harmonics, TRMS measurements is done for AC voltage and current

### Double molded Cover for soft touch and firm grip of the Instrument

#### Large Jaw Opening

Jaw opening of 51mm and 41 mm for standard wire diameter of 50mm and 40mm for 1000A and 400A respectively.

#### Inrush Current Measurement

Clamp meter will be triggered by inrush current >5A. Inrush current for 100 msec is measured.

#### DATA Hold Function

By pressing DATA HOLD button, reading on the display can be latched for Hands free operation.



# Digital Multimeters

## RISHABH 61 Series Digital Multimeter (612, 613, 615, 616)

### Features

- ◆ Direct and alternating voltages from 100  $\mu$ V ... 1000 V
- ◆ Direct and alternating currents from 10  $\mu$ A ... 10.00 A
- ◆ Resistance from 100 m $\Omega$ ... 60.00 M $\Omega$  with zero correction
- ◆ Capacitance from 1 pF ... 40.00 mF with zero correction
- ◆ Frequencies from 10.00 Hz ... 10 MHz
- ◆ Diode measurement and continuity testing
- ◆ Hold measurement
- ◆ Relative measurement
- ◆ Duty cycle (%) measurement
- ◆ Temperature measurement with K type Thermocouple
- ◆ Peak value measurement

### Applications

RISHABH digital multimeters are suited for universal, general applications in the electrical and electronics radio and television service, training and education.

### Dual Display

The dual display included a main display and a sub display. Main display always display current measurement value whereas sub display shows some special measurements like maximum/minimum value, reference value for relative value measurement. Also dual display is used to display at the same time Voltage/ Current with Frequency, Frequency with Duty cycle etc.



### Protection from dust and water

Instrument: IP 52 For terminals: IP20 as per IEC60529

### Route mean square value with distorted wave form (for 616 only)

Measuring principal employed permits the measurement of root mean square value (TRMS) of AC quantities regardless of wave form.

### MIN/MAX Function

By pressing min/max button instrument will start recording minimum and maximum readings. All functions can measure MIN/MAX except Hz/Duty functions.

### Temperature Measurement

Multimeters measures temperature with "K" type thermocouple (NiCr - Ni) sensor in the range from 00C to 1300°C.

### Indication of negative values on the analog scale

When measuring DC quantities negative values are shown on the analog scale so that variations of the measured value can be observed at the Zero point.

### Applicable International Safety Standards

1000 V CAT III/600V CAT IV as per International Safety standard IEC 61010-1- 2010 and IEC 61557

### Automatic Blocking Socket (ABS)

The automatic terminal blocking system prevents incorrect connection of test lead and incorrect selection of measurement quantity, which provide safety to the user.

# Digital Multimeters

## RISH Multi Series CAT III 1000V / CAT IV 600V Digital Multimeters

### Features

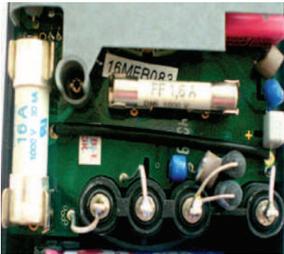
- ◆ Different Models: RISH Multi 12S, 13S, 14S, 15S, 18S & New RISH Multi 20
- ◆ Basic Accuracy 0.02% to 0.25%
- ◆ Automatic Terminal Blocking
- ◆ Protective Rubber Holster for Rough Duty
- ◆ Backlit LCD Display, Analog Scale (Bar Graph)
- ◆ Min / Max value storage, Data Hold
- ◆ Auto ranging, Manual ranging
- ◆ Power Economizing Circuit, Overload warning
- ◆ Computer Connectivity with attachable interface adaptor using RISH Com 100 Software

### Measurements

- ◆ DC Current / DC Voltage
- ◆ AC Current / AC Voltage
- ◆ Resistance, Capacitance, Frequency, Temperature
- ◆ Continuity testing, Diode test, Event Counter, Event Duration, Stop Watch

### Safety Features

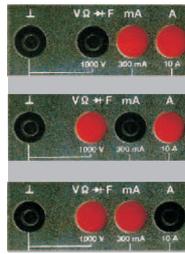
High Precision Fuses, Over Voltage Protection



Multi Purpose Protective Holster



Automatic Terminal Blocking



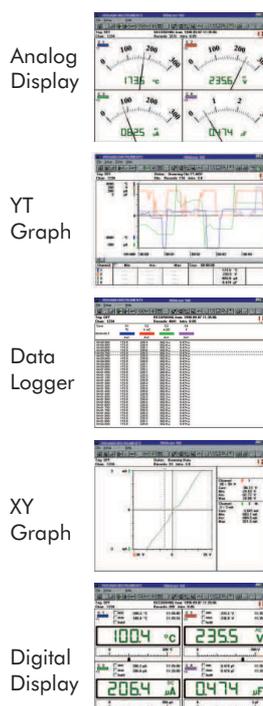
### Storage Adaptor - S1232 With RISHCOM 100 Software

#### RISHMulti SI-232 Storage Adaptor

- ◆ Recording with adjustable sampling from 50ms to 60sec
- ◆ Computer connectivity through standard RS232C interface
- ◆ Up gradable to multichannel recording system by cascading adaptors
- ◆ Can be used Offline (without PC) or Online
- ◆ Memory capacity 128kB (approx 100,000 measured values)

#### RISH COM 100 Software

- ◆ Online transmission of measuring data to PC
- ◆ Representation of measured data in four displays (see fig.)
- ◆ Analysis of derived parameter through calculator function



# Digital Multimeters

## RISH Multi 20 High Precision 5 3/4 (CAT IV) Digital Multimeters

### Product Introduction

- ◆ 3,10,000 Counts and triple display
- ◆ Precision multimeter (V, A, Hz, F, °C, Diode)
- ◆ Direct current measurement (F or 10A)
- ◆ Safety: 1000V CAT III/600V CAT IV

### Applications

RISH Multi 20 Multimeter is 5 3/4 digit high performance precision instruments for laboratory use, as well as for service and training. With a display range of 3,10,000 counts, as well as outstanding accuracy and long-term stability, they fulfill all requirements for use in calibration and R&D laboratories. The instruments can be utilized onsite for precision maintenance & calibration tasks.

### Features

#### Convenient Triple Display

Simultaneous measurement of voltage and frequency or voltage and min, max values is possible. Also current and frequency or the current measurement and minimum and maximum values are displayed simultaneously. The usual switching back and forth between display values is no longer necessary. Main display resolution for AC is 4 3/4 places and for DC it is 5 3/4 places.

#### High Resolution & Precision

5 3/4 places (3,10,000 counts) for DC measured quantities and 4 3/4 places (31,000 counts) for AC measured quantities allow for precision reference measurements and use as a calibration standard for testing devices and assemblies.

#### RMS Value with Distorted Waveshape

The utilized measuring method allows for waveshape independent RMS measurement (TRMS AC).

#### Additional Functions

Resistance ( $\Omega$ ), Temperature ( $^{\circ}\text{C}$ ), Continuity, Diode, Capacitance, Frequency, Duty Cycle.

#### Overload Protection

The instrument is safeguarded for up to 1000V in all measuring functions by overload protection. An acoustic signal is generated if the upper voltage or current range limit is exceeded. FUSE appears at the display if the fuse for the current.

#### Measuring Category

1000 V CAT III/600V CAT IV as per IEC Standard 61010-1.



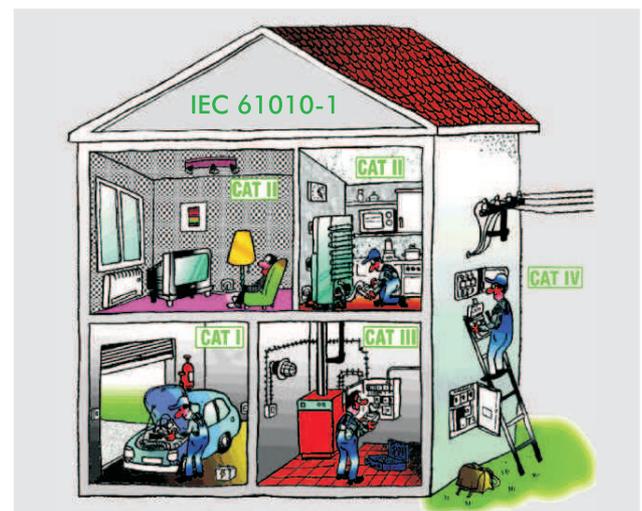
#### Automatic Terminal Blocking System (ABS)

Automatic Terminal Blocking System (ABS) Prevent incorrect connection of measurement cables and inadvertent selection of the wrong measured quantity. This significantly reduces danger to the user, the instrument and the system under test, and in many cases eliminated it entirely.

#### Backlit Display

The instrument is provided with user selectable Back-lit for taking measurements in poor lighting conditions / dark areas.

#### RISH Multi Series CAT III 1000V / CAT IV 600V



# Digital Multimeters

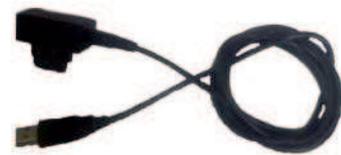
RISHABH 60K Series Digital Multimeters (6012/6013/6015/6016)

## True RMS Digital Multimeter

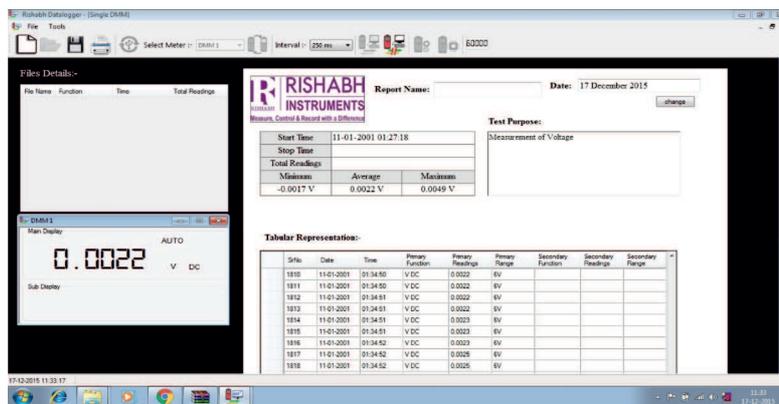
- ◆ Data logger & View function (up to 32000 readings)
- ◆ Plug and Play USB connectivity with PC
- ◆ 100kHz bandwidth for voltage measurement 1kHz Low Pass Filter mode
- ◆ GO-NO-GO function
- ◆ VAC with 1MΩhm impedance 4-20mA/0-20mA scale type measurement
- ◆ Single fuse for mA & A
- ◆ Adjustable square wave output
- ◆ Temperature measurement with J, K, Pt100 & Pt1000 sensors
- ◆ External power adapter for long hours of measurements
- ◆ Selectable clamp ratio for current measurement
- ◆ Conductance Measurement
- ◆ Frequency / Time Period Measurement

## Applications

- ◆ Tool for Automation
- ◆ Tool for predictive maintenance, Service function & Trouble elimination
- ◆ Tool for different applications like Telecom, Processing Industries, Electronics industry, Laboratories, Manufacturing Industries, Railways, Utilities, etc



Plug and Play  
USB connectivity with PC



## Data Logging

DMM 6015/6016 offers continuous data logging of up to 32000 readings with real time stamping. Log rate is adjustable from as low as 0.1 sec to as high as 1hr.

## Fully programmable GO-NO-GO

The Go - NoGo function gives an indication through a buzzer for the applied input lying inside or outside the set band. The values for low limit, high limit and buzzer condition can be easily set through NoGo function in menu settings. Once the NoGo function is set, user can get busy doing other activities in the vicinity of the meter, whenever the condition is met it will be indicated by a buzzer. It eliminates the need of operator to continuously monitor the display.

## 100KHz Bandwidth

Alternating voltages with frequencies up to 100kHz can be measured accurately. This is useful while analyzing high frequency analog signals.

## View Function

Data logged on meter can be viewed directly on the meter itself, hence the data analysis is also possible without a PC based software. However for graphical and large data analysis PC based software can be used

# Digital Multimeters

## Selection Table for 60K Series of Digital Multimeters

### Model Wise Functional Overview

Functions / Features	6012	6013	6015	6016
Voltage VDC (Ri > 9MΩ)	•	•	•	•
Voltage VAC TRMS (Ri > 9MΩ)	•	•	•	•
Voltage LoZ VAC TRMS (Ri = 1MΩ)		•	•	•
Voltage VAC TRMS (Ri > 9MΩ) LPF 1 kHz		•	•	•
Voltage LoZ VAC TRMS (Ri = 1MΩ) LPF 1 kHz		•	•	•
Voltage VACDC (Ri > 9MΩ)	•	•	•	•
High impedance, high bandwidth mV measurement	600mV	60mV / 600mV	60mV / 600mV	60mV / 600mV
Bandwidth VAC & mV ACDC	10 kHz	10 kHz	10 kHz	100 kHz
Frequency Measurement			•	•
Duty cycle % age				
Voltage level measurement dB, dBu, dBm		•	•	•
Resistance	•	•	•	•
Conductance Measurement	•	•	•	•
Continuity test (I const = 1mA)	•	•	•	•
Diode measurement (I const = 1mA)	•	•	•	•
Temperature measurement (TYP J, TYP K)		•	•	•
Temperature measurement (PT100, PT1000)	•		•	•
Capacitance measurement			•	•
Current ADC	600mA	6 A/16 A	600 μA / 6 mA	600 μA / 6 mA
Current ADC + DC TRMS		(20A)	60 mA / 600 mA	60 mA / 600 mA
Current AAC TRMS			6 A/10 A (16A)	6 A/10 A (16A)
Bandwidth @ AAC+DC or AAC 10kHz	•	•	•	•
Measurement with clamp sensor	•	•	•	•
Data logging / Viewing function			•	•
Protective rubber holster	•	•	•	•
Fuse 16A / 1000V	1.6A		•	•
0-20mA / 4-20mA percentage scale			•	•
Square wave out			•	•
Self battery voltage measurement	•	•	•	•
MIN / MAX / AVG and Auto Hold functions	•	•	•	•
Dangerous contact voltage indication	•	•	•	•
REL / Zero function	•	•	•	•
USB IR-interface	Optional			
External power supply adapter				
Measuring Category	1000V CAT III 600V CAT IV	1000V CAT I 600V CAT II	1000V CAT III 600V CAT IV	1000V CAT III 600V CAT IV

# Digital Multimeters

## RISHABH Digital Multimeter Selection Guide (RISH Max, RISH 61 Series, RISH Multi Series)



### Economical Multimeter



RISH Max 10

### General Purpose Multimeter



RISH 410



RISH 612



RISH 613



RISH 615



RISH 616

#### BASIC FEATURES

Digital Display (Counts)

TRMS

Basic Accuracy

Digits

Measuring Category

Automatic Blocking System

Auto Power Off

#### MEASUREMENTS

DC Voltage

Accuracy VDC

AC Voltage

Accuracy VAC

DC Current

Accuracy ADC

AC Current

Accuracy AAC

Resistance

Accuracy Resistance

Capacitance

Accuracy Capacitance

Frequency

Accuracy Frequency

Temperature

Continuity Testing

Diode Test

Duty Cycle

#### DIAGNOSTICS & DATA

Data Hold / MIN-MAX

Peak Hold

Voltage Check (VAC+VDC)

Current Check (AAC+ADC)

Relative

Events Counter/Duration

Computer Interface(Optional)

Stop Watch

#### DISPLAY

Digital Display (mm)

No. of Digital Display

Backlit

Bar Graph Scale

#### PHYSICAL ATTRIBUTES

Dimensions in mm (WxHxD)

Protective Rubber Holster

Weight with batteries

Battery / Service Life

#### WARRANTY & ELECTRICAL SAFETY

Warranty

Protection

	RISH Max 10	RISH 410	RISH 612	RISH 613	RISH 615	RISH 616
Digital Display (Counts)	3999	3999	6600	6600	6600	6600
TRMS						
Basic Accuracy	±0.5% rdg. +2D	±0.5% rdg. +2D	±0.4% rdg. +5D	±0.4% rdg. +5D	±0.4% rdg. +5D	±0.4% rdg. +5D
Digits	3¾	3¾	4	4	4	4
Measuring Category	CAT I - 1000V CAT II - 600V	CAT II - 1000V CAT III - 600V	CAT III - 1000V CAT IV - 600V	CAT II - 1000V CAT III - 600V	CAT III - 1000V CAT IV - 600V	CAT III - 1000V CAT IV - 600V
Automatic Blocking System		•	•	•	•	•
Auto Power Off		•	•	•	•	•
DC Voltage	100mV... 1000V	100mV... 1000V	100mV... 1000V	100mV... 1000V	100mV... 1000V	100mV... 1000V
Accuracy VDC	±0.5% rdg. +2D	±0.5% rdg. +2D	±0.4% rdg. +5D	±0.4% rdg. +5D	±0.4% rdg. +5D	±0.4% rdg. +5D
AC Voltage	100mV... 1000V	100mV... 1000V	100mV... 1000V	100mV... 1000V	100mV... 1000V	100mV... 1000V
Accuracy VAC	±1% rdg. +5D	±1% rdg. +5D	±1% rdg. +3D	±1% rdg. +3D	±1% rdg. +3D	±1% rdg. +3D
DC Current	10µA... 10A	10µA... 10A	10µA... 660mA	10µA... 16A	10µA... 10A	10µA... 10A
Accuracy ADC	±0.8% rdg. +2D	±0.8% rdg. +2D	±0.8% rdg. +5D	±0.8% rdg. +5D	±0.8% rdg. +5D	±0.8% rdg. +5D
AC Current	10µA... 10A	10µA... 10A	10µA... 660A	10µA... 16A	10µA... 10A	10µA... 10A
Accuracy AAC	±1% rdg. +5D	±1% rdg. +5D	±0.8% rdg. +5D	±0.8% rdg. +5D	±0.8% rdg. +5D	±0.8% rdg. +5D
Resistance	100mΩ...40mΩ	100mΩ...40mΩ	100mΩ...66mΩ	100mΩ...66mΩ	100mΩ...66mΩ	100mΩ...66mΩ
Accuracy Resistance	±0.8% rdg. +2D	±0.8% rdg. +2D	±0.8% rdg. +5D	±0.8% rdg. +5D	±0.8% rdg. +5D	±0.8% rdg. +5D
Capacitance	1pF...200mF	1pF...200mF			1pF...40mF	1pF...40mF
Accuracy Capacitance	±0.5% rdg. +3D	±0.5% rdg. +3D			±2.0% rdg. +10D	±2.0% rdg. +10D
Frequency	10Hz...500kHz	10Hz...500kHz			10Hz...10MHz	10Hz...10MHz
Accuracy Frequency	±0.2% rdg. +2D	±0.2% rdg. +2D			±0.2% rdg. +2D	±0.2% rdg. +2D
Temperature	(0...1300°C)	(0...1300°C)	(0...1300°C)	(0...1300°C)	(0...1300°C)	(0...1300°C)
Continuity Testing	•	•	•	•	•	•
Diode Test	•	•	•	•	•	•
Duty Cycle	•	•	•	•	•	•
Data Hold / MIN-MAX	Only Hold	Only Hold	Only Hold	•	•	•
Peak Hold			•	•	•	•
Voltage Check (VAC+VDC)						
Current Check (AAC+ADC)						
Relative	•	•	•	•	•	•
Events Counter/Duration						
Computer Interface(Optional)						
Stop Watch						
Digital Display (mm)	50 x 30	58 x 31.4				
No. of Digital Display	Single	Single	Dual display	Dual display	Dual display	Dual display
Backlit		•	•	•	•	•
Bar Graph Scale			•	•	•	•
Dimensions in mm (WxHxD)	92 x 154 x 25	79 x 174 x 38				
Protective Rubber Holster	•	•	•	•	•	•
Weight with batteries	0.25 Kg.	0.48 Kg.	0.48 Kg.	0.48 Kg.	0.48 Kg.	0.48 Kg.
Battery / Service Life	2 x 1.5 / 600hrs	2 x 1.5 / 600hrs	2 x 1.5 / 600hrs	2 x 1.5 / 600hrs	2 x 1.5 / 600hrs	2 x 1.5 / 400hrs
Warranty	1 Year	3 Years				
Protection	IP50	IP52	IP52	IP52	IP52	IP52



# Insulation Testers

## Digital Insulation Tester 1kV (999M $\Omega$ )

- ◆ Insulation Resistance measurement from 10k $\Omega$  to 999M $\Omega$
- ◆ Selectable Test Voltages 50V/100V/250V/500V/1000V
- ◆ Low Resistance measurement 0.01 $\Omega$  to 99.9 $\Omega$
- ◆ Voltage Measurement <25V to 600V AC/DC
- ◆ Live Circuit Detection >25V irrespective of function selected
- ◆ Automatic Discharge of Capacitive circuits after Test performed
- ◆ Storage of Min/Max values
- ◆ Storage memory for last 50 readings
- ◆ Preselectable Measurement time for Insulation Resistance
- ◆ Continuity Testing with Programmable Threshold Resistance
- ◆ Stop Watch function, Blow Fuse Indication
- ◆ Auto power OFF
- ◆ Power supply battery 6 x 1.5V Cells, IEC LR6

RISH *Insu* 10



## Digital Insulation Tester 1kV (2G $\Omega$ )

- ◆ Insulation Resistance measurement from 10k $\Omega$  to 2G $\Omega$
- ◆ Selectable Test Voltages 50V/100V/250V/500V/1000V
- ◆ Low Resistance measurement 0.01 $\Omega$  to 99.9 $\Omega$
- ◆ Voltage Measurement <25V to 600V AC/DC
- ◆ Optional: Connector jack for External Mains Adapter, 230VAC/9VDC
- ◆ User Selectable Backlit Display
- ◆ Storage of Min/Max values, Storage memory for last 50 readings
- ◆ Live Circuit Detection >25V irrespective of function selected
- ◆ Automatic Discharge of Capacitive circuits after Test performed
- ◆ Preselectable limit checks (Go/No Go option) for M $\Omega$
- ◆ Preselectable Measurement time for Insulation Resistance
- ◆ Lead Resistance Null facility
- ◆ Stop Watch function, Blow Fuse Indication
- ◆ Auto power OFF, Low Battery Indication
- ◆ Power supply battery 6 x 1.5V Cells, IEC LR6

RISH *Insu* 20



## Analog Insulation Tester 5kV (1T $\Omega$ )

- ◆ Rugged 5kV Insulation Tester from state-of-the-art GERMAN TECHNOLOGY
- ◆ Insulation Resistance measurement from 10k $\Omega$  to 1T $\Omega$
- ◆ Selectable Test Voltages 100V/250V/500V/1000V/1500V/2000V/2500V/5000V
- ◆ Test current is equal to 1mA at Test Voltage 100V, 250V, 500V & 1000V
- ◆ Voltage Measurement upto 2500V AC/DC
- ◆ Easy to read logarithmic scales with dual range
- ◆ Confirms to IS2992 (EN 61 557)
- ◆ Guard Terminal for elimination of surface current
- ◆ Re-chargable Battery Operated or Crank Operated or Mains Operated
- ◆ Permanently connected Test leads with heavy duty insulation
- ◆ Green LED indicator to show whether battery charge is sufficient or not
- ◆ Automatic Discharge of Capacitive circuits after Test performed
- ◆ Checking absence of voltages
- ◆ Electrical Safety: Protection class II, IP 52
- ◆ Electromagnetic Compatibility (EMC)
- ◆ Power Supply 6 x 1.5V as per IEC R20
- ◆ Dimension 290mm x 250mm x 150mm
- ◆ 3.4 Kg. (including Battery) & 4.5 Kg. (Including Battery & Mains Assembly)
- ◆ Applications: Insulation Measurement for Cables, motors, etc.

RISH *Insu* 5000

Guard Cable



Hand Crank Generator

# Insulation Testers

## RISH MIT 30 Digital Multimeter with Insulation Tester

### Protection from dust and water:

Instrument: IP50  
For Terminals: IP20 as per IEC60529

### Applicable International Safety Standards

1000V CAT II/600V CAT III as per International Safety Standard IEC 61010-1-2001.

### Signaling in the case of a blown fuse

The display shows "FUSE" in case of blown fuse.

### Automatic blocking socket (ABS)

The automatic terminal blocking system prevents incorrect connection of test lead and incorrect selection of measurement quantity, which provide safety to the user.

### NULL ZERO Correction for Resistance

For Low ohm measurement, the lead resistance can be compensated by pressing the shift key (Yellow Key.)

### NULL ZERO Correction for Capacitance

Null zero connection for capacitance. For nF range, stray capacitance can be compensated by shift key (Yellow Key).



## Product Features

Rish Mit 30 is Analog Digital Multimeter with insulation resistance measurement, which measures VAC, VDC, VAC+DC, Frequency, mA DC, mA AC+DC, Resistance, Continuity, Diode, Farad, equivalent leakage current, AC current measurement with clip-on sensor and insulation resistance measurement.

### Insulation resistance measurement up to 3GΩ

Insulation resistance measurement up to 3GΩ with Test Voltage Selection: 50V, 100V, 250V, 500V and 1000V.

### Root mean square value with distorted wave form

Measuring principal employed permits the measurement of Root Mean Square Value (TRMS) of AC quantities and mixed quantities (AC and DC) regardless of wave form.

### AC Current measurement with clip-on sensor

Current measurement up to 300A with clip-on sensor having ratio 1mv/10mA.

### Temperature measurement

Temperature from -200 to 800°C using PT100 and PT1000 sensors.

### Auto power off

In order to save the power of the Batteries, the meter will automatically shut OFF if it detects no activity for 10 minutes.

### Indication of negative values on the analog scale

When measuring DC quantities, also negative values are shown on the analog scale so that variations of the measured value can be observed at the Zero point.

## Multimeter Functions

DC Voltage Measurement	30mV to 1000V
Intrinsic Error Vdc	±0.25% of rdg+1D
AC Voltage Measurement	3V to 1000V
Intrinsic Error Vac	±0.75% of rdg+1D
AC+DC Voltage	3V to 1000V
Intrinsic Error Vac	±0.75% of rdg+3D
TRMS	Yes
DC Current Measurement	300μA to 300mA
Intrinsic Error Adc	±0.5% of rdg+2D
AC Current Measurement	with clamp 30/100A
Intrinsic Error Aac	±2.5% of rdg+3D
Resistance Measurement	30Ω to 30MΩ
Intrinsic Error Resistance	±0.4% of rdg+1D
Diode Test	Yes
Capacitance Measurement	30nF to 30μF
Intrinsic Error Capacitance	±1% of rdg+3D
Capacitance Leakage Current	Yes
Frequency Measurement	300Hz to 100kHz
Temperature Measurement	Yes
PT100/PT1000	
Continuity Testing	Yes
Data hold, Min/Max Storage	Yes
Bar graph Scale	Yes
Digital Display (Resolution/Counts)	-
Automatic Blocking Sockets	Yes
Measuring Category	CAT II-1000V, CAT III- 600V
Backlit	Yes
Software	RishCom100
Insulation Testing Functions	
Insulation resistance measurement @	0.1MΩ to 3GΩ
50V, 100V, 250, 500, 1000V	

# SHANTI Insulation and Earth Testers

## Features

- ◆ New rigged design to withstand industrial environment
- ◆ In metal body with collapsible steel handle and in ABS which is light in weight and compact
- ◆ In built hand driven brushes AC generator and static rectifier to supply stabilized DC voltage
- ◆ Guard terminal to eliminate surface leakage current
- ◆ An Accurate and Stable reading using Edge Pointer
- ◆ Study movement suitable for Stringent work

## LV Insulation Tester ABS Body (IT series)

Range: 500V / 100MΩ	ITS - 5010
Range: 1000V / 200MΩ	ITS - 10020
Range: 500V / 100MΩ & Continuity - 5KΩ	ITC - 5010
Range: 1000V / 200MΩ & Continuity - 5KΩ	ITC - 10020
Range: 500V / 100MΩ & Measurement 500V	ITS - V - 5010
Range: 1000V / 200MΩ & Measurement 500V	ITS - V - 10020

## LV Insulation Tester Metal Body - (ITS Series)

Range: 100V / 20MΩ	ITI - 102
Range: 100V / 50MΩ	ITI - 105
Range: 250V / 20MΩ	ITI - 252
Range: 250V / 50MΩ	ITI - 255
Range: 500V / 100MΩ	ITI - 5010
Range: 500V / 100MΩ & Measurement 500V	ITI - V - 5010
Range: 500V / 500MΩ	ITI - 5050
Range: 500V / 1000MΩ	ITI - 50100
Range: 1000V / 200MΩ	ITI - 10020
Range: 1000V / 200MΩ & Measurement 500V	ITI - V - 10020
Range: 1000V / 500MΩ	ITI - 10050
Range: 1000V / 1000MΩ	ITI - 100100
Range: 1000V / 2000MΩ	ITI - 100200

## HV Insulation Tester (ITHV Series)

Range: 2500V / 2500MΩ	ITHV - 2525
Range: 2500V / 5000MΩ	ITHV - 2550
Range: 2500V / 10000MΩ	ITHV - 25100
Range: 2500V / 20000MΩ	ITHV - 25200
Range: 2500V / 50000MΩ	ITHV - 25500
Range: 5000V / 5000MΩ	ITHV - 5050
Range: 5000V / 10000MΩ	ITHV - 50100
Range: 5000V / 20000MΩ	ITHV - 50200
Range: 5000V / 50000MΩ	ITHV - 50500
Range: 5000V / 100000MΩ	ITHV - 501000

LV Insulation Tester With Metal Body



HV Multi range Insulation Tester



LV Insulation Tester with ABS Body



## HV Multirange Insulation Tester (ITMR Series)

Multirange Insulation Tester with 3 ranges 1000V (2000 MΩ), 500V (1000 MΩ) & 250V (500 MΩ)	ITMR - 3
Multirange Insulation Tester with 4 ranges 1000V (200 MΩ), 500V (100MΩ), 250V (50 MΩ) & 100V (20 MΩ)	ITMR - 4

# Optional Accessories

## For Multimeters

### Optional Accessories for DMM / Clamp Meter

RISH Clip on CT	Clip on CT 300A / 0.3A AC
	Clip on CT 1000A / 1A AC
	Clip on CT 1000A / 5A AC
RISH Multi SI 232 Communication Adaptor - Storage Adaptor + RISH COM 100 Software	
Temperature Probe - PT 100	
Temperature Probe - PT 1000	
High Voltage Probe - 3 K V	
High Voltage Probe - 30 K V	
1.6 Amp Fuse for RISH Multi / RISH Max	
16 Amp Fuse for RISH Multi / RISH Max	
RISH Multi / RISH Max Normal Probe Set	
RISH Multi / RISH Max Fine Tip Probe Set	
RISH Multi Carrying Case	
RISH Clamp Meter Carrying Case	
Crocodile Clip Set	
Test Certificate	
RISH Multi Probe set according to IEC - 61010 - (CAT IV) 600V	
Terminal block for RISH Max Series	
SPAR - SD00 - 0226	External Power Supply adapter for 601X DMM
SPAR - SD00 - 0227	USB Interface adapter for 601X DMM

# SHANTI Insulation and Earth Testers

## Earth Testers (ET Series)

Measurement of Earth Resistance and Soil resistivity.  
 Earth Resistance Measurement by 4 wire method.  
 Sintered anti friction bearing provide smooth and maintenance free operation.

### Direct Indicating Type Earth Tester (Four Terminals) (ET Series)

Single Range	0 - 3Ω	SET - 3
	0 - 10Ω	SET - 10
	0 - 50Ω	SET - 50
	0 - 100Ω	SET - 100
	0 - 500Ω	SET - 500
Double Range	0 - 10Ω / 0 - 100Ω	DET - 10
	0 - 20Ω / 0 - 200Ω	DET - 20
	0 - 50Ω / 0 - 500Ω	DET - 50
	0 - 100Ω / 0 - 1000Ω	DET - 100
	0 - 500 Ω / 0 - 5000Ω	DET - 500
Tripple Range	0 - 3Ω / 0 - 30Ω / 0 - 300Ω	TET - 3
	0 - 5Ω / 0 - 50Ω / 0 - 500Ω	TET - 5
	0 - 10Ω / 0 - 100Ω / 0 - 1000Ω	TET - 10
	0 - 50Ω / 0 - 500Ω / 0 - 5000Ω	TET - 50
Four Ranges	0 - 3Ω / 0 - 30Ω / 0 - 300Ω / 0 - 3000Ω	FET - 3
	0 - 10Ω / 0 - 100Ω / 0 - 1000Ω / 0 - 10000Ω	FET - 10



#### Option:

Single range (SET), Double Series (DET),  
 Tripple range (TET), Four range (FET)

#### Option:

Earth Tester Kit - 4 M S Spikes, 1 Hammer, Spike Lifting Rod,  
 3 Rolls of flexible wire & 5 mtrs loose wire, 1 rexin carrying case.

# Optional Accessories

## For Insulation / Earth Testers

### Accessories

Extra Cable for RISHInsu 5000A/AK/AKM - Price / Per Meter / Per Dipole Standard Cable length - 1.5m & Maximum possible length is 10m (including 1.5m)	
RISH Insu 10/20 Normal Probe Set	
RISH Insu 10/20 Fine Tip Probe Set	
Crocodile Clip Set	
Crocodile Clip Set for RISH Insu 5000A/AK/AKM (3 nos)	
RISH Insu 10/20 Carrying Case	
RISH Insu 5000A/AK/AKM Carrying Case	
RISH Insu 20 Mains Adaptor	
Spare Hand Crank for 5000A	
Rechargeable Battery set for 5000AKM	
FUSE 500mA / 500V for RISH Insu 10/20	
ITS	Test Leads 1 Mtr Long
ITI & ITI-V	Test Leads 1 Mtr Long
ITHV & ITMR	Test Leads 1 Mtr Long
ET	Test Leads 1 Mtr Long
ITS	Test Leads 3 Mtr Long
ITI & ITI-V	Test Leads 3 Mtr Long
ITHV & ITMR	Test Leads 3 Mtr Long
ET	Test Leads 3 Mtr Long
ITS	Rexine Carrying Case
ITI & ITI-V	Rexine Carrying Case
ITHV & ITMR	Rexine Carrying Case
ET	Rexine Carrying Case
Kind of Earth Tester Models ET Series	Consisting of - 4 M.S. spikes length 45 cms each approx., 1 Spike Lifting Rod, 3 Rolls of wire wound on Spool (30m app), 5m Loose Wire, 1 Hammer, 1 Rexine Carrying Case (Not as per IS Standard)
Re-calibration Charges with Certificate	-V/ITI/ITI-V/ITHV/ITMR/ET Models

# Rishabh Maintenance Tool Kit

Model No.	Description
RISH Kit 14E	Kit Consisting of Tool Bag, RISH Insu 10, Rishabh 410, RISH Clamp ES1000 & accessories
RISH Kit 26D	Kit Consisting of Tool Bag, RISH Insu 20, Rishabh 616, RISH Clamp 1000 A AC/DC & accessories
RISH Kit 36P	Kit Consisting of Tool Bag, RISH Mit 30, Rishabh 616, RISH Clamp 1000 A AC/DC & accessories



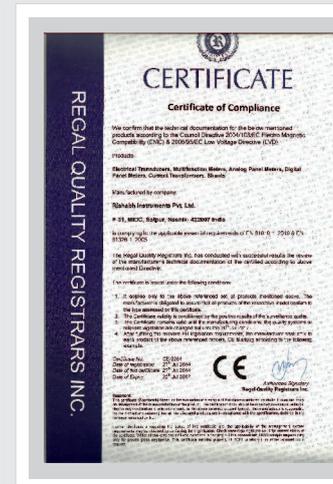
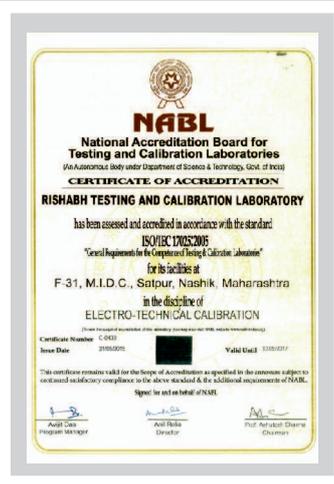
Maintenance Tool Kit



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