



# Product Catalogue



Distributing to the electrical sector



Version V025

[testinstrumentsolutions.co.uk](http://testinstrumentsolutions.co.uk)



# Product Index



Multifunction Test Equipment	
MFT-PRO+ & MFT-PRO Ultimate Kits	4
MFT-PRO+ Professional TRMS Multifunction Installation Tester	5
MFT-PRO Professional TRMS Multifunction Installation Tester	6
MFT-ECO Multifunction Installation Tester with 2 Wire Loop Test	7
TIS 1835 TRMS Digital Insulation and Continuity Tester	8
TIS Checkbox Calibration Checkbox	8
Accessories Range of Multifunction Test Equipment Accessories	9

EV Testing Equipment	
MFT-PRO+ - EV & MFT-PRO - EV Ultimate Kits	10
MFT-PRO+ - EV Complete EV Testing Kit	11
MFT-PRO - EV Complete EV Testing Kit	11
MFT-ECO - EV Complete EV Testing Kit	11
TIS EV-TEST100 EV Testing Adapter	12
TIS 2907 Dedicated EVSE Installation Certificate Book	12
TIS 1908 EVSE Test Report Certificate Book	12

Solar Photovoltaic Equipment	
PVCHECKS PRO Professional Solar PV Commissioning Tester	13
IV-600 I-V Curve Advanced Multifunction Instrument	14
PVCHECKS ONE PLUS Professional Solar PV Commissioning Tester	15
PV-ISOTEST Multifunction Photovoltaic System Tester	16
SOLAR PRO PV Commissioning & I-V Curve Tracer	17
TIS PV1 Solar Power Meter	18
TIS PV2KIT/ELITE Elite Solar PV Kit	18
TIS PV2KIT Solar PV Kit	18
SOLAR-03 Remote Unit For Measuring Irradiation, Temperature & Tilt Angle	19
HT305 Reference Cell For Irradiation Measurement	19
HT9025 TRMS AC/DC Current Clampmeter With Data Logger	19
Range of Solar PV Equipment Accessories	20

PAT Testing Equipment	
TIS 600 SafetyPat Plus Portable Appliance Tester	21
TIS 700 SafetyPat Elite Downloading Portable Appliance Tester	22
Range of PAT Testing Accessories	23/24

Voltage Testers & Safe Isolation Kits	
TIS 849, 859 TRMS Voltage and Continuity Testers	25
TIS 829 Replacement Lead Set	25
TIS 9000PV AC/DC Open Jaw Current & Voltage Multi Tester	26
TIS 9000SIKIT AC/DC Open Jaw Current & Voltage Multi Tester Complete Safe Isolation Kit	26
TIS 9000MC4 MC4 Lead Set For The TIS 9000PV	26
TIS 8000 Open Jaw Current & Voltage Multi Tester	27
TIS 8000 SIKIT Multi Tester Complete Safe Isolation Kit	27
TIS 8000L Spare Lead Set for the TIS 8000	27
TIS 850, 851 LCD and LED Voltage and Continuity Testers	28
TIS 810 Single Pole Contact Voltage Tester	28
TIS 819 Voltage Tester	28
TIS PU1 Proving Unit	28
TIS 849, 859 SIKIT Voltage & Continuity Safe Isolation Kit	29
TIS 850, 851 PKIT Voltage, Continuity & Proving Kit	30
TIS 819 PKIT Voltage, Continuity & Proving Kit	30
Safe Isolation Procedure PDF	31

Lock Off Kits & Accessories	
TIS PKIT Professional Lockoff Kit	32
TIS BKIT Safety Lockout Kit	32
TIS EKIT Safety Lockout Kit	32
Accessories Range of Safe Isolation Accessories	33/34

Thermal Imaging & Boroscope Equipment	
TIS 1900 Digital Thermal Image Camera	35
HTB500 Boroscope with Rechargeable Battery	36
BP36 Optional 3 Meters Long Probe	36

**Powering professionals with precision testing since 2005**

### Digital Multimeter Test Equipment

TIS E227/E217 TRMS Elite Range Electrical Multimeters	37
TIS 280 TRMS Auto-Ranging Digital Multimeter	38
TIS 201 TRMS Digital Auto-Ranging Digital Multimeter	38
TIS 258 Pocket Size Digital Multimeter with Temperature	38

### Digital Clampmeter Test Equipment

TIS E237 TRMS Elite Range Digital Clampmeter with Amp Tip Jaws	39/40
TIS E247 TRMS Elite Range Digital Clampmeter with Amp Tip Jaws	39/40
TIS E257 TRMS Elite Range Digital Clampmeter with Amp Tip Jaws	39/40
TIS 438 TRMS Auto-Ranging Clamp Meter with Inrush Reading	41
TIS 418 TRMS Auto-Ranging Clampmeter	41
TIS 518 TRMS Auto-Ranging Clampmeter	41
TIS 570, 560, 565 Earth Leakage Clamp Meters	42
TIS 455 AC Line Splitter	43
F3000 Clamp Meter with Flexible Jaws	43

### Socket Testers, NCV Detectors & Specialised Equipment

TIS 1005 Socket Polarity Checker with Loop and RCD	44
TIS 1000 Socket Tester with Sounder	44
TIS 870 Circuit Fuse / Breaker Finder	44
TIS 1100 R2, R1 + R2 Socket Adapter	45
TIS 934 Optical / Accoustical Non-Contact Voltage Detector	45
TIS 950 Non-Contact Voltage Detector with IP65 Rubber Housing	45
TIS 960 IP67 Ultimate Non Contact Voltage Detector	45
TIS 415 Phase Rotation / Motor Rotation Tester	46
TIS USB1 USB Tester	46
TIS LD40 Laser Distance Meter	46

### Environmental Test Equipment

TIS 1310 Digital LED Light Meter	47
TIS 770 Digital Sound Level Meter	47
TIS 1309 Digital Anemometer	48
TIS 82 Non-Contact Infrared Thermometer	48
TIS 720 Dual Input K-Type Digital Thermometer	49
Probes Range of K-Type Probes	49
TIS BODYIR Dual Forehead & Ear Medical Infrared Thermometer	50
TIS CO2 Carbon Dioxide, Temperature & Humidity Monitor	50

### TIC (Calibration & Repair Service)

Full Details of our Service and Instruments which we can Calibrate

### Test Leads & Spare Instrument Pouches

TIS MC4TL MC4 to 4mm Test Leads	51
TIS 2FLK Fused Test Lead Set	51
TIS 3TLK Fused Test Kit (unfused)	51
TIS 4TL Test Leads	51
TIS 5TLK Long Nose Needle Test Lead Set	51
TIS 174DB Elite Universal Multifunction Test Lead Set	51
TIS 173DB Distribution Board Lead Set with Probes and Crocodile Clips	51
TIS 172ML Universal Mains Lead	51
TIS 15 Small Test Instrument Pouch	52
TIS 25 Large Test Instrument Pouch	52
TIS PUK Dual Instrument Pouch	52

### Certificate Books

TIS 2901-1710 Electrical Installation and Inspection Certificate Pads	53
TIS 1814 - 1817 Fire Alarm and Emergency Lighting Books	54

### Power Quality Analysers and Data Loggers

PQA924 Professional Class S Network Quality Analyser	55
PQA820 Three-Phase and Single-Phase Power Quality Analyser	56
HT4020 & HT4022 Professional Clamp Meters with Power Harmonics	57
XL421 TRMS Single-Phase Current Data Logger	58
XL422 TRMS Three-Phase Current Data Logger	58
XL423 TRMS Single-Phase Current Data Logger	59
XL424 TRMS Three-Phase Current Data Logger	59

### Network Testers

TIS 880 Network Cable Tester	60
TIS 888 Multifunction Tone Generator & Cable Tracker	60

### Earth Resistance Test Equipment

T2000 20A AC Earth Ground Clampmeter	61
T2100 TRMS Earth Resistance Clampmeter	61

### 5kVA Insulation Tester

HT7051 Professional 5kV Insulation Meter	62
--	----

### Electrical Safety Labels

Labels Various Testing Labels and Electrical Safety Labels	63
--	----

### Electrical Starter Kits

TIS SK1 Electricians Starter Kit	64
----------------------------------	----

### Knipex Tools/WIHA Tools

65/66

# Multifunction Test Equipment

## TIS MFTPRO+ ULTIMATE

Ultimate Professional TRMS Multifunction Installation Tester  
with Power Quality Analysis, Wi-Fi, Earth Electrode & EVSE Testing Capabilities



UK  
CA

Please refer to page 5 for the full specifications of the TIS MFT-PRO+.

The Ultimate kit comes complete with the HT96U Power Harmonic & Leakage Clampmeter & PR400 Remote Testing Probe.

## TIS MFTPRO ULTIMATE

Ultimate Professional TRMS Multifunction Installation Tester  
with Power Quality, Leakage & EVSE Testing Capabilities



UK  
CA

Please refer to page 6 for the full specifications of the TIS MFT-PRO.

The Ultimate kit comes complete with the HT96U Power Harmonic & Leakage Clampmeter & PR400 Remote Testing Probe.

# Multifunction Test Equipment

## TIS MFTPRO+

**Professional TRMS Multifunction Installation Tester with Power Quality Analysis, Earth Electrode and then EVSE Testing Capabilities, Wi-Fi & EVSE Testing Capabilities**



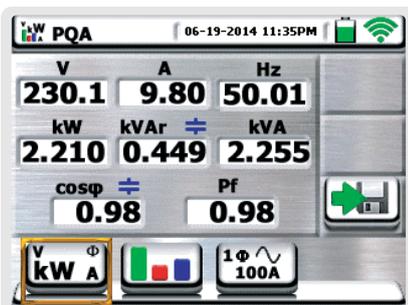
**UK  
CA**



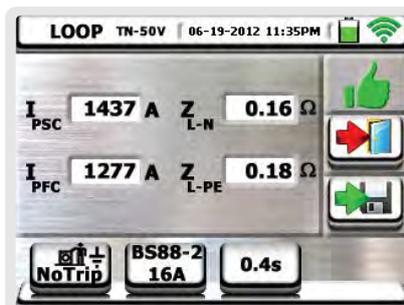
(Supplied with TIS ERKIT)



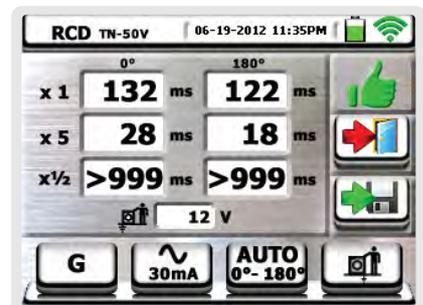
- **NEW** EVSE Testing Capabilities, Full Auto-Sequence using TIS EV-TEST100
- **NEW** 6mA Type B, DC RCD & Ramp Test for EVSE Charging Stations
- **NEW** RDC-DD 6mA Test to IEC 62955 for EVSE Testing
- **NEW** With 3 & 4 Wire Earth Electrode Testing
- **NEW** Auto Sequence performs Loop, RCD & both cycles of the Ramp Test from pressing the test button once
- Volt Drop Measurement and Calculation
- TFT Large Colour LCD Display, 320 x 240 pixels
- Phase to Phase Loop Testing
- TRMS for accurate measurements on noisy and distorted circuits
- Resistive Touch Screen, works even with gloves on!
- Full Help Schematic Display
- Built in Fuse Characteristic Table, ✓ OK and ✗ Fail Display
- Measurement of Continuity > 200mA
- Complete with Rechargeable Batteries and Charger
- Supplied with Neck Strap & Harness for Hands Free Use
- Displays both L-N, L-PE with PFC & PSC
- Simultaneously on No Trip Test
- Compliant with BSEN 61557-1-2-3-4-5-6-7 17th Amendment 3 & 18th Edition
- Accurate PRO-LOCK No Trip Loop Test
- Phase Sequence Measurement
- Accurate and Reliable, 'No Trip' Loop Testing
- Line / Loop Impedance, Phase - Phase, Phase - Neutral, Phase - PE
- Insulation Test at 50, 100, 250, 500 and 1000V
- RCD Testing up to 1A, or 10A with optional adapter
- Automatic RCD Test, 0° 180°, x 1 x 5 x 1/2, Contact Voltage
- Ramp Test in one visit
- Tripping time of General, Selective & Delayed RCDs Type AC, A, F & B
- Measurement of Voltage, Current, Active Reactive, Apparent Power
- Measurement of Cosphi, Power Factor
- Optional adapters for measuring PQA, Earth Leakage, Lux & Temperature
- Memory 999 Locations, 3 Level Markers
- PC interface integrated WiFi communication
- Software Included



Complete set of test results having conducted a Power Quality Analysis



Outcome of No Trip Loop Test displaying Z L-N, Z L-PE Results and IPSC & IPFC results



Outcome of Auto RCD Test showing x1, x5, x1/2, 0° and 180°

\* Provided the instrument is calibrated and maintained by TIS & TIC, this will also include any firmware updates during this time.

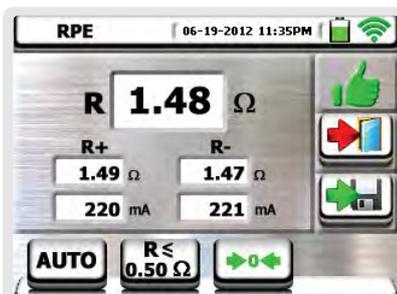
# Multifunction Test Equipment

## TIS MFTPRO

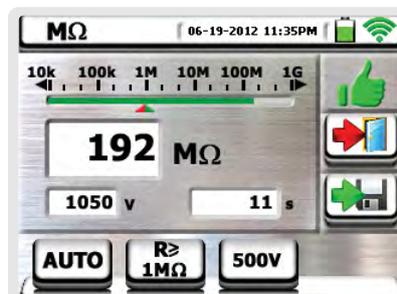
**Professional TRMS Multifunction Installation Tester with Power Quality Analysis, Wi-Fi & EVSE Testing Capabilities**



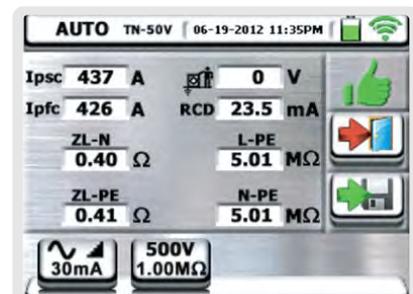
- **NEW** EVSE Testing Capabilities, Full Auto-Sequence using TIS EV-TEST100
- **NEW** 6mA Type B, DC RCD & Ramp Test for EVSE Charging Stations
- **NEW** Auto Sequence performs Loop, RCD & both cycles of the Ramp Test from pressing the test button once
- **NEW** RDC-DD 6mA Test to IEC 62955 for EVSE Testing
- Volt Drop Measurement and Calculation
- TFT Large Colour LCD Display, 320 x 240 pixels
- Phase to Phase Loop Testing
- TRMS for accurate measurements on noisy and distorted circuits
- Resistive Touch Screen, works even with gloves on!
- Full Help Schematic Display
- Built in Fuse Characteristic Table, ✓ OK and ✗ Fail Display
- Measurement of Continuity > 200mA with a single test continuity function, timed continuity test function & locked on time limitless test function
- Complete with Rechargeable Batteries and Charger
- Supplied with Neck Strap & Harness for Hands Free Use
- Displays both L-N, L-PE with PFC & PSC Simultaneously on No Trip Test
- Compliant with BSEN 61557-1-2-3-4-5-6-7 17th Amendment 3 & 18th Edition
- Accurate PRO-LOCK No Trip Loop Test
- Phase Sequence Measurement
- Accurate and Reliable, 'No Trip' Loop Testing
- Line / Loop Impedance, Phase - Phase, Phase - Neutral, Phase - PE
- Insulation Test at 50, 100, 250, 500 and 1000V
- RCD Testing up to 1A, or 10A with optional adapter
- Automatic RCD Test, 0° 180°, x 1 x 5 x 1/2, Contact Voltage
- Ramp Test in one visit
- Tripping time of General, Selective and Delayed RCDs A, AC and B
- Measurement of Voltage, Current, Active Reactive, Apparent Power
- Measurement of Cosphi, Power Factor
- Optional adapters for measuring PQA, Earth Leakage, Lux & Temperature
- Memory 999 Locations, 3 Level Markers
- PC interface integrated WiFi communication
- Software Included



Outcome of EVSE Continuity Test with actual result and current injected



Outcome of an Insulation Test showing passed result



Sample of the Auto Mode test results which show the results for PSC, Touch Voltage, PFC, RCD, ZL-N, L-PE, ZL-PE, N-PE

\* Provided the instrument is calibrated and maintained by TIS & TIC, this will also include any firmware updates during this time.

# Multifunction Test Equipment

## TIS MFTECO

### Multifunction Installation Tester with EVSE Testing Capabilities

✓ **Accurate & Reliable**  
**2 Wire Loop Test**

✓ **Automatic Testing**  
**of the 3 Insulation**  
**Tests from one**  
**connection**



**UK**  
**CA**



TIS EV-TEST100  
(optional extra)

- **NEW** 6mA Type B, DC RCD & Ramp Test for EVSE Charging Stations
- **NEW** RDC-DD 6mA Test to IEC 62955 for EVSE Testing
- 2\* and 3 Wire Loop Test (\*European patent pending)
- Automatic Testing of 3 Insulation Tests from one connection
- TRMS for accurate measurements on noisy and distorted circuits
- LPE/LN with PFC/PSC results displayed on single test
- New Auto Start Mode, On or Off for easy testing
- Dual Test Button for Left or Right hand use
- Neck Strap and Safety Harness
- Built in Fuse Characteristic Table, ✓ OK and ✗ Fail Display
- Accurate and Reliable 'No Trip' Testing, Line / Loop Impedance, Phase - Phase, Phase - Neutral, Phase - PE with 2 Wire Mode
- Phase to Phase Loop Test
- Full Help Schematic Display
- Large COG Graphic LCD Display 128 x 128 pixels
- Compliant with BSEN 61557-1-2-3-4-5-6-7, 18th Edition
- Insulation Test at 50, 100, 250, 500 and 1000V DC
- Fast Automatic RCD Test, 0° 180° x 1 x 5 x 1/2 with Ramp & Contact Voltage Tests
- Auto Mode Loop and RCD Tests in a single test
- Continuity Test of Earth Conductors with Test Current >200mA
- Tripping time of General, Selective & Delayed RCDs Type AC, A, F & B
- RCD Testing 6mA to 1A
- Phase Sequence Measurement
- Safety Compliance with IEC EN 61010-1
- Built in Pass / Fail Levels
- Measurement Category CAT IV 300V

#### SUPPLIED WITH

- Neck Strap and Safety Harness
- PR400 Remote Switch
- Test Leads, Probes and Crocodile Clips
- 6 x 2000mA Rechargeable Batteries & Charger
- Soft Padded Carrying Case
- 12 Month Calibration Certificate
- Guarantee upgradeable to 3 years

\* Provided the instrument is calibrated and maintained by TIS & TIC, this will also include any firmware updates during this time.

# Multifunction Test Equipment



## TIS 1835

### Handheld TRMS Insulation Resistance Tester with Multimeter Features

The TIS 1835 Digital Insulation Tester meets all the requirements of the 18th Edition and is packed full of features which are listed below and includes all the features of a digital multimeter and a high end digital insulation tester, with 0.01 of an ohm at 200mA.

- Insulation Range 50, 100, 250, 500 & 1000 Volt, (Stepping 10%)
- 99 - Group Data Storage
- Measuring Range 50MΩ up to 20.0GΩ
- With 0.01 of an ohm at 200mA
- High Voltage Output Alarm
- Continuity R1 R2 Testing 20.00KΩ, >200mA with Buzzer
- TRMS
- AC Voltage Range 0 - 600V, 0.1V ± 2% + 3
- DC Voltage Range 0 - 600V, 0.1V ± 2% + 3
- DAR + PI Timing Measurements
- Frequency DC 50Hz - 400Hz
- Step Voltage
- Compliance Standards EN61557-1-2007, EN61557-2-2007, EN61557-4-2007
- Compliance Standards EN61326-1-2013, EN61326-2-2-2013, EN61010-2-030-2010
- Compliance Standards EN61010-2-033-2012 and IET 18th Edition
- Display with Max Reading being 9999
- Data Hold
- Low Battery Alarm
- Analogue Bar Graph
- CAT IV 600V
- Battery Life Expected on new set of Alkaline Batteries 800 Insulation Tests
- Uses 6 x AA, 1.5V Batteries
- Automatic Discharge of Voltage
- Back Lit Display
- Lock Timer Feature
- Complete with Test Leads, Alligator Clip, Batteries & Padded Case

UK  
CA



EN 61010-1  
CAT III  
1000V

EN 61010-1  
CAT IV  
600V



## TIS CHECKBOX

### Calibration Checkbox

The TIS Checkbox is a very useful tester which ensures on a weekly, monthly basis that all your multifunction testers or individual loop, RCD, insulation and continuity testers are within specification. This unit does not replace your annual calibration procedures.

- For all types and makes of Multifunction Testers including the TIS MFTPRO+, TIS MFTPRO & TIS MFTECO
- All types and makes of separate Loop, RCD & Insulation / Continuity Tester
- Checks Continuity 0 - 10Ω
- Checks Insulation Resistance 1 - 200Ω
- RCD Test checks at 30mA and 150mA
- Checks Loop at socket +0.50Ω, +2.00Ω and 50Ω
- Can be used to check Voltage & Resistance on Multimeters
- Easy to Use
- Compact Design
- Mains Lead Supplied
- Complete with Padded Case



COMPLETE WITH  
Calibration  
Certificate

COMPLIANT WITH  
BSEN  
61326

UK  
CA

# Multifunction Test Equipment

## HT96U

**Power Harmonic & Leakage  
Clampmeter For the TIS  
MFTPRO+ & TIS MFTPRO**

- Measuring range: 1mA=1000A
- Basic Precision:  $\pm 1.0\%$  reading
- Measurement Category: CAT III 600V
- Clamp jaw internal diameter: 54mm
- Output connector: Hypertac



UK  
CA

## PR400

**Remote Test Probe For  
The TIS MFTPRO+, TIS  
MFTPRO & TIS MFTECO**

- Overall length: 25cm
- Tip length: 1.9cm
- Tip diameter: 4mm
- Measurement category: CAT IV 600V / CAT III 1000V



UK  
CA

## TIS 173DB

**Distribution Board Lead  
Set with Probes and  
Crocodile Clips**



UK  
CA

The TIS 173DB is a rugged constructed distribution board lead set, constructed with silicone cable, making it extremely flexible, the set comes complete with probes and rugged strong crocodile clips and is fitted with standard 4mm terminals making it suitable for our own MFT-PRO, MFT-PRO+ & MFT-ECO, plus most other test instrumentation, no matter what manufacturer.

## TIS 174DB

**Elite Universal Multifunction  
Test Lead Set**



UK  
CA

- 3- Test Leads, Black, Blue & Green
- 3- GS38 Long Reach Probes, Black, Blue & Green
- 1- GS38 Fine Point Probe, Black
- 3- Crocodile Clips, Black, Blue & Green
- 3- Grabber Clips, Black, Blue & Green
- Ideal for use with the TIS MFTPRO+, TIS MFTPRO & TIS MFTECO
- Universal Lead Set Will Fit Most Manufacturers Multifunction Testers
- Complies to BSEN IEC61010-31:2023
- CAT III 1000V & CAT IV 600V
- 10A, 50/60Hz

## TIS 172ML

**Universal Mains Lead**



UK  
CA

The TIS 172ML is a universal mains lead that can be used with most multifunction testers and our own TIS MFTPRO+, TIS MFTPRO & TIS MFTECO.

## TIS ERKIT

**3 & 4 Pole Earth  
Electrode Kit**



UK  
CA

This Kit can be used with the TIS MFTPRO+ & other makes and models of Multifunction Testers with Earth Electrode Testing Capabilities.

## TIS 50

**50M Earth  
Wander Reel**

UK  
CA



The 50m earth wander reel is to enable performance of r2 testing and is easy to use, on a quick and simple rewindable cable reel it has a 4mm terminal to fit the majority of test equipment no matter what manufacturer.

## TIS JUMPTL

**Jump Leads with Crocodile  
Clips**

UK  
CA



Ideal for use when carrying out insulation testing or continuity testing at a distribution board. Length of leads: 2 x 170mm & 2 x 450mm.

## TIS LIGHTAD

**Lamp Adapters**



UK  
CA

The TIS LIGHTAD Lamp Adapters are ideal for all types of lamp holder connectors, enabling simple and easy testing of all lighting circuits.

# EV Testing Equipment

## TIS MFTPRO+-EV ULTIMATE

Ultimate Professional TRMS Multifunction EVSE Test Kit with Earth Electrode Capabilities



EVSE Charger  
*Installation Certificates*  
& EVSE Test Reports  
also available (page 12)

UK  
CA

Please refer to page 5 for the full specifications of the TIS MFT-PRO+.

The Ultimate kit comes complete with the HT96U Power Harmonic & Leakage Clampmeter & PR400 Remote Testing Probe.

## TIS MFTPRO-EV ULTIMATE

Ultimate Professional TRMS Multifunction EVSE Test Kit



EVSE Charger  
*Installation Certificates*  
& EVSE Test Reports  
also available (page 12)

UK  
CA

Please refer to page 6 for the full specifications of the TIS MFT-PRO.

The Ultimate kit comes complete with the HT96U Power Harmonic & Leakage Clampmeter & PR400 Remote Testing Probe.

# EV Testing Equipment



## TIS MFTPRO+-EV

Complete EVSE Testing Kit



Both Products can be purchased separately

Please see individual functions of: The MFT-PRO+ on page 5 & TIS EV-TEST100 on page 12



EVSE Charger *Installation Certificates* & EVSE Test Reports also available (page 12)



## TIS MFTPRO-EV

Complete EVSE Testing Kit



Both Products can be purchased separately

Please see individual functions of: The MFT-PRO on page 6 & TIS EV-TEST100 on page 12



EVSE Charger *Installation Certificates* & EVSE Test Reports also available (page 12)



## TIS MFTECO-EV

Complete EVSE Testing Kit



Both Products can be purchased separately

Please see individual functions of: The MFT-ECO on page 7 & TIS EV-TEST100 on page 12



EVSE Charger *Installation Certificates* & EVSE Test Reports also available (page 12)

# EV Testing Equipment

## TIS EV-TEST100

### EV Testing Adapter



- Tests Mode 2 and Mode 3 Charging Stations
- Tests Type A-30mA, B-6mA and B-30mA RCDs
- CAT III 300V Measurement Category
- Fault Simulation ( PE and E )
- Phase Presence Indication
- Type 2 Connection
- IP40 Protection
- Data Saving using the TIS MFT-PRO & MFT-PRO+
- Data Export using the Top View Software
- External Load - Fused Max 10A/230V
- Vehicle Status Simulation (CP) A,B,C,D
- Guided AUTO Test Sequence using the TIS MFT PRO & TIS MFT-PRO+
- Cable Coding Simulation (PP) Open, 13A, 20A, 32A and 63A
- Standards, IEC/EN61010-1, IEC/EN61851-1 and IEC/EN60364-7-722
- The TIS EV-TEST100 can be used with Most Multi Function Testers



For Fully Automated Results please use in conjunction with the TIS MFTPRO+ & TIS MFTPRO.

## TIS 2907

### Dedicated EVSE Installation Certificate Book

The new single signature Electrical Installation Certificate for a single circuit supplying an electric vehicle charging point, conforms to Appendix 6 of 857671: 2018+ A2, suitable for Single Phase and Three Phase properties.



## TIS 1908

### EVSE Test Report Certificate Book

The TIS 1908 is an EVSE test report pad ideal for use when testing and recording results on an EVSE charging station and is perfect to use with the TIS MFTPRO+, TIS MFTPRO & TIS MFTECO in conjunction with the TIS EV-TEST100.



# Solar Photovoltaic Test Equipment

## PVCHECKS-PRO PLUS

Professional Solar PV Commissioning Tester 1500V and 40Amp



PVCHECKS-PRO is a one-stop test solution to meet the IEC 62446-1 standards for category 1 tests. PVCHECKS-PRO performs on single-face (SF) as well as on bifacial (BF) photovoltaic systems all tests required by the IEC 62446-1 to commission a photovoltaic installation in automatic sequence. Therefore, by a single GO-key stroke PVCHECKS-PRO measures and tests:

- Continuity of protective earthing and/or equipotential bonding conductors, where fitted
- Polarity test
- String open-circuit voltage test up to 1500V
- String short-circuit current test up to 40A
- Insulation resistance of the DC circuits by generating up to 1500V even on live circuits
- GFL (Ground Fault Locator) to identify a faulty panel in a string



- Continuity of protective conductors at 200mA
- Polarity
- Open circuit voltage (Voc) of PV modules and strings: 1500V
- Short circuit current (Isc) on PV modules and strings: 40 Amp
- PV string / field insulation with test voltages: 250V, 500V, 1000V & 1500V DC
- Use of SOLAR-03 remote unit with Bluetooth connection
- Measurement of direct (front side) irradiation with reference cell (with supplied SOLAR 03 & HT305 Reference Cell)
- Temperature measurement of cell and environment (with the supplied PT305 Temperature Probe)
- Measurement of polarisation index (P.I)
- Dielectric absorption ratio (D.A.R)
- GFL function to locate the fault position in the string
- CAT III 1000V AC, CAT III 1500V DC Measurement category
- Backlit LCD display
- Internal memory: 999 locations
- Integrated Wi-fi connection and compatibility with HTANALYSIS App
- Optical / USB serial port for PC connection
- Custom management of internal PV module database
- Auto power off
- Help on line on the display
- Size (LxWxH): 235 x 165 x 75mm
- Weight (batteries included): 1200 grams

Kit supplied with one SOLAR-03 and one HT305



2 Extra HT305s Needed to test Bi-Facial Solar Photovoltaic Panels



# Solar Photovoltaic Test Equipment

## IV-600

**Advanced Multifunction Instrument for I-V Curve Measurements up to 1500V and 40A**



IV600 allows field tracing of I-V curve of modules and strings up to 1500V and 40A. Once traced the I-V curve, thanks to the user updatable database of modules, IV600 compares the measured data to the nominal values as provided by the manufacturer of the module/string under test to return a clear OK/NOT OK response.

Communication to the remote unit SOLAR-03 is granted up to 100m (in free field), and the logging function in case the communication was impossible (obstacles such as floor, concrete structures, etc.), it is always possible to trace the I-V curve regardless the environment the installation is in.

IV600 traces the I-V curve of mono-facial and bi-facial modules. According to IEC technical specification TS 60904-1-2, in addition to the front-side radiation, IV600 measures the back-side radiation by two different sensors (to consider the rear side irradiance nonuniformity). IV600 drives up to 3 solar radiation reference cells, but no more tons of parameters to set and high risk of misconfiguration.

IV600 automatically recognizes the calibration parameters of the reference cells connected. Running out of battery power is every professional's worst nightmare. Finding yourself without battery power in the middle of nowhere with a job to be delivered within hours would put anyone in trouble. Thanks to the patented BMS (Battery Management System), IV600 recharges its own batteries by recovering the power absorbed while tracing the I-V curve.

With IV600 it is possible to reach the PV field with fully flat batteries, start the measuring campaign, and end it with fully charged batteries. BMS turned the worst nightmare into the best dream ever! Reversing graphics to read the display properly even while hanging the instrument upside-down to the module rails, Wi-Fi connection to smartphones and tablets, and the microSD card slot to expand the memory complete the functions that IV600 provides.

- I-V Curve tracing of PV modules and strings: 1500V 40A
- Open circuit voltage VOC of PV modules and strings: 1500V
- Short circuit current ISC on PV modules and strings: 40A
- Quick IVCK test for measuring VOC and ISC on PV modules: 1500V 40A
- Use of SOLAR-03 remote unit with Bluetooth connection
- Measurement of direct (front side) irradiation with reference cell
- Measurement of albedo (back side irradiation) with up to 2 optional extra HT305 reference cells
- Temperature measurement of cell and environment with the supplied PT305 Temperature Probe
- BMS (battery management system) to recover testing energy and recharge the batteries
- Rechargeable or alkaline AA battery powered
- Mains power supply and battery cover
- PV power supply
- Seamless measuring mode to start the curve tracing automatically
- CAT III 1500V DC
- Backlit LCD colour display with touchscreen
- Intuitive memory: 9999 I-V curves
- External memory: micro SD
- PC Interface with software for Windows & Mac
- Integrated Wi-fi for connection to smartphones and tablets
- Auto power off
- Help on line on the display
- Size (LxWxH): 335 x 289 x 155mm
- Weight: 6kg

# Solar Photovoltaic Test Equipment

UK  
CA

## PVCHECKS ONE PLUS

### Solar Multifunction Commissioning Tester

#### PVCHECKS-ONE PLUS: The All-in-One Frontline Testing Solution

The PVCHECKS-ONE is a comprehensive, all-in-one meter designed to support the commissioning, verification, and troubleshooting of photovoltaic (PV) installations. Combining high-performance measurement capabilities with advanced diagnostic functions, it enables technicians to quickly assess system integrity, identify issues, and ensure reliable operation.

Thanks to its cutting-edge technology, technicians can easily perform commissioning tests in full compliance with IEC/EN62446-1 Category 1 requirements, while efficiently identifying ground faults during troubleshooting. With its fully automated test sequences, PVCHECKS-ONE ensures comprehensive certification of the performance and safety of both Monofacial and Bifacial PV modules. The instrument also introduces two innovative features that further enhance testing experience and operational efficiency:

- AUTOSTART/AUTOSAVE function
- Insulation testing on PV strings with DC optimizers

#### AUTOSTART & AUTOSAVE FUNCTION

The automatic sequential testing is engineered to maximize the throughput by reducing the time needed to test each PV string. PVCHECKS-ONE connects directly to the bus bars inside the combiner box, allowing seamless operation. Starting with all string fuses or switches open, the technician simply enables one string at a time. As soon as PVCHECKS-ONE detects voltage at its inputs, it automatically initiates the test sequence—performing the five measurements required by IEC/EN62446-1 and storing all results in its internal memory. When the fuses or switches of the tested string are reopened and those of the next string are closed, PVCHECKS-ONE immediately begins the next test cycle. No manual action is required; the instrument handles the entire process autonomously for fast, reliable, and efficient testing.



#### Kit supplied with one SOLAR-03 and one HT305



#### 2 Extra HT305s Needed to test Bi-Facial Solar Photovoltaic Panels



- Continuity of protective conductors at 200mA
- Insulation measurement with test voltage 250V, 500V & 1000V DC
- NEW OPT Insulation measurement with DC Optimisers present
- Open circuit voltage (Voc) measurement up to 1000V DC
- Short circuit current (Isc) measurement up to 30A
- Measurement of Irradiance using the HT305 Reference cell & Solar-03 communication meter supplied
- Measurement of Bi-facial solar photovoltaic panels using 2 extra optional HT305 Reference cells
- Measurement of Temperature through the PT305 Temperature probe supplied
- IVCK Measurement with the press of one button
- GFL (Ground Fault Locator) to identify faulty solar panels in a string from 4 panels up to 60 panels
- DMM Feature to measure DC voltage and AC TRMS voltage
- 240 X 240 COG LCD screen with backlight
- Internal database of panels maximum 64
- Memory maximum 999 tests
- Power supply 6 x 1.5V AA alkaline batteries or 6 x 1.2V AA NiMH rechargeable batteries
- PC Communication Optical USB & WiFi
- Solar-03 Communication Bluetooth range up to 100 Metres clear site
- Conforms to BSEN 62446-1
- CAT III 1000V
- IP40

# Solar Photovoltaic Test Equipment

## PV-ISOTEST

Multifunction Tester for Maintenance & Fault Finding of a Photovoltaic system



UK  
CA

PV-ISOTEST represents a real innovation in the panorama of PV verification and testing instrumentation. PV-ISOTEST measures the insulation resistance of a single module, a string or even an entire photovoltaic field up to 1,500 V DC according to IEC/EN62446 standard.

Traditional insulation meters would require a DC-rated switch-box to short-circuit the positive and negative terminals of the module/string/PV field under test. With the PV-ISOTEST the use of any external device is not required, PV-ISOTEST carries out the measurements in full autonomy and self-sufficiency.

In addition, through the new GFL (Ground Fault Locator) function, PV-ISOTEST indicates the position of any poor insulation on a string of the photovoltaic system, due, for example, to water or humidity leakage.

- TRMS AC voltage measurement: 1000V
- DC voltage measurement: 1500V
- Insulation resistance: 250V, 500V, 1000V & 1500V DC
- GFL function to locate the fault position in the string
- Measurement of polarization index (P.I)
- Dielectric absorption ratio (D.A.R)
- Continuity of protective conductors at 200mA
- Size (LxWxH): 235 x 165 x 75mm
- CAT III 1500V DC / CAT III 1000V AC
- Weight: 1.2kg

## SOLAR PRO – Coming Soon

The SOLAR PRO is the most advanced multifunction PV tester ever developed, being the combination of an I-V curve tracer meeting IEC 60891, and a commissioning tester meeting the IEC 62446-1 standards. The SOLAR PRO is a one-stop test solution to take category 1 and category 2 commissioning tests, to measure the performance and functionality, and to troubleshoot single face and bifacial modules in PV systems.



**TIS**

- Continuity of protective conductors at 200mA
- Polarity
- PV Module type- all most common types of PV modules single face & bifacial
- Wireless environmental parameters measurement (free field, max 100m, bluetooth connection with SOLAR-03)
- Performance / acceptance tests @ OPC (operating conditions) I-V Curve
- Open circuit voltage (Voc) of PV modules and strings: 1500V
- Short circuit current (Isc) on PV modules and strings: 40 Amp
- PV string / field insulation with test voltages: 250V, 500V, 1000V & 1500V DC
- GFL function to locate the fault position in the string
- Insulation measurement (dual mode & timer)
- PV Module datasheet database: 40,000 internal
- Memory: 9999 tests
- Data transfer / communication port: USB-C & Wi-fi
- Touch screen colour graphic LCD: 800 x 600 pixel
- Help on line display
- IP67 (closed) IP40 (open)
- Buzzer

# Solar Photovoltaic Test Equipment



## TIS PV1 Solar Irradiance Meter



### GENERAL CHARACTERISTICS

- Power: 2 x 1.5V AAA Batteries (supplied)
- Weight: 90g
- Size: 134mm x 48mm x 27mm

The TIS PV1 Solar Power Meter is used to measure solar power. with this unit you can determine the optimal incident angle for solar panels, together with determining the best choice of solar panel. Measurements are displayed in w/m2 or btu (ft2 x h).

- Measuring Range: 4000W/m<sup>2</sup>, 1268 BTU (ft<sup>2</sup>\*h)
- Resolution: 0.1 W/m<sup>2</sup>, 0.1 BTU (ft<sup>2</sup>\*h)
- Accuracy: Typically within  $\pm 10$ W/m<sup>2</sup> [ $\pm 3$  BTU (ft<sup>2</sup>\*h)] or  $\pm 5\%$ , whichever is greater in sunlight; additional temperature induced error  $\pm 0.38$ W/m<sup>2</sup>/°C [ $\pm 0.12$  BTU (ft<sup>2</sup>\*h)/°C] from 25°C
- Sampling time: Approx. 4 time/second
- Solar radiation measurement
- Solar power research
- Physics and optical laboratories
- Identify high performance windows
- Meteorology
- Simple to use general data
- 3½ digits LCD display with maximum reading of 3999
- Measuring the Solar radiation emitted by the sun
- Display units: W/m2 (Watts per square meter) or BTU
- Data Hold & MAX / MIN functions

## TIS PV2KIT/Elite

### Elite Solar PV Kit

- **TIS PV1** - please see above for a full list of features Solar Power Meter
- **TIS E257** - please see page 39/40 for a full list of features 1000A AC/DC TRMS Auto-Ranging Clamp Meter with Inrush Reading & Recording facility measuring the Min, Max & Average Current Flow
- **TIS MC4TL**  
MC4 to 4mm Plugs
- **TIS 25**  
Padded Case with Shoulder Strap



## TIS PV2KIT

### Solar PV Kit



- **TIS PV1** - please see above for a full list of features Solar Power Meter
- **TIS 438** - please see page 41 for a full list of features 1000A AC/DC TRMS Auto-Ranging Clamp Meter with Inrush Reading
- **TIS MC4TL**  
MC4 to 4mm Plugs
- **TIS 25**  
Padded Case with Shoulder Strap



# Solar Photovoltaic Test Equipment

## SOLAR-03

### Remote Unit For Measuring Irradiation, Temperature & Tilt Angle

Communication device to allow wireless connection of irradiance & temperature probes to the PVCHECKS PRO PLUS, IV600, SOLAR PRO & PVCHECKS ONE.



UK  
CA

- Recording: irradiance and temperature values coupled with Master unit
- Measurements: Irradiance (with HT305 cell) and module temperature (with PT305 probe)
- Power supply: 2 1.5V AA-type alkaline batteries or 1.2V AA-type NiMH rechargeable batteries
- Master unit connection: Bluetooth BLE
- Output connection: USB-C for battery charging
- Automatic acquisition of the cell calibration value
- Basic accuracy:  $\pm 1.0\%$  reading
- Type of PV modules: Single-sided and Double-sided
- Internal memory: approx. 60 hours (@ fixed PI = 1s)
- Measuring range: 0-1400W/m<sup>2</sup>
- Protection rating: IP65
- Size: 155x100x55mm
- Weight: 350g (including batteries)
- Input connectors: custom HT 5 poles

## HT305

### Reference Cell For Irradiation Measurement

Reference cell to measure the irradiance values in conjunction with the Solar-03 and works with the PVCHECKS PRO PLUS, IV600, SOLAR PRO & PVCHECKS ONE.



UK  
CA

- Measuring Range 50 - 1400W W/m<sup>2</sup>
- Basic Accuracy  $\pm 3.0\%$
- Type of cells Monocrystalline & Polycrystalline
- Protection IP65
- Size 120x85x40mm
- Weight 260g
- Output Connector Binder

## HT9025

### TRMS AC/DC Current Clampmeter With Data Logger Function

HT9025 has been designed to measure AC/DC current up to 1000A, DC voltage up to 1500V and AC voltage up to 1000V in TRMS reaching CAT IV 600V and CAT III 1000V in compliance with safety standard IEC/ EN61010-1. The clamp is provided with a display with 6000 measuring spots with backlight and bargraph to allow for a simple reading even in poorly lit environments. HT9025 also measures Resistance, Frequency, Capacity and Temperature with K-type probe.

UK  
CA

- TRMS
- Current Measuring Range 1000A
- AC & DC Current
- AC Voltage 1000V
- DC Voltage 1500V
- Leakage Current With Optional Clampmeter
- Frequency
- Resistance & Continuity Test With Buzzer
- Capacitance
- Diode Test
- Duty Cycle
- Temperature With K-Type Probe
- Inrush Current Measurement
- Clamp Diameter 40mm
- Measuring Count 6000
- Backlight
- Bargraph
- Auto Ranging
- Auto Power Off
- Non Contact Voltage Detector
- Data Hold
- Min/Max Function
- Relative Measurement
- Colour LCD Display
- Datalogger & Graph
- Memory Saving
- LI-ION Battery
- CAT IV 600V, CAT III 1000V



# Solar Photovoltaic Test Equipment

## TIS MC4TL

### MC4 Test Leads

MC4 to 4mm Test Lead Set to allow connection into Solar Panels and an appropriate clampmeter such as the TIS E257 & TIS 438.



## TIS 1711

### Electrical Installation Certificate For Small Scale PV Systems

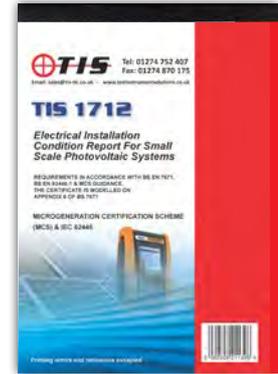
Electrical Installation Certificate For Small Scale PV Systems, requirements in accordance with BS EN 7671, BS EN 62446-1 & MCS Guidance.



## TIS 1712

### Electrical Installation Condition Report For Small Scale PV Systems

Electrical Installation Condition Report For Small Scale PV Systems, requirements in accordance with BS EN 7671, BS EN 62446-1 & MCS Guidance, the certificate is modelled on appendix 6 of BS 7671.



## TIS MC4KIT

### Solar MC4 Crimping Kit



- KN 00 21 15LE - Case
- KN 97 43 200 A - Crimp System Pliers For Exchangeable Crimping Dies
- KN 97 49 66 2 - Set of Mounting Tools For Solar Cable Connectors
- KN 97 49 71 - Die Set for MC4 Connectors
- KN 97 49 71 A - Locator for MC4 Cable Connectors

## KN 97 91 04 V01

### KNIPEX Complete Tool Case For PV Installations



- With crimping die 97 49 66 for solar cable connectors MC4 (Multi-Contact) 2.5 - 6.0 mm<sup>2</sup>, locator 97 49 66 1 and set of mounting tools 97 49 66 2
- With Precision Insulation Stripper 12 12 11 with adapted blades for smaller stripping capacities 1.5 / 2.5 / 4.0 / 6.0 mm<sup>2</sup>
- With Crimp System Pliers 97 43 200 A for exchangeable crimping dies; crimping pressure has been set precisely (calibrated) in the factory
- With cable shears 95 16 165 for Cu cables up to Ø 15 mm
- With service tools (hexagonal key) for the change of crimping dies
- Foam insert with recesses for tools, crimping dies and locators
- Shock-resistant plastic case
- Dimensions, exterior (W x H x D): 345 x 80 x 280 mm

## TIS 600

SafetyPat Plus Portable Appliance Tester (5th Edition Compliant)



The TIS 600 Safety Pat Plus is a very simple and easy to use portable appliance tester that works from batteries or an AC/DC power adapter, it will also test ALL portable equipment, 110V, 230V or 415V (110V and 415V with optional adapters). Built in memory stores 300 results which can be written down later, it's as simple as A, B, C, press the button and the tester does the rest. Complete with a padded carrying case, batteries and AC/DC adapter.



- 5th Edition Compliant
- Tests 230V, 110V & 415V Appliances
- Battery & Mains operation
- Simple and very easy to use
- Fully Portable
- Automatically Stores Test Results
- Tests long Extension Leads
- Tests I.T. Equipment, Computers, etc
- 250V & 500V Insulation Test
- Stores up to 300 Test Results
- 110V and 230V True Leakage Results
- Tests up to 0.5Ω
- Indicates if appliance is on or off
- Complete with free 12 month calibration certificate
- Will even test equipment that does not conform to EN60950
- Single press of the button from start to finish
- Large LCD Display
- Rugged Case with Rubber Boot Carry Strap and Harness

### BASIC FUNCTIONS

Earth Continuity  
 Insulation Test  
 True Reading of Leakage  
 Polarity Test  
 Surge Protected Equipment

### RANGE

up to 0.5Ω  
 250V / 500V  
 110V & 230V

# PAT Testing Equipment

## TIS 700

SafetyPat Elite Downloading Portable Appliance Tester (5th Edition Compliant)



UK  
CA



The TIS 700 Safety Pat Elite is a unique downloading pat tester being the first pat tester with built in and removeable SD card, which can store up to 1 million test results. Then you simply remove the SD card and put it into your PC, the SD card will download all its information into Excel, producing smart pass and fail certification with client details, etc. All this without the need for an expensive software package!



- 5th Edition Compliant
- Full QWERTY Keypad
- Stores up to 1 million Results onto SD Card
- Appliance Description Entry
- Next Due Test Date
- Stores minimum of 3000 Test Results
- SD Card formatted as Excel File
- Automatically creates Test Result Certificates
- SD Card ensures your tester is always testing
- Mains Adapter
- User Name Entry
- Client Name Entry
- Location Entry
- Battery Operated
- Plus All the normal Testing Features

### BASIC FUNCTIONS

Earth Continuity  
Insulation Test  
True Reading of Leakage  
Polarity Test  
Surge Protected Equipment

### RANGE

up to 0.5Ω  
250V / 500V  
110V & 230V

## TIS 110 230V to 110V Adapter

This Adapter allows you to test all your 110V equipment using the 230V output socket on your PAT Tester.



## TIS IEC 110V to IEC Adapter

This Adapter allows you to test all your 110V extension leads by connecting into the end of the uncoiled cable leads and placing the IEC end into the appropriate socket at the rear of your PAT Tester.



## TIS 164 16A 415V 4pin Adapter

This Adapter allows you to test all your 415V equipment using the 230V output socket on your PAT Tester.



## TIS 165 16A 415V 5pin Adapter

This Adapter allows you to test all your 415V equipment using the 230V output socket on your PAT Tester.



## TIS 324 32A 415V 4pin Adapter

This Adapter allows you to test all your 415V equipment using the 230V output socket on your PAT Tester.



## TIS 325 32A 415V 5pin Adapter

This Adapter allows you to test all your 415V equipment using the 230V output socket on your PAT Tester.

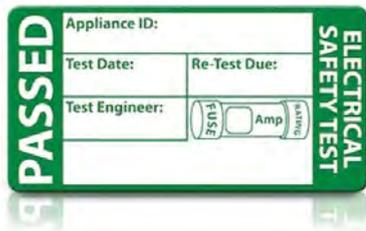


# PAT Testing Equipment

## TIS 1612-500

### Standard Passed Labels

49mm x 25mm - Pack of 500



## TIS 1613-200

### Standard Failed Labels

49mm x 25mm - Pack of 200



## TIS 1710

### Certificate Book

Portable Appliance Inspection and Test Records.  
In compliance with IET Code of Practice 4th Edition.



## TIS 455

### AC Line Splitter with Earth Leakage Measurement

The TIS 455 Line Splitter is an ideal accessory when using a clamp meter to measure AC current as it splits the live conductor from the neutral and earth. Ideal when PAT testing to measure loads of individual equipment, including Earth Leakage.

- Allows for Easy AC Current Measurement using a Clamp Meter on 2 or 3 Wire Power Cords
- AC Voltage to 250 Volts, AC Current to 13A
- Allows Measurement of Earth Leakage
- Enables safe measurement of Current without the need to separate conductors
- Allows Voltage Measuring on 13A Sockets
- Separates the Live Conductor from the Neutral and Earth
- Ideal for use with the TIS 518, 418, 438, 237, 247 & 257 Clamp Meters  
Plus TIS 560, TIS 565 & TIS 570 Earth Leakage Clampmeters



UK  
CA

# Voltage Testers & Safe Isolation Kits

## TIS 849

TRMS 1000V AC/DC LCD, LED, Audible & 'Shaker' Voltage and Continuity Tester with Built-in Non-Contact / Contact Voltage Detector, 30mA RCD Test & RST 3-Phase Rotation Detection



UK  
CA

## TIS 859

TRMS 1000V AC/DC LCD, LED, Audible & 'Shaker' Voltage and Continuity Tester, Built-in Non-Contact / Contact Voltage Detector, 30mA RCD Test & RST 3-Phase Rotation Detection, with Built-in Resistance & Capacitance



UK  
CA

## TIS 829

Replacement Test Lead Set for the TIS 849 and TIS 859



UK  
CA

### FEATURES

	TIS 849	TIS 859
Removable and fully replaceable shuttered test leads (TIS 829)	✓	✓
TRMS sensing of voltage	✓	✓
Indicates by LED with or without battery power up to 1000V AC / DC	✓	✓
Built in non-contact and contact voltage detector with signal strength indication	✓	✓
Will not trip RCDs even when testing with or without battery power	✓	✓
ACV frequency response 45Hz - 65Hz	✓	✓
IP65 rated, in compliance with BSEN 61243-3: 2014	✓	✓
Conforms fully with HSE GS38	✓	✓
Low battery warning	✓	✓
Complete with padded carrying case and batteries	✓	✓
Audible continuity function with LED indication	✓	✓
30mA RCD Test button	✓	✓
LCD and LED 1000V AC/DC indication of Voltage	✓	✓
Built in backlight and flashlight	✓	✓
RST, 3 phase rotation detection	✓	✓
Shaker, vibration to indicate presence of voltage, above 50V	✓	✓
Audible LED and LCD indication of continuity	✓	✓
Resistance range 1.99Ω, 19.99Ω, 199.9kΩ, and 1000kΩ	-	✓
Capacitance range 199.9μF and 1999μF	-	✓
Single Pole Contact Voltage Tester	✓	✓

### See our online video demonstration

Simply scan the QR code below or search for 'Test Instrument Solutions' on YouTube.



# Voltage Testers & Safe Isolation Kits

## TIS 9000PV

### AC/DC Open Jaw Current & Voltage Multi Tester

The TIS 9000PV is a Multi Tester for electricians - particularly those involved with Solar PV installations. Apart from the instrument being a true voltage tester for electrical safe isolation purposes in accordance with BS EN61243-3, the unit will also measure both AC & DC current up to 200A via the open jaws. Coupled with the ability to measure 1500V DC on the LCD screen & having interchangeable MC4 test leads, it is perfect for Solar PV work. Apart from current measurement, included are single pole contact & non-contact voltage detecting features, providing detection of dangerous voltages caused by phenolic degradation.



- LED / LCD Measurement
- Voltage Measurement: 1000V AC, 1500V DC
- Current Measurement: 200A AC, 200A DC
- Voltage Leads Are Replaceable (See TIS 8000L)
- MC4 Test Leads Supplied And Are Replaceable (See TIS 9000L)
- Proving Magnet Supplied For Current Measurement Check
- Phase Rotation, Continuity Test & Diode Test
- Non Contact Voltage Detector
- Single Pole Detection
- Resistance Measurement
- Frequency Measurement
- Torch Light
- Self Test (Voltage & Continuity)
- Duty Cycle
- Low Battery Warning
- Auto Power Off
- Fork Opening 14mm
- IP64 Protection
- Can Be Used For Safe Isolation With Appropriate Proving Unit In Accordance With IEC 61243-3:2014 & IEC 61010-1:2010
- CAT IV 600V, CAT III 1000V
- GS38 Compliant (With Removable Tip Covers)

## TIS 9000PV SIKIT

### AC/DC Open Jaw Current & Voltage Multi Tester Complete Safe Isolation Kit

- TIS 9000PV AC/DC Open Jaw Current & Voltage Tester
- TIS PU1 Proving Unit
- TIS PUK Dual Instrument Pouch
- TIS BKIT Lockout Kit Inc, Hasp, Padlock & Tags Etc



## TIS 9000L

### Replacement MC4 Lead Set For The TIS 9000PV



# Voltage Testers & Safe Isolation Kits

## TIS 8000

### Open Jaw Current & Voltage Multi Tester

UK  
CA

Our TIS 8000 is the perfect Multi Tester for any electrician, not only do you have a true voltage tester that can be used for proving dead as the tester has no dials and will detect voltage with or without a battery, you also have a 200amp AC Current Clampmeter. Plus the tester has fully removable test leads and can be replaced if damaged by simply purchasing the TIS 8000L Lead Set.

- LED/ LCD Measurement
- Voltage Measurement: 1000V AC, 1500V DC
- Current Measurement: 200A AC
- Leads are Replaceable (See TIS 8000L below)
- Phase Rotation, Continuity Test, Diode Test
- Non Contact Voltage Detector
- Resistance Measurement
- Frequency Measurement
- Torch Light
- Self Test (Voltage & Continuity)
- Duty Cycle
- Low Battery Warning
- Auto Power Off
- Fork Opening 14mm
- IP64 Protection
- Can Be Used For Safe Isolation With Appropriate Proving Unit In Accordance With IEC 61243-3:2014
- IP64 Protection
- Compliant to IEC 61243-3:2014, IEC 61010-1:2010
- CAT IV 600V, CATIII 1000V
- GS38 Compliant (With Removable Tip Covers)



## TIS 8000 SIKIT

### Open Jaw Current & Voltage Multi Tester Complete Safe Isolation Kit

- TIS 8000 Open Jaw Current & Voltage Tester
- TIS PU1 Proving Unit
- TIS PUK Dual Instrument Pouch
- TIS BKIT Lockout Kit inc. Hasp, Padlocks, Tag, etc

UK  
CA



**TRUE Complete Safe Isolation Kits**

## TIS 8000L

### Replacement Lead Set for the TIS 8000

UK  
CA

Replacement Lead Set for the TIS 9000 & TIS 8000 Open Jaw & Voltage Multi Tester, Fully conforms to GS38.



# Voltage Testers & Safe Isolation Kits

## TIS 850

**LCD and LED Voltage / Continuity Tester with Phase Rotation**



## TIS 851

**LCD and LED Voltage / Continuity Tester with Phase Rotation & Built In Proving Check**

The TIS 851 is an exclusive voltage and continuity tester, with phase rotation test and a built in proving test that conforms fully to BSEN 61243-3: 2014 and HSE GS38 12B. The TIS 850 does not have the proving test function. TIS 851 is packed with many outstanding features which include will not trip any rcd when testing between live and earth, digital LCD and LED voltage indication, indicates the presence of voltage even if the battery is dead or missing, built in two pole phase rotation test, AC / DC voltage 0 - 690V, single pole phase test, all this plus much more. Please see the full list of outstanding features in the section below marked 'special functions'



- AC/DC Voltage: 0V - 690V, LED 12V - 690V
- CAT III 1000V, CAT IV 600V
- Will Not Trip RCDs when connected Live to Earth
- Loud Continuity Buzzer
- 2 Pole Phase Rotation Test
- LCD and LED Voltage Indication
- Single Pole Live Side Test
- Compliant with BSEN61243-3:2014
- Compliant with GS 38 HSE
- Auto Power On / Off
- Complete with Padded Case
- TIS 850 In the features and benefits can we add one
- Loud Audible Tone On the Detection Of Voltage Over 50V



- AC/DC Voltage: 0V - 690V, LED 12V - 690V
- CAT III 1000V, CAT IV 600V
- Will Not Trip RCDs when connected Live to Earth
- Built in Proving Check
- Loud Continuity Buzzer
- 2 Pole Phase Rotation Test
- LCD and LED Voltage Indication
- Single Pole Live Side Test
- Compliant with BSEN61243-3:2014
- Compliant with GS 38 HSE
- Auto Power On / Off
- Low Battery Warning
- Complete with Padded Case
- Loud Audible Tone On the Detection Of Voltage Over 50V

## TIS 810



**Contact Single Pole Voltage Detector**

- Designed to meet international safety standards EN 61010-1
- Measurement Category CAT III 600V / CAT IV 300V
- Contact voltage testing between 50V & 600V (AC RMS)
- Checks for voltage on exposed parts
- Identification of line terminals & connections
- Voltage test through red LED and buzzer
- Use of advanced digital filter technology for reliable indication
- Auto power off
- IP54 (IEC 60529)
- Ideal for detecting dangerous circulating neutral currents caused by PEN faults



## TIS 819



**Voltage Tester 12V - 690V AC / DC**

- Voltage Range: 12, 24, 50, 120, 230, 400 & 690 Volts
- Automatic Polarity Indication
- Frequency Range 0-60Hz
- IP 54 & Shock proof
- Conforms to BSEN 61243-3:2014
- Conforms to H.S.E. GS 38
- Works without batteries
- CAT III 600V & CAT IV 300V



## TIS PU1



**Proving Unit for all Voltage Testers 0 - 690V**

- Compliant to GS38
- Proves all voltage testers 6V - 690V
- Low Battery Warning LED
- Built in On / Off Switch
- Ideal for use with TIS 810, TIS 819, TIS 850, TIS 851, TIS 849, TIS 859 & TIS 8000
- Uses 6 x AA Alkaline (supplied)



# Voltage Testers & Safe Isolation Kits

## TIS 859 SIKIT

### TRMS Voltage & Continuity Complete Safe Isolation Kit

Kit Contains:

- TIS 859  
TRMS 1000V AC/DC Digital Voltage & Continuity Tester  
(full details on page 25)
- TIS PU1  
Proving Unit  
(full details on page 28)
- TIS PUK  
Dual Instrument Pouch  
(full details on page 52)
- TIS BKIT  
Lockout Kit inc. Hasp, Padlocks, Tag, etc  
(full details on page 32)



UK  
CA

## TIS 849 SIKIT

### TRMS Voltage & Continuity Complete Safe Isolation Kit

Kit Contains:

- TIS 849  
TRMS 1000V AC/DC Digital LCD LED Voltage & Continuity Tester  
(full details on page 25)
- TIS PU1  
Proving Unit  
(full details on page 28)
- TIS PUK Dual  
Instrument Pouch  
(full details on page 52)
- TIS BKIT  
Lockout Kit inc. Hasp, Padlocks, Tag, etc  
(full details on page 32)



UK  
CA

# Voltage Testers & Safe Isolation Kits

## TIS 851 SIKIT

**Voltage & Continuity Complete  
Safe Isolation Kit**

**UK  
CA**

Kit Contains:

- TIS 851 Voltage & Continuity Tester (full details on page 28)
- TIS PU1 Proving Unit (full details on page 28)
- TIS PUK Dual Instrument Pouch (full details on page 52)
- TIS BKIT Lockout Kit inc. Hasp, Padlocks, Tag, etc (full details on page 32)



**TRUE Complete Safe Isolation Kits**

## TIS 850 SIKIT

**Voltage & Continuity Complete  
Safe Isolation Kit**

**UK  
CA**

Kit Contains:

- TIS 850 Voltage & Continuity Tester (full details on page 28)
- TIS PU1 Proving Unit (full details on page 28)
- TIS PUK Dual Instrument Pouch (full details on page 52)
- TIS BKIT Lockout Kit inc. Hasp, Padlocks, Tag, etc (full details on page 32)



**TRUE Complete Safe Isolation Kits**

## TIS 819 SIKIT

**Voltage Only Complete  
Safe Isolation Kit**

**UK  
CA**

Kit Contains:

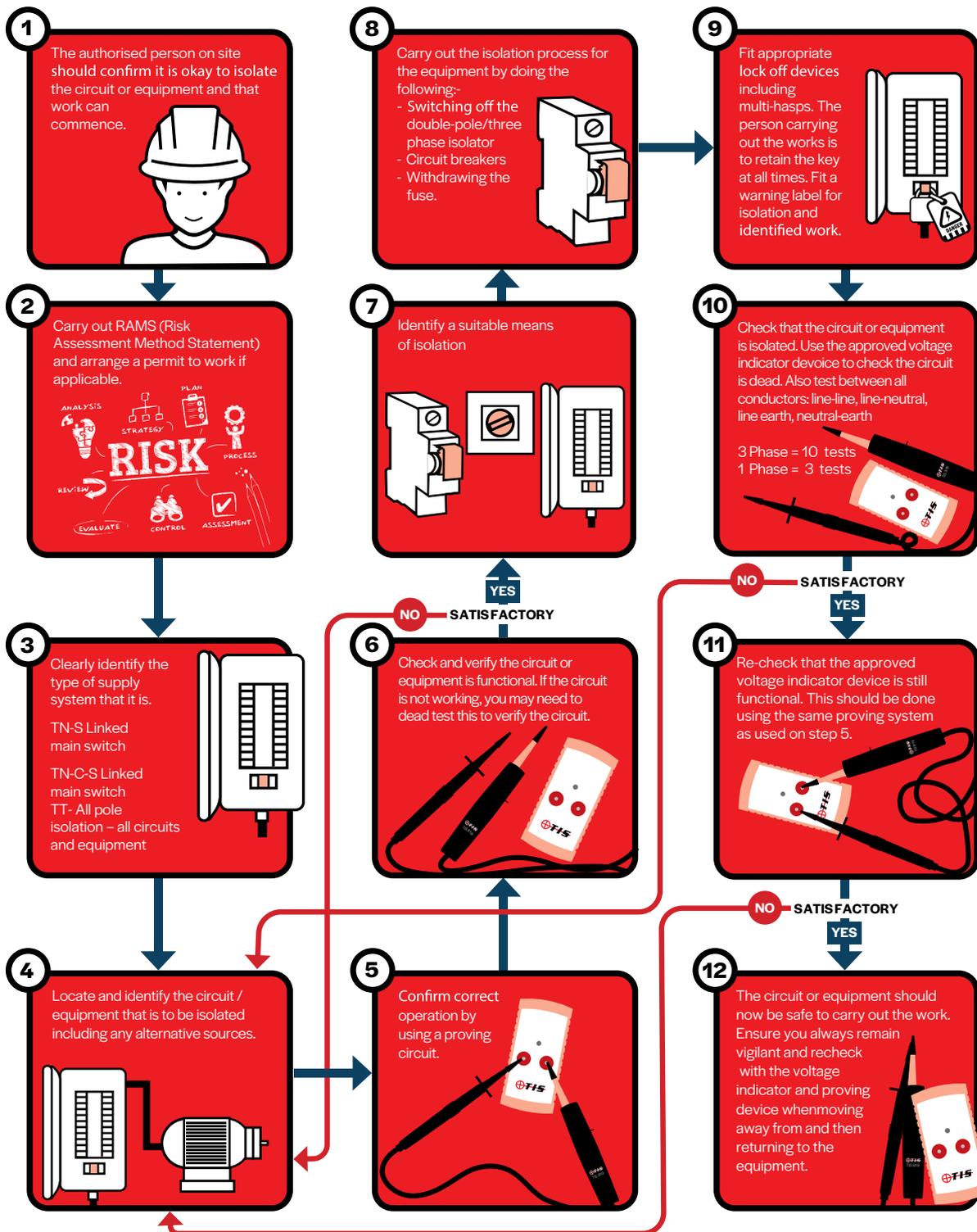
- TIS 819 Voltage Tester 12V - 690V AC / DC (full details on page 28)
- TIS PU1 Proving Unit (full details on page 28)
- TIS PUK Dual Instrument Pouch (full details on page 52)
- TIS BKIT Lockout Kit inc. Hasp, Padlocks, Tag, etc (full details on page 32)



**TRUE Complete Safe Isolation Kits**

# Voltage Testers & Safe Isolation Kits

## 12 Easy steps to safe isolation



### Process for re-energising the circuit/system/equipment

**Step 1** - After completing the work, inspect and test it in accordance with part 6 BS7671 (Dead tests).

**Step 2** - Cancel any permits that were issued and remove any locking off devices, locks and labels and then restore the electrical supply.

**Step 3** - Complete live tests testing and commission the circuit equipment.

**Step 4** - Complete and issue the appropriate test certificate and/or reports.

# Lock Off Kits & Accessories

## TIS PKIT

### Professional Lockoff Kit



Kit Contains:

- Red Lockoff Bag
- Red Lock with One Key
- Blue Lock with One Key
- Yellow Lock with One Key
- Pin Out MCB Lockout
- Pin In MCB Lockout
- Steel Hasp
- Spur Lockout Device
- Stainless Steel Hasp
- No Tool Lockoff Device
- 3 Phase Lockoff Device
- Industrial Plug Lockoff Device
- 5x Lockoff Tags
- MCCB Lockoff
- Simple MCB Lockoff Device



## TIS BKIT

### Safety Lockout Kit



Kit Contains:

- Lockout Pouch
- Lockout Hasp
- Lockout Padlock
- Pin Out MCB Lockout
- Pin In MCB Lockout
- MCB Lockout-Red
- Writing Pen For Tags
- Lockout Tag



Full Range of Accessories available

## TIS EKIT

### Safety Lockout Kit



Kit Contains:

- Lockout Pouch
- Lockout Dielectric Hasp
- Dielectric Lockout Padlock
- Pin Out MCB Lockout
- Pin In MCB Lockout
- MCB Lockout-Red with Thumb Screw
- Writing Pen For Tags
- Lockout Tag

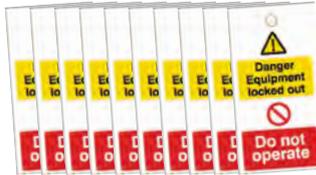


Full Range of Accessories available

# Lock Off Kits & Accessories

## TIS TAG

Pack of 10 Lock off Tags



UK  
CA

## TIS PEN

Pack of 2 Pens



UK  
CA

## TIS UL3

Universal 3 Phase Lock



UK  
CA

## TIS NT1

No Tool MCB Lock



UK  
CA

## TIS MCCBL

MCCB Locking Device



UK  
CA

## TIS CB1

Simple Circuit Breaker Lockout



UK  
CA

## TIS PO

MCB Pin Out



UK  
CA

## TIS PI

MCB Pin In



UK  
CA

## TIS NH1

Nylon Hasp



UK  
CA

## TIS SH1

Steel Hasp



UK  
CA

## TIS LY1

Yellow Steel Lock



UK  
CA

## TIS LR1

Red Steel Lock



UK  
CA

## TIS LB1

Blue Steel Lock



UK  
CA

# Lock Off Kits & Accessories

**TIS LG1**  
Green Steel Lock



**TIS LW1**  
White Steel Lock



**TIS LP1**  
Purple Steel Lock



**TIS LO1**  
Orange Steel Lock



**TIS LBK1**  
Black Steel Lock



**TIS SPURL**  
Spur Lockoff Device



**TIS IPL**  
Industrial Plug Lockoff Device



**TIS SSH1**  
Stainless Steel Hasp



**TIS ALH**  
Aluminium Lockout Hasp/Tag



# Thermal Imaging & Boroscope Equipment

## TIS 1900 Digital Thermal Image Camera

Thermal image cameras are designed to make your work easier, more productive and effective. 160 X 120 resolution at 50Hz for real-time capture; temperature range from -20°C to 350°C (-4°F to 662°F), 32x continuous zoom, picture-in-picture, voice comment recording and text annotation on images.

Hot/cold spot marker automatically finds the hottest and coldest spots. It includes memory card, lithium polymer battery & power supply and usb cable. All this and one hour video recording too!



**UK  
CA**

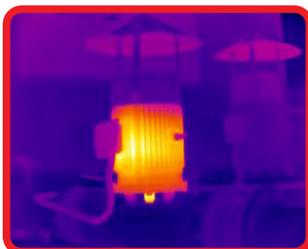


- High Resolution IR Images 6,400 pixels (160 x 120) infrared resolution
- Visible Light Digital Camera 5 Megapixels digital camera resolution with flash provides sharp images regardless of lighting conditions
- Picture in Picture Displays thermal image super-imposed over a digital image
- LED Flashlight Allows the visual camera and fusion to be used in poorly lit environments
- Wide Temperature Range From -20°C to +350°C targeting electrical and industrial applications
- ±2% Accuracy Reliable temperature measurement
- Thumbnail view Easy to view and analyze images quickly
- Audio recorded with the video images A speaker to listen to audio recorded with the video image up to one hour video recording
- Li-ion Rechargeable Battery Lasts >4 hours continuous use; replaceable
- HDMI High resolution video output
- 8GB Micro SD Card Stores >6000 images
- Copy to USB Easy upload images from camera to USB memory card
- Area (Min/Max) Mode Shows the minimum or maximum temperature reading in the selected area

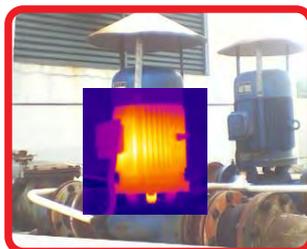


BASIC FUNCTIONS	RANGE	ACCURACY
Object Temperature	-20°C to +150°C 0°C to +350°C	±2°C or 2% of rdg ±2°C or 2% of rdg
Storage Jpeg	>6000 Pictures	
Video Storage	Standard Mpeg-4 encode 1280 x 960 @ 30fps	

\*For a comprehensive list of all the specification please see the TIS 1900 4 page flyer



Full Infrared



Picture-in-Picture



Colour Alarms



Full Visible Light

## HTB500

### Boroscope with Rechargeable Battery & Interchangeable Probe

The HTB500 is a portable digital borescope which allows carrying out inspections inside parts of objects not physically accessible (typically rotating equipment) and not visible to the naked eye. The instrument uses a waterproof external feeler with 4 LEDs with high brightness and a photo camera, in order to obtain a high-resolution image on the display.

- Sensor Size: 1/4in (CMOS), 300,000pxl
- Max sensor resolution: 640 x 480 pixel
- Max sampling frequency: 30FPS/S
- Colour depth: 24 bit
- Zoom image: 1.0x - 2.0x
- External probe length: 1m (39in)
- Probe diameter: 6mm (0.2in)
- Brightness adjustment: 10 levels
- Rechargeable battery: Li-ION, 2000mAh
- Low battery indication: Yes
- Battery operation time: 5 hours
- Colour LCD Display: 640 x 320 pixel
- Weight in grams (battery included): 345g
- Size (LxWxH): 250 x 100 x 95mm



UK  
CA

## BP36

### Optional Probe 3 Meters Long for the HTB500 Boroscope

IP67 3 Metre probe attachment for the HTB500 borescope.



UK  
CA

## TIS E227 TRMS Professional Multimeter

- 3 - 5/6 Digits & 4 - 1/2, 20,000 Counts Max, Large easy to read LCD Display
- Nominal 5/Sec Fast Measurements; Fully Auto-Ranging
- 61 Segment Analog Bar-graph Updates 60/Sec
- Paper white Back-Lit LCD Display
- Dual Digital Display AC + Hz Readings
- AC True RMS Conversion & Intelligent Auto Power Off
- Data Hold, Diode Tester & Relative Zero Mode
- Crest (Peak Hold) Max/Min Readings
- High-Update Record Max/Min Readings Update Intervals DC's 100ms / AC's 120ms
- BeepJack™ Input Warning against improper plug in to  $\mu$ AmA/A Terminals
- VFD V & VFD-Hz Measures Fundamental V & Hz of most Variable-Frequency-Drives
- AC/DC Voltage Ranges 200.00mV to 1000.0V
- Best Basic DCV accuracy up to 0.09%
- ACV Bandwidth up to 5kHz
- Ohms Ranges 200.00 $\Omega$  to 20.000M $\Omega$
- nS Range 60.00nS
- BeepLit™ Continuity. Features Audible Beep & Visible Backlight Effects
- Frequency Ranges 9.999Hz to 100.0kHz
- AC/DC  $\mu$ A, mA & A Ranges 200.00 $\mu$ A to 10.000A
- Capacitance Ranges 20.00nF to 20.00mF
- Type-K Temperature Readings -40.00C to 1090.00C; Selectable OF Readings
- Optional Purchase Magentic Hanger
- Rugged Fire Retarded Casing with Battery and Fuse Access Door
- Replaceable Protective Holster with Probe-Holders & Tilt-Stand
- HBC 1kV Fuses Protected on  $\mu$ AmA/A Terminals
- Transient Protection up to 8kV 1.2/50 $\mu$ s Lightning Surge
- LVD Meets: EN61010-1/-2-030/-2-033, CAT-III 100V & CAT-IV 600V
- EMC: EN61326-1: 2013



part of  
**ELITE - RANGE**

## TIS E217 TRMS Electrical Multimeter

- 3 - 5/6 Digits, 6000 Counts, Large easy to read LCD Display
- Fast Measurements, 5/Sec; Fully Auto-Ranging
- True RMS AC Conversion & Intelligent Auto Power Off
- Data Hold, Diode Tester & Relative Zero Mode
- Records Max/Min Readings & Calculates Average Readings over time
- VFD V & Hz Fundamental Readings of most Variable-Frequency-Drives
- Paper white Back-Lit LCD Display
- BeepLit™ Continuity. Features Audible Beep & Visible Backlight Effects
- Non-Contact EF-Detection (NCV) with Hi/Lo Selectable Sensitivities
- Probe-Contact EF-Detection for more precise indication of Live
- 3 $\phi$ -Rotation-R (Regular-sensitivity mode) for Supply Systems (Probe-contact)
- 3 $\phi$ -Rotation-M (Hi-sensitivity mode) for Motors (Probe-contact)
- AutoV LoZ Feature. Automatic DC & AC 1000V Selection with Low Initial Impedance to Drain Ghost Voltages
- DC/AC V Ranges: 600.0mV to 1000V
- Ohms Ranges: 600.0 $\Omega$  to 60.00M $\Omega$
- Cx Ranges 2000nF to 10.00mF for Start & Run Motor Capacitors
- Line Level Frequency Ranges 99.99Hz to 50.00kHz
- DC/AC A Ranges 6.000A to 10.00A (20A for 30s / 5 mins cool down)
- DC/AC  $\mu$ A Ranges 200.0 $\mu$ A to 2000 $\mu$ A
- Type-K Temperature Readings -400C to 4000C or -400F to 7520F
- Beep-Jack™ Input Warning against improper A-Terminal Plug In
- Rugged Fire Retarded Housing
- Replaceable Protective Holster with Probe-Holders & Tilt-Stand
- Batteries and Fuses Access Door with Optional Magnetic Hanger
- Transient Protection up to 6kV 1.2/50 $\mu$ s Lightning Surge
- LVD: EN61010-1/-2-030/-2-033, CAT-II 1kV, CAT-III 600V & CAT-IV 300V
- EMC: EN61326-1: 2013



part of  
**ELITE - RANGE**

**High Performance, High Precision & High Accuracy**

# Digital Multimeter Test Equipment

## TIS 280 TRMS Auto-Ranging Digital Multimeter with Capacitance, Frequency and Temperature

The TIS 280 is packed with features at a very affordable price which includes resistance up to 60M ohm, bar graph display, 6000 count display, capacitance to 99.99mF, frequency to 10MHz, temperature -40°C to 1000°C, CAT IV 600V, non contact voltage detector, full overload protection, rel function, max/min function, auto power off, back lit display. All this in a rugged rubberised double injection moulded case with a built in stand.

BASIC FUNC.	RANGE
DC Voltage	600V
AC Voltage	600V
VFC Measurement	600V
DC Current	10A
AC Current	10A
Resistance	60MΩ
Capacitance	99.99mF
Frequency	10Hz - 10MHz
Temperature	-40°C to 1000°C -40°F to 1832°F
Display Count	6000

- Duty Cycle
- Continuity
- Diode Test
- NCV
- Max / Min
- Relative Mode
- Data Hold
- Low Battery Indication
- Back Light
- TRMS
- Auto Power Off



## TIS 201 TRMS Pocket Size, Auto-Ranging Multimeter With Temperature

The TIS 201 is a TRMS pocket sized auto-ranging digital multimeter which is packed with features which include temperature -20 Deg C - 1000 Deg C and measuring ranges which include AC/DC voltage AC/DC current, resistance, capacitance, frequency, duty cycle, diode test and a 6000 count digital display plus much more.

BASIC FUNC.	RANGE
DC Voltage: 600mV - 600V	
AC Voltage: 6V - 600V	
DC Current: 600uA - 10A	
AC Current: 600uA - 10A	
Resistance: 600Ω - 60MΩ	
Capacitance: 60nF - 100mF	
Frequency: 10Hz - 10MHz	
Duty Cycle: 0.1% - 99.9%	
Temperature: -20 Deg C - 1000 Deg C	



- TRMS: Yes
- Continuity: Yes
- Diode Test: Yes
- Data Hold: Yes
- Min / Max Hold: Yes
- Transistor Test: Yes
- NCV Detection: Yes
- Live Wire Recognition: Yes
- Relative Mode: Yes
- LCD Display: EBTN
- Low Battery Indication: Yes
- Overload Protection: Yes
- In-Built Flash Light: Yes
- Auto Power Off: Yes
- Size: 150 x 75 x 47mm
- Weight: 300g
- Battery Supplied: AAA 1.5V X2
- Safety Category: CAT III 600V



## TIS 258 Digital Multimeter with Temperature

Robust "pocket size" digital multimeter with AC/DC voltage 500V AC/DC current 200µA to 10A, resistance to 20MΩ, -20°C to 750°C, data hold, diode test, continuity buzzer, rubber boot and built in stand, 2000 count LCD display, with backlight.

BASIC FUNC.	RANGE
Maximum Display	2000 Counts
Basic Accuracy	0.5%
DC Voltage	200mV - 500V
AC Voltage	200mV - 500V
DC Current	200µA - 10A
AC Current	200µA - 10A
Resistance	200Ω - 20MΩ
Temperature Range -	20°C - 750°C, -4°F - 1382°F

- Diode Test
- Continuity
- Data Hold
- Back Light
- Auto Power Off
- Manual Range
- Power by 9V Battery x 1



# Digital Clampmeter Test Equipment

## TIS E237

### TRMS Digital Clamp Meter 600A AC with Amp™ Tip Jaws and Recording Facility

- VFD-V & Hz for fundamental V/Hz of most Variable-Frequency-Drives
- AmpTip™ Low-Current-Range Calibrated at Jaw-Tip for Slim-Conductors
- AC True RMS Voltage and Current Functions
- Fast 80ms PEAK-RMS Mode to Capture In-Rush Currents
- 3 $\phi$ -Rotation-R for MAINS Supply (Probe-contact)
- 3 $\phi$ -Rotation-M (Hi-sensitivity mode) for Motors (Probe-contact)
- DC $\mu$ A Ranges 200.0 $\mu$ A to 2000 $\mu$ A (via leads) for HVAC Flame Sensors
- Cx Ranges 200.0 $\mu$ F to 2500 $\mu$ F for Start & Run Motor Capacitors
- Recording facility to measure the Min, Max & Average Current flow

5 YEAR  
WARRANTY

COMPLETE  
WITH  
Calibration  
Certificate

UK  
CA

part of

ELITE - RANGE



## TIS E247

### TRMS Digital Clamp Meter 600A AC/DC with Amp™ Tip Jaws and Recording Facility

- VFD-V & Hz for fundamental V/Hz of most Variable-Frequency-Drives
- 3 - 5/6 Digits, 6000 Counts, Large LCD Display
- 35mm Conductor Size Hall-Effect 600A DC/AC Jaws
- AC + DC, AC True RMS Voltage and Current Functions
- Fast 80ms PEAK-RMS Mode to Capture In-Rush Currents
- DC $\mu$ A Ranges 200.0 $\mu$ A to 2000 $\mu$ A (via leads) for HVAC Flame Sensors
- DC + ACA Ranges 60.00A to 600.0A + AmpTip™ DC + ACA 60.00A Range
- Cx Ranges 200.0 $\mu$ F to 2500 $\mu$ F for Start & Run Motor Capacitors
- Recording facility to measure the Min, Max & Average Current flow

5 YEAR  
WARRANTY

COMPLETE  
WITH  
Calibration  
Certificate

UK  
CA

part of

ELITE - RANGE



## TIS E257

### TRMS Digital Clamp Meter 1000A AC/DC with Amp™ Tip Jaws and Recording Facility

- VFD-V & Hz for fundamental V/Hz of most Variable-Frequency-Drives
- 51mm Conductor Size Hall-Effect 1000A AC/DC Jaws
- 51mm Conductor Size Ultra-Slim 1000A AC Jaws
- Record Max/Min/Avg Mode (Auto-Ranging)
- Fast 80ms PEAK-RMS Mode to Capture In-Rush Currents
- 5ms Crest Mode to capture instantaneous +Peak & -Peak
- DC $\mu$ A Ranges 200.0 $\mu$ A to 2000 $\mu$ A (via leads) for HVAC Flame Sensors
- DC + ACA Ranges 60.00A to 1000A + AmpTip™ DC + ACA 60.00A Range
- Recording facility to measure the Min, Max & Average Current flow

5 YEAR  
WARRANTY

COMPLETE  
WITH  
Calibration  
Certificate

UK  
CA

part of

ELITE - RANGE



High Performance, High Precision & High Accuracy

# Digital Clampmeter Test Equipment

part of

**ELITE - RANGE**

## CLAMP METER FEATURE CHART

Digital Clampmeter Test Equipment	TIS E237	TIS E247	TIS E257
VFD-V & Hz for fundamental V/Hz of most Variable-Frequency-Drives	✓	✓	✓
Fast Measurement updates 5/Sec 5/Sec 3/Sec	5/Sec	5/Sec	3/Sec
3 - 5/6 Digits, 6000 Count, Large LCD Display	✓	✓	✓
Conductor Size Hall-Effect DC/AC Jaws -	-	35mm 600A DC/AC	51mm 1000A DC/AC
Conductor Size Ultra-Slim AC Jaws	30mm 600A	30mm 600A	-
AmpTip™ Low-Current-Range Calibrated at Jaw-Tip for Slim-Conductors	✓	✓	✓
True RMS Voltage and Current Functions	AC	AC + DC, AC	AC + DC, AC
Input Protection on General Functions	600V AC/DC	600V AC/DC	1000V AC/DC
Auto Power Off	✓	✓	✓
Data Hold	✓	✓	✓
Record Max/Min/Avg Mode (Auto-Ranging)	✓	✓	✓
Relative Mode (Auto-Ranging) with DC-Zero Mode on DCA, DC + ACA Ranges	✓	✓	✓
Fast 80ms PEAK-RMS Mode to Capture In-Rush Currents	✓	✓	✓
Back-Lit, Easy to Read LCD Display	✓	✓	✓
5ms Crest Mode to capture instantaneous +Peak & -Peak	-	-	✓
Flash Light for easy operation in dim areas	-	-	✓
Non-Contact EF-Detection (NCV)	✓	✓	✓
Probe-Contact EF-Detection for more precise indication of Live	✓	✓	✓
3φ-Rotation-R for MAINS Supply (Probe-contact)	✓	✓	✓
3φ-Rotation-M (Hi-sensitivity mode) for Motors (Probe-contact)	✓	✓	✓
Type-K Temperature Readings -40.00C to 400.0C or -40.00F to 752.0F selectable	✓	✓	✓
DCµA Ranges 200.0µA to 2000µA (via leads) for HVAC Flame Sensors	✓	✓	✓
DC + ACA Range	-	60.00A to 600.0A	60.00A to 1000.0A
DCA Range	-	60.00A to 600.0A	60.00A to 1000.0A
ACA Range	60.00A to 600.0A	60.00A to 600.0A	60.00A to 1000.0A
DC + ACV Range	-	600.0V	1000V
DCV Range	600.0V	600.0V	1000V
ACV Range	600.0V	600.0V	1000V
Ohms Ranges 60.00kΩ	✓	✓	✓
Cx Ranges 200.0µF to 2500µF for Start & Run Motor Capacitors	✓	✓	✓
Diode Test & Fast Audible Continuity	✓	✓	✓
Line Level ACV Frequency 5.00Hz to 999.9kHz	✓	✓	✓
Soft Carrying Pouch	✓	✓	✓
Rugged Fire Retarded Casing with Battery Access Door	✓	✓	✓
Transient Protection up to 8kV 1.2/50µs Lightning Surge	6kV	6kV	8kV
LVD: EN61010-1/61010-2-032/61010-2-033 to CAT-III 1000V & CAT-IV 600V	CATIII 600V CATIV 300V	CATIII 600V CATIV 300V	CATIII 1000V CATIV 600V
EMC: EN61326-1 (EN55022, EN61000-3-2/-3 & EN61000-4-2/-3/-4/-5/-6/-8/-11)	✓	✓	✓

**High Performance, High Precision & High Accuracy**

# Digital Clammeter Test Equipment

## TIS 438 1000A AC/DC TRMS Auto-Ranging Clamp Meter with Inrush Reading



Our TIS 438 is designed and manufactured to the very latest standards and features 1000A AC/DC current, AC/DC voltage, resistance, capacitance, frequency from the clamp, logic frequency and duty cycle, 6000 count display, TRMS, inrush current reading, continuity buzzer, work light, back light, non contact voltage detection, relative measurement and auto power off. The TIS 438 is packed with features for the professional electrician.

BASIC FUNC.	RANGE	ACCURACY
DC Voltage	600mV/6V/60V/600V	±0.7%+2d
AC Voltage	6V/60V/600V	±0.8%+3d
DC Current	60A/600A	±3.0%+6d
AC Current	60A/600A	±2.5%+6d
Resistance	600Ω/6kΩ/60kΩ/ 600kΩ/6MΩ/60MΩ	±1.2%+2d
Capacitance	40nF/400nF/4uF/40uF/ 400uF/4000uF	±4.0%+5d
Frequency	0 ~ 10MHz	±1.5%+5d
Duty Cycle	0.1% ~ 99.9%	±3.0%
Temperature	-20°C ~ 1000°C -4°F ~ 1832°F	±2.0%

- 6000 Count Display
- Jaw Opening Ø26mm
- Auto / Manual Range
- Auto Power Off
- Max / Min Hold
- Data Hold
- Non Contact Voltage Test
- AC/DC Current and Voltage
- Continuity Buzzer
- Resistance
- Capacitance
- Frequency
- Temperature -20°C - 1000°C
- Duty Cycle and Diode Test



- GENERAL CHARACTERISTICS**
- Power: 1 x 9V 6F22 Battery
  - Weight: 386g
  - Size: 238mm x 92mm x 50mm

- STANDARD ACCESSORIES**
- Carrying Case
  - Test Leads



## TIS 418 TRMS 600A AC/DC Auto-Ranging Clampmeter

The TIS 418 is a TRMS 600A AC/DC clamp meter which is supplied with a host of features, for the everyday electrician or maintenance electrician. These include AC/DC current, frequency, capacitance, resistance, duty cycle, temperature -40°C to 1000°C, complete with thermocouple. Other features include max/min hold, auto power off, auto ranging, continuity buzzer, data hold, work light, back light and non contact voltage test.



BASIC FUNC.
DC Voltage: 600mV - 1000V
AC Voltage: 6V - 1000V
DC Current: 60A - 600A
AC Current: 60A - 600A
Resistance: 600Ω - 60MΩ
Capacitance: 6nF - 10mF
Frequency: 10Hz - 10MHz
Temperature: -40 Deg C - 1000 Deg C



- GENERAL CHARACTERISTICS**
- Power: 3 x 1.5V AAA Batteries
  - Weight: 239g
  - Size: 218mm x 78mm x 35mm

- STANDARD ACCESSORIES**
- Carrying Case
  - Test Leads
  - Thermocouple

- Display Count: 6000 Counts
- LCD Size: 36 x 50.5mm
- TRMS: Yes
- Range Select: Auto
- Dual Jaw Open Size: 34mm
- Diode Test: Yes
- Continuity Test: Yes
- Data Hold: Yes
- Min / Max Hold: Yes
- Peak Hold: Yes
- Analog Bar Display: Yes
- Duty Cycle (1%-99%): Yes
- Loz AC/DC (1000V): Yes
- VFC Measurement: Yes
- Inrush Current: Yes
- Relativity Function: Yes
- NCV Detection: Yes
- Live Wire Recognition: Yes
- Inbuilt Torch: Yes
- Auto Power Off: Yes
- Low Battery Indication: Yes
- Over Range Indication: Yes
- LCD Backlight: Yes
- Double Mold Housing: Yes
- Battery: AAA 1.5V x 3
- Size: 225 x 75 x 35mm
- Weight: 250g
- CAT III 1000V & CAT IV 600V

## TIS 518 TRMS 600A AC Auto-Ranging Clampmeter

The TIS 518 is part of our range of TRMS digital auto ranging clamp meters. This unit has many features, including a non contact voltage detector, plus AC/DC voltage, AC current, resistance, continuity buzzer, max hold, data hold, diode test, auto power off, jaw work light and display light. The TIS 518 is an ideal instrument for the everyday electrician / maintenance.



BASIC FUNC.
DC Voltage: 600mV - 1000V
AC Voltage: 6V - 1000V
AC Current: 6A - 600A
Resistance: 600Ω - 60MΩ
Capacitance: 6nF - 10mF
Frequency: 10Hz - 10MHz
Temperature: -40 Deg C - 1000 Deg C



- GENERAL CHARACTERISTICS**
- Power: 3 x 1.5V AAA Batteries
  - Weight: 238g
  - Size: 218mm x 78mm x 35mm

- STANDARD ACCESSORIES**
- Carrying Case
  - Test Leads

- Display Count: 6000 Counts
- LCD Size: 36 x 50.5mm
- TRMS: Yes
- Range Select: Auto
- Dual Jaw Open Size: 34mm
- Diode Test: Yes
- Continuity Test: Yes
- Data Hold: Yes
- Min / Max Hold: Yes
- Peak Hold: Yes
- Analog Bar Display: Yes
- Duty Cycle (1%-99%): Yes
- Inrush Current: Yes
- Relativity Function: Yes
- NCV Detection: Yes
- Live Wire Recognition: Yes
- Inbuilt Torch: Yes
- Auto Power Off: Yes
- Low Battery Indication: Yes
- Over Range Indication: Yes
- LCD Backlight: Yes
- Double Mold Housing: Yes
- Battery: AAA 1.5V x 3
- Size: 225 x 75 x 35mm
- Weight: 250g
- CAT III 1000V & CAT IV 600V

# Digital Clampmeter Test Equipment

## TIS 570

### TRMS AC / DC Earth Leakage Clamp Meter to 0.001A

The TIS 570 AC/DC Earth Leakage Clamp Meter will measure from 0.001A to 20A AC and from 0.001A to 10A DC, with True RMS AC Voltage and AC Current plus a Resistance Range from 0.1Ω to 500kΩ, having a Continuity Buzzer <100Ω. Other features include Max / Min, Data Hold, Backlight, Zero Function, Auto Power Off and Overload Protection.

**UK  
CA**



- True RMS AC Voltage & AC Current
- Continuity Buzzer 0 < 100Ω
- Back Lit Display
- Max / Min Function
- Data Hold Function
- Zero Function
- Complete with Soft Passed Case with Belt Loop
- Fully Compliant Test Leads with Probes
- Full Instruction Manual

#### GENERAL CHARACTERISTICS

- Power: 2 x 1.5V AAA Batteries
- Weight: 262g
- Size: 206mm x 76mm x 33.5mm

BASIC FUNCTIONS	RANGE	ACCURACY
DC Voltage	0 - 300V	±1.0% + 2d
AC Voltage (TRMS)	0 - 300V	±1.2% + 5d
DC Current	0 - 10A	±1.0% + 10d
AC Current	0 - 20A	±1.0% + 5d
Resistance	0 - 500KΩ	±1.0% + 2d

## TIS 565

### Elite TRMS AC Earth Leakage Clampmeter down to 0.001mA

- 0.001mA - 60A AC TRMS Measurement
- Low Pass Filter
- 0.01V - 600V AC Voltage Measurement
- 0.01V - 600V DC Voltage Measurement
- Continuity
- 0.1 (Ohm Symbol) - 600K (Ohm Symbol) Resistance Measurement
- GS38 Compliant Test Leads Supplied
- Carry Case Supplied
- 2x AAA Batteries Supplied



**UK  
CA**



## TIS 560

### Earth Leakage Clamp Meter 0.001mA to 60A AC

The TIS 560 is a highly sensitive earth leakage clamp meter from 0.001mA which will also read up to 60A AC, having a large jaw opening of ø31mm for such a compact, pocket size clamp meter. For a full list of features and specifications please see the sections below, marked 'basic functions' and 'special functions'.



**UK  
CA**

- High Sensitivity from 0.001mA
- Data Hold
- Jaw Opening ø31mm
- Measures up to 60A AC
- 2000 Count
- LCD Display
- Low Battery Warning
- Pocket Size
- Zipped Padded Case

#### GENERAL CHARACTERISTICS

- Power: 2 x 1.5V AAA Batteries
- Weight: 136g
- Size: 176mm x 59mm x 29mm

BASIC FUNCTIONS	RANGE	ACCURACY
AC Current	2mA	±2% + 5d
Resolution	0.001mA	±2% + 5d
AC Current	20mA	±2% + 5d
Resolution	0.01mA	±2% + 5d
AC Current	60A <50A	±2% + 5d
Frequency	50 to 60Hz >50A	±3% + 5d
Max permitted input	120% full range for 60 seconds	



# Digital Clampmeter Test Equipment

## TIS 455

### AC Line Splitter with Earth Leakage Measurement

The TIS 455 Line Splitter is an ideal accessory when using a clamp meter to measure AC current as it splits the live conductor from the neutral and earth. Ideal when PAT testing to measure loads of individual equipment, including Earth Leakage.

- Allows for Easy AC Current Measurement using a Clamp Meter on 2 or 3 Wire Power Cords
- AC Voltage to 250 Volts, AC Current to 13A
- Allows Measurement of Earth Leakage
- Enables safe measurement of Current without the need to separate conductors
- Ideal for use with the TIS 518, 418, 438, 237, 247 & 257 Clamp Meters. Plus TIS 560, TIS 565 & TIS 570 Earth Leakage Clamp Meters
- Separates the Live Conductor from the Neutral and Earth
- Allows Voltage Measuring on 13A Sockets



UK  
CA



## F3000

### TRMS 3000Amp AC Clampmeter with Flexible Clamp Jaws

TRMS Clamp meter with flexible current probe to measure up to 3000A AC, designed to measure AC current up to 3000A in TRMS in total autorange and reaches CAT IV 600V, CAT III 1000V according to standard IEC/EN61010-1.

The clamp is provided with innovative flexible current probe capable of reaching a maximum diameter of 110mm and allowing for an easy reading in any condition. The clamp is provided with a wide display with 3000 measuring spots, Data HOLD function and Backlight to allow for a simple reading even in poorly lit environments. The clamp is also provided with the auto power off function to preserve its own battery.

- Maximum diameter: 110mm
- TRMS
- Current measuring range: 3000Amp
- AC Current
- Backlit LCD Display
- Auto ranging
- Auto power off
- Data hold
- Power supply
- Measurement category: CAT IV 600V, CAT III 1000V

UK  
CA



# Socket Testers, NCV Detectors & Specialised Equipment

## TIS 1005 Loop Impedance, RCD 30mA Socket Polarity Checker 230V

The TIS 1005 is a pocket size checker for indicating loop impedance, socket polarity and rcd 30mA are all ok. Indication is by led's and audible buzzer. It is an ideal unit for initial 'checking out' of a 13A socket and will advise if the circuit is ok, needs attention or needs urgent attention, an ideal product for housing associations, landlords, council property departments, shopping centers, electricians, etc.

BASIC FUNCTIONS	RANGE	ACCURACY
Nominal Voltage	230V AC	±10%
Frequency Range	50Hz - 60Hz	
Contact Voltage Range	<50V AC (Relative to Ground)	
Overload Protection	AC / DC 300V	

**GENERAL CHARACTERISTICS**

- Weight: 40g
- Size: 72mm x 78mm x 80mm



- Earth Loop Check at mains frequency
- Checks condition of Earth Loop
- Loop Detection Ranges <1.8Ω, 1.8Ω - 92Ω, >92Ω
- 30mA RCD Test
- 3 Coloured LEDs (Green, Amber, Red) give indication of condition
- Socket Checked against 17 possible fault conditions
- Microprocessor controlled, with built in self check
- Audible Buzzer
- Simple and Easy to Use, plug in and switch the socket on



## TIS 1000 13A Socket Tester with Sounder

Designed to test 230V 13A sockets to international standards 61010-1 CATIII 600V in one easy step, simply plug in for visual and audible indication, reliable and easy to use wiring conditions that are included; correct, missing earth, live earth reversal, live neutral reversal, missing neutral\*. Simple and easy to use with no maintenance or batteries.



\*this unit will not indicate neutral/earth reversal



## TIS 870 Circuit Fuse / Breaker Finder with NCV and Socket Test

The TIS 870 features the very latest technology in fuse/breaker location. The advanced microprocessor locates the fuse/breaker with pin-point accuracy by using the very latest second pass technology. Simply plug the transmitter into the circuit to test then pass the receiver over the fuses / breakers. You will hear several tones on various breakers, etc. Then pass over them for a second time when only one of the fuse/breakers will cause the TIS 870 to light up, indicating by tone which is protecting the circuit under test. The TIS 870 also features a non contact voltage tester and the transmitter also acts as a socket tester with "buzzer".

- Quickly, Easily and Accurately Identifies the Fuse/Breaker
- Built-in Non Contact Voltage Test
- Built-in Socket Test
- Fully Automatic Operation
- Very Latest 2nd Pass Technology for accurate Fuse / Breaker Detection
- Rugged Design
- Two Part Kit: Transmitter and Receiver
- Verifies presence of AC Voltage
- Can Locate Breaks in Cables
- Buzzer and LED Indication



**GENERAL CHARACTERISTICS**

- Power: 1 x 9V MN1604 Battery
- Weight: 95g
- Size: 175mm x 45mm x 30mm



# Socket Testers, NCV Detectors & Specialised Equipment

## TIS 1100

### R2, R1 + R2 Socket Adapter

Our TIS 1100 is a must have accessory for any electrician who carries out testing. It eliminates the need to remove the faceplate of the socket from the wall when testing R2, R1 + R2, saving valuable time and expense. The adapter also allows voltage testing from the socket, without having to open the 'shutters' of the wall socket.



#### BASIC FUNCTIONS

Rated Voltage

Rated Current

Operating Environment

Relative Humidity

#### RANGE

230V

Max 2A

Temperature 0oC - 40oC

<80%

- Eliminates the need to remove socket faceplate from wall
- 'Speeds Up' testing of R2, R1 + R2
- Enables voltage testing at the wall socket
- Saves time and money when testing
- A 'must have' for all electricians
- Robust and Rugged design



#### GENERAL CHARACTERISTICS

- Weight: 66g
- Size: 68mm x 62mm x 62mm

## TIS 950 Non-Contact Voltage Detector with IP65 Rubber Housing, Vibration and LED Indication

The TIS 950 is a simple, yet very accurate indicator of AC voltage by LED and vibration, having a built in pocket clip and having IP65 approval, a simple screw off cap for battery replacement.



#### GENERAL CHARACTERISTICS

- Power: 2 x AAA Batteries (supplied)
- Weight: 45g
- Size: 150mm x 20mm x 20mm



## TIS 934 Optical / Accoustical Non-Contact Voltage Detector

The TIS 934 is an optical and accoustical non contact voltage detector that detects ac voltage from 50V - 1000V, HSE recommends that voltages over 50V must not be touched, therefore a voltage detector that detects voltage from 50V is a necessary purchase. For all other features see special functions below.



- Detects 50V - 1000V
- Built in Self Audible Test
- Bright LED Light, Loud Buzzer
- On / Off Button
- Checks for Cable Breaks
- Uses Advanced Digital Filter Technology for reliable results
- CAT IV for Indoor / Outdoor Use, IP65

#### GENERAL CHARACTERISTICS

- Power: 2 x AAA Batteries (supplied)
- Weight: 55g
- Size: 155mm x 25mm x 23mm

## TIS 960 IP67 Ultimate Non Contact Voltage Detector



- 12V - 1000V Range Selectable
- 48V - 1000V Range Selectable
- Signal Strength LCD Visual Display
- IP67
- Robust
- Strong Audible Output
- LED Torch Light
- Low Battery Alert
- CAT III 1000V
- 2x AAA 1.5V Batteries Supplied

# Socket Testers, NCV Detectors & Specialised Equipment

## TIS 415 Phase Rotation Plus Non Contact/Contact Motor Rotation Tester

The TIS 415 determines the rotary field of three Phase systems and rotational direction of three Phase motors, using non-contact or contact technology. Simply place the TIS 415 on top of the motor with the base of the instrument facing the shaft of the motor, press the "green" button and the magnetic field of the motor will be detected along with its clock wise or anti-clock wise rotation. Alternatively connect the TIS 415 with the test leads to the motor terminals, give the shaft a quarter turn to the right and the rotational field will also be displayed.

### SAFETY SPECIFICATIONS

- Meets DIN VDE0411, IEC61010, VDE0413-7
- Maximum Operating Voltage 400V for All Ranges
- CAT III, 300V
- Current Consumption Max 20mA

### GENERAL CHARACTERISTICS

- Power: 6F22 / 9V Weight: 150g
- Size: 124mm x 61mm x 27mm



**UK  
CA**

EN: 61010-1  
**CAT III  
300V**



- Determines Rotary Field of 3 Phase Systems
- Non-Contact Motor Rotation
- Contact Motor Rotation
- Clear and Precise LED Indication
- Wireless
- Rotational Chart

### STANDARD ACCESSORIES

- 2 x AA Batteries
- Test Leads
- 3 x Crocodile Clips
- Zipped Padded Case
- Rubber Housing

## TIS USB1 USB Tester

- Input & Output Ports Type A
- Tests Load at 0.5a, 1a, 2a & 3a
- Resolution: 0.01mAh
- Energy: 0 - 1000WH
- Voltage Range: 4 - 24.00V DC
- Current Range: 0.05 - 3.00A DC
- Operational Resistance Measurements
- Capacity: 0 - 99999mAh
- CE Approved
- Q.C. USB 1.0, 2.0, 3.0 Fast Charge Protocol



**UK  
CA**



## TIS LD40 40 Metre Laser Distance Meter

- Pythagoras Measurement
- Single Length, Area and Volume Measurements
- 0.05M - 40M Measurement
- Resolution: 0.001M
- Accuracy: ± 1.5mm
- Measuring Speed: 0.5 seconds
- Laser Type: 650nm, Class 2 <1mW
- Laser Beam Size: 25mm @ 30M
- Battery Life: 10,000 Measurements
- Auto Power Off
- Highly Accurate SX10V2 Software
- Low Battery Warning & Back Lit Display
- Option to measure from the front or base of the unit
- Metric or Feet and Inches Measurement

### GENERAL CHARACTERISTICS

- Power: 2 x AA Alkaline Batteries
- Weight: 45g
- Size: 122mm x 53mm x 35mm



Class 2 Laser  
Product  
EN 60825-1:  
2007

**UK  
CA**

### STANDARD ACCESSORIES

- Carrying Case
- 2 x AA Batteries
- Safety Strap
- Instruction Manual



## TIS 1310 Digital LED Light Meter & Standard Lux Levels

The TIS 1310 is an LED light meter which will measure LED, daylight, red light, amber, yellow, green, blue and purple light, as well as measuring standard lux/light levels from 0.01 lux (emergency light levels) up to 200,000 lux. The unit has a built in op to-sensor and features max/min/relative value/peak hold/lux/foot candle measurements with a 3½ digit LCD display with both digital and analogue bar graph readings in a compact hand held housing with tripod capability and zero calibration function. The ideal instrument for the lighting professional, maintenance engineer or electrician.

BASIC FUNCTIONS	RANGE	ACCURACY
Max Range	0.01 - 200,000 Lux 0 - 999900 CD (LED)	±3.0%
Max Resolution	0.01 Lux / 0.01Fc 0.01 CD	±(3% + 2d)
Measuring Rate	2 times / second	



**GENERAL CHARACTERISTICS**

- Power: 1 x 9V 6F22 Battery (200 Hour Life)
- Weight: 200g
- Size: 165mm x 85mm x 38mm
- Accessories: Padded Case

- **LED Measurement Selection:**
  - L1 LED Daylight, L2 LED Red Light
  - L3 LED Amber (Yellow) Light, L4 LED Green Light
  - L5 LED Blue Light, L6 LED Purple Light
  - L7 - L9 Default Standard Lighting
  - Enables Testing of LED Red Strobe Light
- 3½ Digit Display
- Measures Emergency Light Levels 0.01 Lux
- Measuring Range 0.01 - 200,000 Lux
- Digital and Bar Graph Readings
- Auto / Manual Ranging
- Max / Min Function & Peak Hold
- Relative Measurement
- Auto Power Off & Data Hold
- Compact with Built In Sensor
- Backlit Display & Low Battery Warning
- Cosine Corrected & Calibration Zero Function

## TIS 770 Digital Sound Level Meter

The TIS 770 meets the very latest regulations including IEC 61672-1 Type 2, IEC 651 Type 2 and ANSI S1.1 Type 2. A & C weighting, LCD display with analogue bar graph, fast response, slow response, max hold feature, backlit display, auto-ranging, auto power off. Complete with padded carrying case and sensor muffler.

BASIC FUNCTIONS	RANGE	ACCURACY
Measurement	30dB - 130dB	±1.5dB
Frequency	30Hz - 8kHz	
Resolution	0.1dB	

**GENERAL CHARACTERISTICS**

- Power: 4 x 1.5V AAA Batteries
- Weight: 200g
- Size: 193mm x 60mm x 29mm

- LCD Display
- Analogue Bar Graph
- A & C Weighting
- Fast / Slow Response
- Max Hold
- Data Hold
- Auto Power Off
- Auto & Manual Ranging
- Low Battery Display
- Over Range Display
- Backlit Display
- 30dB - 130dB
- 6 Measurement Gears

**STANDARD ACCESSORIES**

- Instruction Book
- Sensor Muffler
- Padded Case



# Environmental Test Equipment

## TIS 1309 Digital Anemometer

Our TIS 1309 digital anemometer will measure a wide range of air velocity including metre per second, feet per minute, kilometer per hour, mile per hour and nautical mile per hour. Plus air flow at cfm, cmm and cms, plus flow area settings. The TIS 1309's other features include max/min, display backlight, auto power off and low battery indication.



BASIC FUNCTIONS	RANGE	ACCURACY
<b>Air Velocity:</b>		
m/s (metre per second)	0.40 ~ 30.0	±3.0%
ft/m (feet per minute)	80 ~ 5900	±3.0%
km/h (kilometer per hour)	1.4 ~ 108.0	±3.0%
mile/h (mile per hour)	0.9 ~ 67.0	±3.0%
Knots (nautical miles per hour)	0.8 ~ 58.0	±3.0%
<b>Air Flow:</b>		
CFM	0 to 99990	0 to 9.999ft <sup>2</sup>
CMM	0 to 99990	0 to 9.999m <sup>2</sup>
CMS	0 to 9999	0 to 9.999m <sup>2</sup>

- Large LCD Display
- Built in Vane
- Backlit Display
- Max / Min Measurement
- Data Hold
- Auto Power Off
- Measures Air Velocity
- Measures Air Flow
- Flow Area Settings
- Conforms to Part F (Ventilation) of Building Regs



- GENERAL CHARACTERISTICS**
- Power: 1 x 9V 6F22 Battery
  - Weight: 200g
  - Size: 165mm x 85mm x 38mm

- STANDARD ACCESSORIES**
- Padded Case
  - Battery
  - User Manual



## TIS 82 Non-Contact Infrared Thermometer

The TIS 82 is an ideal 12:1 ratio, Non-Contact Infrared Thermometer which can measure in OC or OF, -500C - 8500C or -560F - 15620F with a fast response time of 500ms, large Laser Circular Sight, Hi / Lo Alarm, plus many more outstanding features.

- Temperature Range: -50°C - 850°C, -56°F - 1562°F
- Best Accuracy: ±1.5%, ±1.5°C or ±1.5°F, ±0.5%, ±0.5°C or ±1°F
- Display Resolution: 0.1
- Distance to Spot Size Ratio: 12:1
- Response Time (95% Reading): 500ms
- Spectral Response: 8µm - 14µm
- Laser Power: Class 2 (II) operation; Output < 1mW, Wavelength 630 - 670nm
- Laser Sighting: Circular
- Emissivity: 0.10 to 0.95
- Adjustable Emissivity (from 0.10 to 0.95)
- °C / °F Selection
- Temperature Data Hold
- Search
- Max / Min Room Temperature
- Hi / Lo Alarm
- Display Back Light
- Sleep Mode
- Power by 9V (6F22) x 1



# Environmental Test Equipment

## TIS 720 T1 and T2 Dual Input K-Type Digital Thermometer -200°C to 1372°C

The TIS 720 is a dual input, T1 and T2 k-type digital thermometer that has a temperature range of -200°C up to 1372°C, -328°F up to 1999°F. The extremely low/high temperature range means it is ideal for refrigeration, cold store or high temperature environments such as paint plants / steel production and maintenance applications. For a list of the features please see 'special functions' section below.

BASIC FUNCTIONS	RANGE	ACCURACY
Centigrade Scale	-60°C to 1372°C	0.1% rdg +1°C
	-60°C to 200°C	0.1% rdg +2°C
Fahrenheit Scale -	76°F to 1999°F	0.1% rdg +2°F
	-76°F to -328°F	0.1% rdg +4°F

### GENERAL CHARACTERISTICS

- Power: 4 x 1.5V AAA Batteries
- Weight: 240g
- Size: 160mm x 83mm x 38mm

- -200°C to 1372°C / -328°F to 1999°F
- Dual Input T1 & T2 K-Type (supplied with 2 x Oven Probes)
- High Accuracy 0.1% reading +1°C
- Fast Response Time
- Large LCD Display
- Max / Min Temperature Readings
- T1 Measurement, T2 Measurement, T1/T2 Measurement
- Adj. Button for Self Checking Calibration
- Relative Mode to Zero Display
- Data Hold
- Back Lit Display
- Rugged, Rubberised Housing with Stand
- APO Function
- Auto Ranging / Auto Power Off



### TIS AP2

K-Type Air Probe



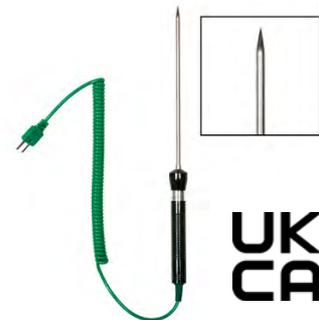
### TIS LP2

K-Type Liquid Probe



### TIS NP2

K-Type Needle Probe



### TIS SP2

K-Type Gas / Air Probe



### TIS PC1

K-Type Pipe Clamp



# Environmental Test Equipment

## TIS BODYIR Dual Forehead & Ear Medical Infrared Thermometer

The TIS BODYIR Infrared Thermometer is a very simple and non-invasive way to measure a persons temperature and is ideal for pin pointing high temperatures.



- Ear Mode
- Forehead Mode
- Room / Surface Mode
- 1 Second Reading
- C° / F°
- Fever Alarm
- Silent Mode
- Child Mode
- Recall Last 20 Readings
- Magnetic Head Cover

BASIC FUNCTIONS	RANGE	ACCURACY
Forehead Mode	35°C to 42.2°C	±0.2°C
	95°F to 108°F	±0.4°F
Ear Mode	35°C to 42°C	±0.2°C
	95°F to 107.6°F	±0.4°F
Object Mode	0°C to 100°C	±0.1°C
	32°F to 212°F	±0.2.0°F



**EC | REP**  
Wellkang Ltd  
Suite B, 29 Harley Street  
London, W1G 9QR, UK



Ear Mode



Forehead Mode



Room/Surface Mode



1 Second Reading



C/F



Fever Mode



Silent Mode



Child Mode



Recall Last 20 Readings



Magnetic Head Cover

## TIS CO2 Carbon Dioxide, Temperature & Humidity Monitor

Co2 is naturally occurring gas emitted at high levels by human activity, along with being one of several greenhouse gases in our atmosphere. CO2 only accounts for 0.03% of fresh air and if you breathe in high concentrations of it, you could suffer from carbon dioxide Intoxication.

Symptoms Include headache, Irregular heartbeat, nausea, unconsciousness or worse.

The TIS CO2 is a CO2 monitor that measures CO2 concentration, temperature and humidity.

This monitor can be used in homes, shopping centres, schools offices and vehicles.

- CO2 Range: 400 - 5000ppm
- Temperature: -10.0°C - 50.0°C
- Humidity: 0 -99%RH
- Data Hold
- Maximum Value
- Minimum Value
- Average Value
- Time Weighted Average
- Short Term Exposure Limit
- Sensor - NDIR
- Audio & Visual Alarm
- Low Battery Warning
- LCD Screen
- Backlight
- Protective Case
- User Manual
- USB Cable for recharging
- Rechargeable Battery (Supplied)



# Test Leads & Spare Instrument Pouches

## TIS MC4TL

MC4 to 4mm Test Leads

UK  
CA



The TIS MC4TL test leads allow you to plug into the panels and then to the TIS 438 to measure DC Current and Voltage.

TEST LEADS MEET  
VERY LATEST  
BSEN STANDARDS

## TIS 2FLK

Fused Test Lead Set

UK  
CA



Comprises of test leads, probes, crocodile clips and fuses ideal for all test instruments having 4mm sockets.

TEST LEADS MEET  
VERY LATEST  
BSEN STANDARDS

## TIS 3TLK

Test Lead Kit  
(unfused)

UK  
CA



Comprises of test leads, probes, crocodile clips. Ideal for all test instruments having 4mm sockets, most manufacturers.

TEST LEADS MEET  
VERY LATEST  
BSEN STANDARDS

## TIS 4TL

Test Leads  
(unfused)

UK  
CA



Test leads complete with probes. Ideal for all test instruments having 4mm sockets, most manufacturers.

TEST LEADS MEET  
VERY LATEST  
BSEN STANDARDS

## TIS 5TLK

Long Nose Needle  
Test Lead Set

Universal long nose lead set to fit most manufacturers multimeters, comes complete with long nose probes that comply with HSE GS38 and suitable crocodile clips.



UK  
CA

TEST LEADS MEET  
VERY LATEST  
BSEN STANDARDS

## TIS 174DB

Elite Universal Multifunction  
Test Lead Set



UK  
CA

- 3- Test Leads, Black, Blue & Green
- 3- GS38 Long Reach Probes, Black, Blue & Green
- 1- GS38 Fine Point Probe, Black
- 3- Crocodile Clips, Black, Blue & Green
- 3- Grabber Clips, Black, Blue & Green
- Ideal for use with the TIS MFTPRO+, TIS MFTPRO & TIS MFTECO
- Universal Lead Set Will Fit Most Manufacturers Multifunction Testers
- Complies to BSEN IEC61010-31:2023
- CAT III 1000V & CAT IV 600V
- 10A, 50/60Hz

## TIS 173DB

Distribution Board Lead  
Set with Probes and  
Crocodile Clips

The TIS 173DB is a rugged constructed distribution board lead set, constructed with silicone cable, making it extremely flexible, the set comes complete with probes and rugged strong crocodile clips and is fitted with standard 4mm terminals making it suitable for our own TIS MFTPRO+, TIS MFTPRO & TIS MFTECO, plus most other test instrumentation, no matter what manufacturer.



UK  
CA

## TIS 172ML

Universal Mains Lead

UK  
CA



The TIS 172ML is a universal mains lead that can be used with most multifunction testers and our own TIS MFTPRO+, TIS MFTPRO & TIS MFTECO.

# Test Leads & Spare Instrument Pouches

## TIS 15

### Small Test Instrument Pouch

The TIS 15 is suitable for our range of voltage testers or any instrument that does not exceed the following dimensions: 250mm x 70mm x 40mm



UK  
CA

## TIS 25

### Large Test Instrument Pouch

The TIS 25 is suitable for our general range of test equipment that does not exceed the following dimensions: 230mm x 170mm x 50mm

This case includes a carrying handle and a removeable shoulder strap.



UK  
CA

## TIS PUK

### Dual Instrument Pouch

The TIS PUK is suitable for our range of voltage testers with space for a proving unit or any instrument that does not exceed the following dimensions:

280mm x 80mm x 40mm

This Case includes a removeable shoulder strap.



UK  
CA

## TIS 2901

**Complete Electrical Installation Certificate Single Phase & Three Phase 18th ED AM2**



## TIS 2903

**Complete Electrical Condition Report Single Phase & Three Phase 18th ED AM2**



## TIS 2905

**Schedule Of Test & Circuit Detail Continuation Sheets Single Phase & Three Phase 18th ED AM2**



## TIS 2906

**Complete Electrical Minor Works Certificate Single Phase & Three Phase 18th ED AM2**



## TIS 2907

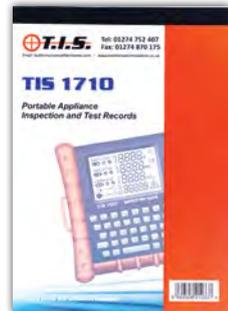
**Dedicated EVSE Installation Certificate Book**

The new single signature Electrical Installation Certificate for a single circuit supplying an electric vehicle charging point, conforms to Appendix 6 of 857671: 2018+ A2, suitable for Single Phase and Three Phase properties.



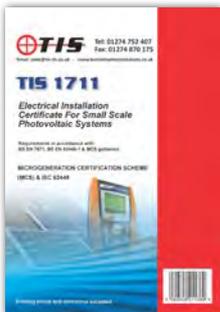
## TIS 1710

**Portable Appliance Inspection and Test Records**



## TIS 1711

**Electrical Installation Certificate For Small Scale Photovoltaic Systems**



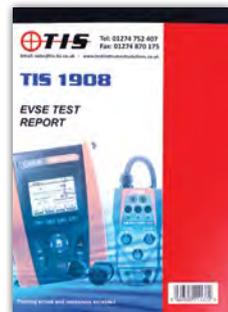
## TIS 1712

**Electrical Installation Condition Report For Small Scale Photovoltaic Systems**



## TIS 1908

**EVSE Test Report**



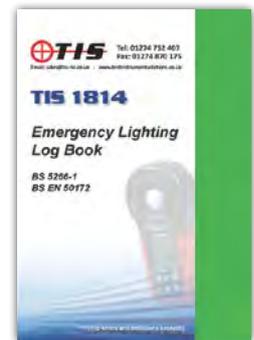
# Certificate Books

## TIS 1814

### Emergency Lighting Log Book

- System Details
- Standards
- Site and Contact Details
- Luminaires and Test Switch Locations
- Daily Inspection Sheet
- Monthly / Annual Inspection and Test Records
- Service Details
- Fault Action Records
- Staff Training Sheets
- Fire Officer Visit Records

**CONFORMS TO**  
BS 5839, BS 5839-1, H.2, H.3,  
H.4, H.5, H.7 : 2017

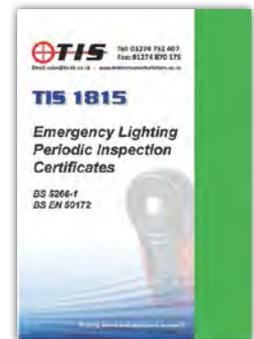


## TIS 1815

### Emergency Lighting Certificate Book

- Design Sheets
- Verification Sheets
- Periodic Inspection and Test Certificates
- Installation Sheets
- Completion Certificates

**CONFORMS TO**  
BS 5839, BS 5839-1, H.2, H.3,  
H.4, H.5, H.7 : 2017

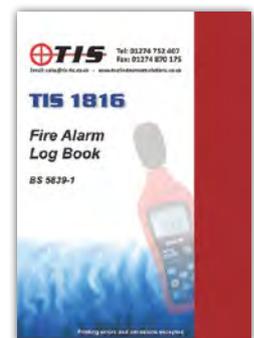


## TIS 1816

### Fire Alarm Log Book

- Fire Alarm Routine Testing
- Site and Contact Details
- Panel and Zone Locations
- Locations of Alarm, Detectors and Devices
- Weekly Testing Schedule
- Asset Register of Fire Extinguishers
- Asset Register of Fire Blankets & Hose Reels
- Asset Register of Fire Doors and Emergency Doors
- Service Records of Extinguishers, Blankets & Hose Reels
- Weekly Inspection Record for Extinguishers, Blankets
- Hose Reels, Fire & Emergency Doors
- False Alarm Reports & Maintenance Reports
- Fire Test Drills & Staff Training Reports
- Fire Officer Visit Report

**COMPLIES WITH**  
BS 5266-1, BS 5266  
Part 1 Clause 12.1,  
BSEN 50172 / bs 5266-8  
BSEN 1838 : 1999 /  
BS 5266 : 1999,  
BS 5266-1 : 2016



## TIS 1817

### Fire Alarm Certificate Book

- Installation Certificate
- Commissioning Certificate
- Modification Certificate
- Design Certificate
- Acceptance Certificate
- Verification Certificate

**COMPLIES WITH**  
BS 5266-1, BS 5266 Part 1 Clause 12.1, BSEN 50172 / bs 5266-8  
BSEN 1838 : 1999 / BS 5266 : 1999, BS 5266-1 : 2016



# Power Quality Analysers and Data Loggers

## PQA924

### Professional Class S Network Quality Analyser

With a new design, advanced technology, and graphical user interface, the PQA924 Class S network analyser dramatically reduced the complexity of power quality analysis and improved troubleshooting. The PQA924 is designed to perform energy quality studies with automated measurements, a touch screen user interface and configuration, high accuracy specifications, and a simplified reporting platform. PQA924, due to its high accuracy, can be used either in statistical energy quality surveys or in applications required for contractual compliance measurements without dispute with utilities. Every critical event related to energy quality is considered by the instrument: with fast transients up to 8kV, with harmonic analysis up to 63rd order, with voltage sags and swells and flicker in order to characterize at 100% the power supply system.

The PQA924 can record up to 3177 channels and voltage/ currents events simultaneously:

- Up to 386 channels Max, Min, Average between network parameters (130 categories: frequency, voltages, currents, powers, etc.)
- Up to 2225 harmonic data (63° order voltage, harmonic currents, amplitudes, and phases, 63° order harmonic powers, amplitudes, THD%, k factors)
- Up to 536 inter-harmonic data (63° inter-harmonic groups for voltages and currents, THD%)
- Up to 24 channels on energy data (active and reactive energies)
- Up to 6 channels on flicker data (Pst, Plt voltages)
- Events such as power sags, spikes and interruptions
- Fast transient voltage events
- Inrush currents



- Measurement Category: CAT IV 600V, CAT III 1000V (Max 1000V Between Inputs)
- Accuracy: Class S (Voltage & Current)
- Management of Different Types Of Transducers On Phase & Neutral: Yes
- Automatic Input Setting: Yes
- Auto Recognition Clamp Types (Standard & Flexible) & Measurement Ranges: Yes
- Rated Reference Voltage (Udin): 100 - 690V
- Selectable Electrical Systems : Single phase 2wire + PE, Single phase 3wire (two phase), Three phase 3wire ARON connection, Three phase 4 wire
- Mains Electrical Parameters Considered: Voltages L-N, L-L, L-PE (TRMS), Phase & Neutral Currents (TRMS), Active, Reactive & Apparent Power (4 Quadrants), Cosphi & Power Factor (4 Quadrants) & Active, Reactive, Apparent Energies (4 Quadrants)
- Crest Factor: THD%, K-Factor
- Harmonics: (Up To 63rd Order) Amplitude, Phase & Incoming / Outgoing
- Power Harmonics: (Up To 63rd Order) Amplitude, Incoming / Outgoing
- Inter-harmonic Measurement (Up To 63rd Order): Yes

- Voltage Dissymmetry & Unbalance Current: Yes
- Voltage Anomalies: Sags, Swells, Interruptions & Waveform Graphics: Yes (Max 2000 events)
- Fast Voltage Transients Up To 9kV With Waveform Graphs: Yes (Max 2000 events)
- Flicker: Yes
- Inrush Currents With Waveform Graphs: Yes (Max 2000 events)
- EN5016 Analysis: Yes
- Integration Period: 0.2, 3, 10, 15, 18, 30 Seconds & 1.5, 10, 15, 30, 60, 120 Minutes
- Max Number of Parameters That Can Be Registered: 3,177
- 32GB SD-Card For Data Storage, Maximum Data Size Per Recording 2GB, Example 2 weeks , 450 parameters selected, Pl=1 Second
- PC Connection: USB-C, WiFi, Rete Ethernet
- Colour Display Graphic Touch Screen: Yes 320 x 240 Pxl
- Sound Keys: Yes
- Power Supply: External Power Supply A0080, Internal 6x AA 1.5V Alkaline Batteries or 6x AA 1.2V Rechargeable Batteries
- Mechanical Protection: IP40

# Power Quality Analysers and Data Loggers

## PQA820

### Single Phase & Three Phase Power Quality Analyser



When designing them, HT has taken particular care of three aspects: setting, the operating or storage environment and data transfer. In combination with PQA820, the ACONBIN adapter (optional) is required.

- PQA820 does not need to be set. They simply need to be connected, started and they respectively record 383 and 44 quantities simultaneously.
- They are provided with a comfortable IP65 case, which allows working in any kind of environment.
- When recording has finished, thanks to the Wi-Fi connection, the devices are capable of transferring all data onto a tablet, smart phone or PC.

Further to the Wi-Fi connection, PQA devices are provided with USB connection for transferring data via cable to the PC through the provided TopView software.

They do not need any batteries since they are auto power-supplied from the mains they are analyzing. The internal battery is automatically recharged by the input voltage and will provide the necessary energy to go on recording in case power supply is interrupted. To make the most of the technology used by PQA820 and PQA819 we recommend using the HTanalysis App (available for free download on AppStore and Google Play) on a tablet or smart phone.

Here are some of the functions of HTanalysis:

- Display of measured data on high-definition screen.
- Possibility of "scrolling" through a determined waveform and immediately detecting its critical "moments": it will be sufficient to "touch" a certain spot of the screen in which the measured signal is proposed to immediately obtain all necessary information in order to understand what happened in that spot and in that particular moment!

PQA820 respectively record 383 and 44 quantities which can be recalled and dragged onto the screen to be compared between each other; for example, if you are displaying the trend of voltages and you want to check for the possible presence of harmonic distortion, it will be sufficient to scroll through the list of recorded measures and drag the one relevant to harmonics to the screen. The same can be done for all other quantities: power, cosphi, current, energy, etc.

Everything can then be shared on HT Cloud, the web database created by HT to archive recordings and share them quickly with anyone around the world.

- AC/DC Voltage in single phase & three phase systems
- AC/DC Current in single phase & three phase systems
- Cosphi, Power factor
- Voltage imbalance (NEG%,ZERO%)
- Active, reactive, apparent power / energy and DC power
- Voltage & current harmonics up to the 49th with THD
- Voltage anomalies (dips & peaks) with resolution of 10ms@50Hz
- Phase sequence
- Neutral current
- Max number of simultaneous selectable parameters
- Recording with selectable integration period
- Internal memory
- Saving instant sampled values
- Summary table of main electrical parameters
- Voltage & current waveforms
- Tables of histograms of harmonics and THD%
- Voltage & current vector diagram
- Measurement category CAT IV 300V
- Measurement with use of external TA & TV (with optional accessory HT903)
- Power supply and rechargeable battery recharging
- Auto power off
- USB port for data download onto pen drive
- PC Interface provided for Windows software
- Size (LxWxH): 255 x 200 x115mm
- Weight: 700g

## HT4020

### Professional Clampmeter AC TRMS 400A with Power Measurement

HT4020 can carry out measurements in TRMS of AC current up to 400A, AC/DC voltage up to 600V, Frequency, Resistance, Continuity test, Active, Reactive, Apparent Power, Cos, Energy for balanced single-phase and/or three-phase systems, further to the detection of phase sequence by 1-terminal method.

Each device complies with IEC/EN61010-1 in CAT III 600V and is the ideal solution or troubleshooting typical problems in industrial environments such as non-linear loads, frequency-controlled motors.

- Maximum diameter for clamp
- TRMS
- AC/DC current - AC
- Measuring counts
- AC/DC voltage - 600V
- Current measuring range - 400A
- Resistance and continuity test with buzzer
- Frequency
- Measurement/recording of Active, Reactive, Apparent AC/DC Power
- Measurement/recording of Active, Reactive, Apparent AC/DC Energy
- Measurement/recording of Cosphi, Power Factor
- Phase sequence and phase concordance
- MAX/MIN/AVG
- PEAK
- Backlight
- Data HOLD
- Autorange
- Auto power off
- Power supply
- Measurement category - CAT III
- Weight in grams (batteries included)
- Size (LxWxH) (mm)
- CE MARK
- EMC 2014/30/EU
- EMC: IEC/EN61326
- IEC/EN61010-1
- LVD 2014/35/EU



## HT4022

### Professional Clampmeter AC TRMS 400A with Power/Harmonics Measurement

HT4022 can carry out measurements in TRMS of AC current up to 400A, AC/DC voltage up to 600V, Frequency, Resistance, Continuity test, Active, Reactive, Apparent Power, Cos, Energy for balanced single-phase and/or three-phase systems, further to the detection of phase sequence by 1-terminal method.

Model HT4022 also carries out the absolute/percentage measurement of voltage and current harmonic components with calculation of THD%. Each device complies with IEC/EN61010-1 in CAT III 600V and is the ideal solution or troubleshooting typical problems in industrial environments such as non-linear loads, frequency-controlled motors.

- Maximum diameter for clamp
- TRMS
- Current measuring range - 400A
- Measuring counts
- AC/DC voltage
- AC/DC current - AC
- Resistance and continuity test with buzzer
- Frequency
- AC/DC voltage, current measurement/recording
- Measurement/recording of Active, Reactive, Apparent AC/DC Power
- Measurement/recording of Active, Reactive, Apparent AC/DC Energy
- Measurement/recording of Cosphi, Power Factor
- Voltage and current harmonics up to the 25th and THD%
- Phase sequence and phase concordance
- Backlit LCD display
- Bargraph
- MAX/MIN/AVG
- PEAK
- Data HOLD
- Autorange
- Auto Power OFF
- Power supply
- Measurement category
- Weight in grams (batteries included)
- Size (LxWxH) (mm)
- CE MARK
- EMC 2014/30/EU
- EMC: IEC/EN61326
- IEC/EN61010-1
- LVD 2014/35/EU



# Power Quality Analysers and Data Loggers

## XL421 Single Phase TRMS Current Data Logger

The XL421 is a single phase current data logger capable of performing TRMS AC current measurements and recordings up to 2500A.

It has a sophisticated memory algorithm which permits the instrument to record for up to a year.

- Measurement range: 2 Amps - 2500 Amps
- Resolution: 1 Amp
- TRMS
- Bandwidth: 3200Hz
- Max crest factor: 3
- Sampling Rate: 64 point, 20ms for each sampling period
- Sampling period: 1s, 6s, 30s, 1min & 5min
- Memory capacity: 1MB
- Approx life in days dependent on battery life:  
5 days=1s, 34 days=6s, 170 days=30s  
364 days=1min & 1820 days=5min
- Computer interface: RS232
- Measurement category: CATIV 600V, CATIII 1000V
- Maximum conductor size: 174mm



## XL422 Three Phase TRMS Current Data Logger

The XL422 is a Data Logger capable of measuring and recording the true root mean square (TRMS) value of AC current up to 2500A in three-phase 3-wire electric systems for different applications (evaluation of load currents, rated powers of transformers, etc.).

The device has a comfortable structure with integrated flex clamp jaws which allow surrounding also big-sized cables or bars. Thanks to an advanced memory management algorithm it is possible to monitor a system even for a long time. The device starts recording with a sampling period which can be selected through software among 1, 6, 30 and 60 seconds and, when memory is almost full, the previously recorded values are "re-sampled" according to the subsequent value of the sampling period, thus freeing part of the memory; the device then goes on recording new values, using the new measuring interval. In this way, it is possible to keep the device recording up to approximately 90 days. Each recording is kept stored in the internal memory and can be downloaded and displayed on the PC always through a dedicated software.

Data Logger XL422 is also provided with a special adhesive strap which makes it possible to place it in any place in the installation where measuring is needed. The high protection rating (IP65) makes this device fully reliable also under extreme operating conditions.

- TRMS
- AC Voltage in single phase systems up to 600V AC
- Max number of simultaneously selectable parameters: 1
- Recording with selectable integration period:  
1s, 6s, 30s, 1min & 5min
- Internal memory: 1MB
- IP65 Protection
- Measurement category: CATIV 600V, CATIII 1000V
- PC Interface provided for Windows



## XL423 Single Phase TRMS Voltage Data Logger

XL423 is a Data Logger capable of measuring and recording the true root mean square (TRMS) value of AC voltage up to 600V in single-phase electric systems for different applications (evaluation of mains voltage, load unbalance, etc.). The device has a comfortable fully mobile structure complete with cables for measuring voltage with safety alligator clips. Thanks to an advanced memory management algorithm it is possible to monitor a system even for a long time.

The device starts recording with a sampling period which can be selected through software among 1, 6, 30 and 60 seconds and, when memory is almost full, the previously recorded values are "re-sampled" according to the subsequent value of the sampling period, thus freeing part of the memory; the device then goes on recording new values, using the new measuring interval. In this way, it is possible to keep the device recording up to approximately 1 year. Each recording is kept stored in the internal memory and can be downloaded and displayed on the PC always through a dedicated software. Data Logger XL423 is also provided with a special adhesive strap which makes it possible to place it in any place in the installation where measuring is needed. The high protection rating (IP65) makes this device fully reliable also under extreme operating conditions.

- TRMS
- AC Voltage in single phase systems up to 600V AC
- Max number of simultaneously selectable parameters: 1
- Recording with selectable integration period: 1s, 6s, 30s, 1min & 5min
- Internal memory: 1MB
- IP65 Protection
- Measurement category: CATIV 600V, CATIII 1000V
- PC Interface provided for Windows



## XL424 Three Phase TRMS Voltage Data Logger

XL424 is a Data Logger capable of measuring and recording the true root mean square (TRMS) value of AC voltage up to 600V in three-phase 4-wire electric systems for different applications (evaluation of mains voltage, load unbalance, etc.). The device has a comfortable fully mobile structure complete with cables for measuring voltage with safety alligator clips. Thanks to an advanced memory management algorithm it is possible to monitor a system even for a long time.

The device starts recording with a sampling period which can be selected through software among 1, 6, 30 and 60 seconds and, when memory is almost full, the previously recorded values are "re-sampled" according to the subsequent value of the sampling period, thus freeing part of the memory; the device then goes on recording new values, using the new measuring interval. In this way, it is possible to keep the device recording up to approximately 90 days. Each recording is kept stored in the internal memory and can be downloaded and displayed on the PC always through a dedicated software. Data Logger XL424 is also provided with a special adhesive strap which makes it possible to place it in any place in the installation where measuring is needed. The high protection rating (IP65) makes this device fully reliable also under extreme operating conditions.

- TRMS
- AC/DC Voltage in single phase & three phase systems
- Max number of simultaneously selectable parameters: 3
- Recording with selectable integration period: 1s, 6s, 30s, 1min & 5min
- Internal memory: 1MB
- IP65 Protection
- Measurement category: CATIV 600V, CATIII 1000V
- PC Interface provided for Windows



# Network Testers

## TIS 880

### Network Cable Tester with Built In De-Bug Mode



- Tests UTP Cable, STP Cable and Coaxial Cable
- Checks Continuity and Configuration of Wiring with RJ45 Plugs
- Tests for Open Circuits, Shorts, Miswires, Reversal and Split Pairs
- Shield detection, Tests a Cables Shield Integrity
- De-bug Mode
- Main and Remote Unit allow one person Testing
- Low Battery Indication
- Tests T568A, T568B 10 Base-T and Token Ring Cables
- Identification Plugs (1 & 2) supplied, optional plugs 3-8 available, TIS 880/1D

BASIC FUNCTIONS	RANGE (Plaster Board)
Cable Length	Minimum 1 Metre Maximum 300 Metre



## TIS 888

### Multi-function Tone Generator, Cable Tracker and Continuity Tester

- Tracks the cables or wires and diagnoses the breaking point
- Receives the tone signal on the cables or wires (telephone lines)
- Checks the condition of the working telephone line (clear, ringing or busy)
- Checks continuity of the cables or wires
- Sends a Single Solid or a Dual Alternating Tone
- Complete with Zipped Padded Case



# Earth Resistance Test Equipment

## T2000

### 20A AC Earth Ground Clampmeter

T2000 is a professional clamp specially developed to evaluate resistance of earth rods with no need to disconnect any part of the system (STAKELESS METHOD).

The inner part of the device is made of 2 jaws, one for current reading and the other for voltage generation. The voltage jaws generate a potential (E) on the loop during resistance (R) measurement. A current (I) is consequently generated on the loop and is measured by the current jaws. Based on the value of parameters E and I, the instrument displays the resistance R value calculated as their ratio. The value measured by the device can be used in case the single rods do not influence each other. T2000 also measures AC current up to 20A and leakage current with resolution 0.1mA. This device complies with standard IEC/EN61010-1 in CAT IV 300V, CAT III 600V and it is the ideal solution for measurements to be carried out both in private and in industrial environments.

- TRMS
- Measuring range: 0.01Ω - 1.2kΩ
- Direct measurement on earth probes without any cable interruption
- Measurement of leakage current on earth systems: 0.1mA - 20A
- LCD Display
- Backlight
- Auto power off
- Internal memory for measured data 99 locations
- CAT IV 600V, CAT III 1000V
- Size (LxWxH): 293 x 105 x 54mm



## T2100

### TRMS Earth Resistance Clampmeter Compatible With The TIS MFT-PRO+

T2100 is a professional clamp specially developed to evaluate resistance of earth rods with no need to disconnect any part of the system.

The inner part of the device is made of 2 jaws, one for current reading and the other for voltage generation. The voltage jaws generate a potential (E) on the loop during resistance (R) measurement. A current (I) is consequently generated on the loop and is measured by the current jaws. Based on the value of parameters E and I, the instrument displays the resistance R value calculated as their ratio. The value measured by the device can be used in case the single rods do not influence each other. This device complies with standard IEC/EN61010-1 in CAT III 600V, CAT IV 300V and it is the ideal solution for measurements to be carried out both in private and in industrial environments.

- TRMS
- Direct measurement on earth probes without any cable interruption
- Serial interface RS-232 for connection to the TIS MFTPRO+
- LCD Display
- Backlight
- Auto power off
- Internal memory for measured data 99 locations
- CAT IV 600V, CAT III 1000V
- Size (LxWxH): 293 x 90 x 66mm



# 5KVA Insulation Tester

## HT7051

### 5KVA Professional Insulation Tester

HT7051 has been developed to measure insulation resistance with test voltage programmable up to 5kVDC and measuring range up to 10TΩ which makes it very useful in any industrial application (tests on electric machines, power transformers, electric cables, electric boards, generic devices, etc.) within BT.

The device allows carrying out tests in FIX (with fixed test voltages), ADJUST (programmable test voltage) and RAMP mode (programmable test voltage and application time with selection of 3 available ramp types) which define a kind of operation suitable for any situation. Measurement of parameters such as Polarization Index (PI) and Dielectric Absorption Ratio (DAR), are duration tests which allow defining the quality of insulation.

HT7051 is supplied with NiMH rechargeable battery with integrated battery charger, which allows for a remarkable duration when carrying out measurements, it is provided with internal memory for saving measurements and it is also possible to connect it to the PC to download the measured results. The whole structure has been inserted into a comfortable and resistant transport case, solid and safe for "on-site" use.

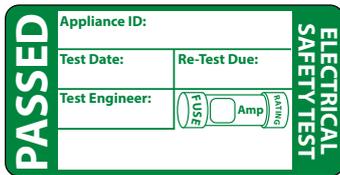
- DC test voltage measuring range 100V - 5KV
- Insulation resistance measuring range 0.01MΩ - 9.99TΩ
- Test with programmable ramp steps of 25V DC
- Programmable test timer 5s - 100min
- Setting of measurement limit value
- Measurement of polarisation index (P.I)
- Measurement of dielectric absorption ratio (D.A.R)
- Measurement of dielectric discharge ratio (D.D)
- Measurement of discharge capacity
- Automatic discharge of target
- Measurement of AC / DC voltage up to 600V
- RS232 / optical USB interface for transferring of data to a PC



# Electrical Safety Labels

## TIS 1612-500

Standard Passed Labels



49mm x 25mm - Pack of 500

## TIS 1612/4ED

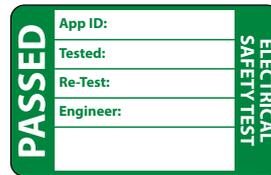
4th Edition Passed Labels



49mm x 25mm - Pack of 500

## TIS 1614-500

Medium Passed Labels



39mm x 25mm - Pack of 500

## TIS 1616-500

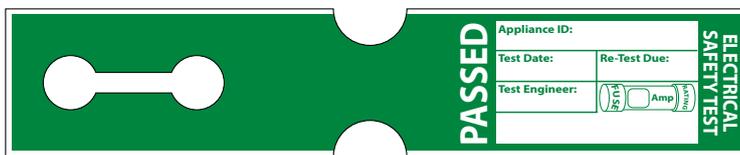
Plug Top Passed Labels



23mm x 25mm - Pack of 500

## TIS 1616-250

Tuff Tag Passed Labels



125mm x 25mm - Pack of 250

4th Edition Tuff Tag Labels  
Also Available

Tuff Tag Failed Labels  
also available at same price

## TIS 1620-250 Passed Pat Wrap Labels



75mm x 23mm - Pack of 250



## TIS 1613-200

Standard Failed Labels



49mm x 25mm - Pack of 200

## TIS 1615-200

Medium Failed Labels



39mm x 25mm - Pack of 200

## TIS 1617-200

Plug Top Failed Labels



23mm x 25mm - Pack of 500

## Electrical Danger Labels



## TIS VL230V

49mm x 25mm - Pack of 250



TIS VL110V



TIS VL220V



TIS VL240V



TIS VL400V



TIS VL440V



TIS VL400VB



TIS VL3300V



TIS VL6600V



TIS VL11kV



TIS VL22kV



TIS VL33kV



TIS VLHV



TIS VLDVE



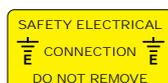
TIS WL1BO



TIS WLIE



TIS CLMS



TIS CLSEC



TIS WL1B



TIS WLFOC



TIS WLAS



TIS WLMTOS



TIS WLFE



TIS CLC



TIS CLER



TIS WLFA



TIS CWIR250

OTHER LABELS AVAILABLE ON REQUEST

# Electrical Starter Kits

## TIS SK1

### Electricians Starter Kit

A perfect starter kit for any electrician packed with a complete safe isolation kit including a Voltage & Continuity Tester, Proving Unit, Lockoff Kit & Appropriate Carry Cases, Voltstick & Audible Socket Tester.

We have also included an Ergo stripping tool, 160mm side cutters and the every popular Electrical Installation 5-1 pliers all packed in a bespoke Knipex Bag.

- KN 00 21 12 LE-00 Knipex Bag
- KN 16 95 01 SB Knipex Ergo Strip
- KN 13 86 200 SB Knipex 5-1 Electrical Installation Pliers
- KN 70 06 160 SB 160mm Diagonal Side Cutters
- TIS 850SIKIT TIS Voltage & Continuity Complete Safe Isolation Kit
- TIS 934 TIS Audible Voltstick 50V - 1000V
- TIS 1000 Audible Socket Tester



# Knipex Tools/WIHA Tools



Did you know that we distribute KNIPEX to the electrical industry – see our website for our full stocked range.



Scan to view for our Knipex Range

# Knipex Tools/WIHA Tools

**wiha**  
Tools that work for you



Did you know that we distribute WIHA to the electrical industry – see our website for our full stocked range.



Scan to view for our WIHA Range



**Test Instrument Calibrations**

## Our Calibration Service

Instruments must be calibrated in line with the manufacturers recommendations and the requirements of BS EN 61557 and in line with the New IET Legislation, which in most instances is a 12 month re-calibration cycle.

Our service includes full certified calibration, traceable to UKAS Standards and ISO 9001; together with a computerised recall service which will log all your instruments by type, manufacturer, serial number and remind you of when they are due for re-calibration.

We are able to calibrate most instruments from any manufacturer including:



- Insulation, Loop Or RCD Testers
- Multi-Functional All In One Testers
- Portable Appliance Testers
- Digital Thermometers
- Multimeters
- Microwave Testers
- Earth Resistance Testers
- Sound Level Meters
- Phase Rotation Testers
- Check Boxes
- Light Meters & Voltage Testers
- Plus Much More - Please Ask!

**Mini On-Site Calibration Service  
and On Site Calibration Service available**



### **Test Instrument Solutions**

Unit 12, 14 & 15 Luddite Way Business Park  
Rawfolds Way, Rawfolds, Cleckheaton, BD19 5DQ

**t: 01274 752 407 e: [sales@tis-tic.co.uk](mailto:sales@tis-tic.co.uk)**

# **[testinstrumentsolutions.co.uk](http://testinstrumentsolutions.co.uk)**

