



Model	ELECTRIC TESTS MAINS ANALYSES ENVIRONMENTAL PARAMETERS					ELECTRIC TESTS			
	GSC53N	GSC57	SIRIUS 89N	ZG47	COMBI 420	MACROTEST G3	SIRIUS 87	MACROTEST 5035	COMBI 419
Insulation with 1000VDC test voltage	•	•	•	•	•	•	•	•	•
Insulation with 500VDC test voltage	•	•	•	•	•	•	•	•	•
Insulation with 250VDC test voltage	•	•	•	•	•	•	•	•	•
Insulation with 50, 100VDC test voltage	•	•	•	•	•	•	•	•	•
Insulation with 100V to 5000VDC test voltage									
Insulation with measurement range up to 10TΩ									
Insulation with 500V to 10kV test voltage									
Continuity of earth conductors with 200mA	•	•	•	•	•	•	•	•	•
Continuity of earth conductors with I>10A, V<12V		•							
Continuity of earth conductors with 10A< I <25A, V<6V									
Continuity of earth conductors according to IEC/EN60204-1:2006		•							
Earth resistance with 2-wire and 3-wire methods	•	•	•	•		•	•	•	
Earth resistance with ring mode						•(**)			
Ground resistivity with 4-wire method	•	•	•	•		•	•	•	
Global earth resistance without RDC's tripping	•	•	•	•	•	•	•	•	•
Line/fault impedance Phase-Phase, Phase-Neutral, Phase-PE	•	•	•	•	•	•	•	•	•
Line/fault impedance Phase-Phase, Phase-Neutral, Phase-PE with high resolution (0.1mΩ)	•(*)	•(*)	•(*)	•(*)	•(*)	•(*)	•(*)	•(*)	•(*)
Prospective short circuit/fault current	•	•	•	•	•	•	•	•	•
Contact voltage	•	•	•	•	•	•	•	•	•
RCD type A, AC Standard and Selective trip out time	•	•	•	•	•	•	•	•	•
RCD type AC Standard trip out time	•	•	•	•	•	•	•	•	•
RCD type B Standard and Selective trip out time						•			
RCD trip out current	•	•	•	•	•	•	•	•	•
Phase sequence indication	•	•	•	•	•	•	•	•	•
Automatic test (Global earth resistance, RCD trip out time, Insulation) directly on test outlet of plant					•				•
Test with remote probe (with PR400 optional accessory)					•				•
Wire mapping test on LAN UTP/STP, RJ45 network cables									
Withstanding test with test voltage from 250V to 5100V									
Withstanding test in BURN mode									
Discharging time on DUT's plug and internal circuits									
Leakage current on machine's socket									
DC/AC TRMS voltage, AC TRMS current(*), Frequency(*), Resistance and Continuity test (*not for M70)									
DC current (with batteryed transducer)									
Leakage current in earth systems									
Leakage current (with HT96U optional accessory)	•	•	•	•	•	•			•
Measurement of electrical parameters (V, A, W, VAR, VA, PF)	•(3)	•(3)	•(1)	•(3)	•(1)				
Recording of electrical parameters (V,A,W,VAR,VA, PF, Wh)	•(3)	•(3)	•(1)	•(3)					
V, A harmonic analysis up to 49 th order and THD% calculation	•(3)	•(3)	•(1)	•(3)	•(1)				
Voltage anomalies (sags, swells) with 10ms resolution	•(3)	•(3)	•(1)	•(3)					
Measurement of environmental parameters (°C, F, %RH, Lux) (with HT52/05, HT53/05 optional probes)	•(3)	•(3)	•(1)	•(3)	•(1)	•			
Recording of environmental parameters (°C, F, %RH, Lux) (with HT52/05, HT53/05 optional probes)	•	•	•	•					
Help on line					•	•		•	•
Internal memory to save the measures	•	•	•	•	•	•	•	•	•
RS-232 / USB port for PC connection	•	•	•	•	•	•	•	•	•
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(1) Single phase installations / Single input; (3) Three phase installations / Three inputs; (*) with IMP57 optional accessory; (**) with T2100 optional accessory

GSC57 - GSC53N - ZG47

INTEGRATED INSTRUMENTS FOR ELECTRIC TESTS, MAINS ANALYSES ON SINGLE-PHASE AND THREE-PHASE SYSTEMS AND ENVIRONMENTAL PARAMETER MEASUREMENTS

GSC53N, GSC57 and ZG47 are strong evolution equipment designed to perform complete test, to verify electrical installations according to the most common safety standards (IEC 61557, VDE 0100, BS7671, etc.) and to carry out power quality analysis on general electric networks. Flexibility of these meters permits their use by installers, technicians, engineers and testers of electrical plants and equipment. GSC53N, GSC57 and ZG47 measure, among the other things, a fault Loop Impedance with high resolution (0.1 mOhm) near power transformers thanks to the use of IMP57 as optional accessory. As power quality analysers, the instrument can record all values of electrical parameters (Voltage, Current, Power, Power Factor, Energy, etc.), perform harmonic analysis of voltage and current (up to 49-th order) and permit voltage quality analysis. With optional probes, GSC53N, GSC57 and ZG47 can also perform measures and recordings of environmental parameters as temperature, humidity, illumination (Lux) and leakage current which are very important for troubleshooting problem of RCDs wrong tripping. Each measure can be stored inside instrument memory, recalled on instrument display and transferred to PC using the management software to create a professional relation which will improve the work quality.

GENERAL CHARACTERISTICS

- Double insulation
- Weight and size:
GSC57: 1700g - 225x165x105 mm
GSC53N: 1200g - 225x165x105 mm
ZG47: 1200g - 225x165x105 mm
- RS232/USB optical output
- Compliance with electromagnetic compatibility standards for measuring instruments
- Power supply through batteries and external supply
- Graphic display to optimize the information displayed in one screen only, with backlighting for carrying out measurements also in poorly lit environments
- Simple use
- Multilanguage messages directly shown on the instrument's display

TECHNICAL SPECIFICATIONS

- Verifications on Civil and Industrial Electric Systems in compliance with Standards IEC/EN 61557, VDE 0100, BS 7661 17th issue

CONTINUITY TEST ON PROTECTIVE CONDUCTORS

- test voltage with open circuit DC $4 < U_0 < 24$ V
- test current $> 0.2A$ ($R < 5\Omega$)
- measuring range 0.01-99.9
- basic precision $\pm 2\%$ reading
- compensation of test cable resistance

INSULATION RESISTANCE MEASUREMENT

- test voltage 50, 100, 250, 500, 1000VDC
- measuring ranges:
- 0.01 ÷ 99.99 M Ω for test voltage 50VDC
- 0.01 ÷ 199.9 M Ω for test voltage 100VDC
- 0.01 ÷ 499 M Ω for test voltage 250VDC
- 0.01 ÷ 999 M Ω for test voltage 500VDC
- 0.01 ÷ 1999 M Ω for test voltage 1000VDC
- basic precision $\pm 2\%$ reading

VERIFICATION OF TRIPPING TIME AND CURRENT OF DIFFERENTIAL PROTECTIVE DEVICES (A, AC, GENERAL AND SELECTIVE TYPE)

- tripping current 10-30-100-300-500mA
- tripping current ramp from:
- 0.5 ÷ 1.4 I_{dn} for AC type
- 0.5 ÷ 2.0 I_{dn} for A type
- tripping time measure: 1/2IDN-IDN-2IDN-5IDN and automatic
- basic precision $\pm 10\%$ reading

MEASUREMENT OF LINE IMPEDANCE AND OF FAULT LOOP WITH CALCULATION OF THE ASSUMED SHORT-CIRCUIT CURRENT AND VERIFICATION OF THE COORDINATION OF PROTECTIONS IN TT AND TN SYSTEMS

- measuring range for phase-phase, phase-neutral line impedance 0,01÷199,9 Ω
- measuring range for phase-earth fault loop impedance 0,01÷1999 Ω
- possibility of measuring the phase-earth fault loop without the differential switch's tripping
- indication of the measured values of Z_s, I_{sc}
- basic precision $\pm 5\%$ reading
- resolution 0.1m Ω (with optional IMP57)

MEASURING EARTH RESISTANCE AND GROUND RESISTIVITY

- meas. earth resistance by means of the auxiliary pins 0.01 ÷ 1999 Ω
- measuring ground resistivity by means of the 4 pins (Wenner method) 0.01 ÷ 199.9k Ω m
- measuring earth resistance from the socket of a TT system by voltage drop
- basic precision $\pm 2\%$ reading

Phase sequence

- voltage 100 ÷ 400V

Direct measurement of leakage current to earth

- by means of amperometric clamps in a range of 0 ÷ 1A; resolution=1mA
- precision $\pm 2\%$ reading

Verifications on Electric Systems in medical rooms (for GSC57 only)

CONTINUITY TEST ON PROTECTIVE CONDUCTORS>

- test voltage with open circuit $U_0 < 12V$
- test current = 10A
- measuring range 0.001 ÷ 0,999 Ω
- basic precision $\pm 2\%$ reading
- measuring duration = 500 tests
- 4-wire measurement

Verification of the Electrical Service Quality in compliance with standard EN50160

- The instruments, suitable for carrying out measurements on single-phase and three-phase systems with or without neutral, both for balanced and unbalanced loads, show the following nominal values:
- measurable voltage up to 600 V
- current by amperometric clamps, output 1V
- frequency 50 ÷ 60 Hz
- precision (instrument) $\pm 0,5\%$ reading
- precision (transients) $\pm 1\%$ reading

THE INSTRUMENTS ALLOW MEASURING AND RECORDING:

- TRMS value of voltage
- TRMS value of current by means of amperometric clamps
- voltage frequency
- harmonic analysis (of voltages and currents) up to the 49th order
- voltage variations out of the set thresholds (dips and peaks) with a minimum resolution of 10ms
- active power
- reactive power
- apparent power
- active energy
- reactive energy
- power factor
- saving and storage of measures
- 40 days duration with 63 quantities and IP=15m
- Memory: 2 Mbyte

ENVIRONMENTAL PARAMETER ANALYSIS

- measuring and recording temperature by means of an adapter
- measuring and recording humidity by means of an adapter
- measuring and recording illuminance by means of an adapter

MEASUREMENT SELECTION:

- by means of a switch and selection keys.

MANAGEMENT SOFTWARE

The instrument's management software is compatible with common Micro-soft Windows operating systems. The minimum hardware includes:

- Pentium III - 500 MHz
- 512 Mbyte of RAM memory
- 100 Mbyte of mass memory (hard disk)
- Operative system Windows 7, WindowsXP, VISTA
- Windows-compatible mouse, RS-232 or USB port, CD-ROM drive.

ACCESSORIES	Code	GSC53N	GSC57	ZG47
Standard				
3-terminal cable with SHUKO plug	C2033X	•	•	•
Set of 4 cables + 4 alligator clips + 2 test leads	KITGSC5	•	•	•
Set of 4 cables + 4 metal earth probes	KITTERRNE	•	•	•
Power supply cord for 10A continuity test	C5700		•	
Flexible clamp 3000A AC, diameter 174mm, 3 pcs	HTFLEX33D	•		•
Power supply adapter 230VAC/12VDC 50Hz	A0050	•	•	•
PC Windows software + optical /USB cables	TOPVIEW2006	•	•	•
Carrying bag	BORSA2051	•	•	•
ISO9000 calibration certificate		•	•	•
User manual		•	•	•
Optional				
Flexible clamp 3000A AC, diameter 274 mm	HTFLEX35	•		•
Set of 3 flexible clamps 300-3000A /1V AC, diameter 174mm	HTFLEX3003	•	•	•
Transducer for 0÷5A, 0÷100A AC currents Ø 20mm	HT4005N	•	•	•
Transducer for 0÷200A, AC currents Ø 40mm	HT4005K	•	•	•
Transducer for 0÷1A, 0÷100A, 0÷1000A AC currents Ø 54mm	HT96U	•	•	•
Transducer for 0÷10A, 0÷100A, 0÷1000A AC currents Ø 54mm	HT97U	•	•	•
Transducer for 0÷200A, 0÷2000A AC currents Ø 70mm	HP30C2	•	•	•
Transducer for 0÷3000A AC currents Ø 70mm	HP30C3	•	•	•
Set of cables for 10A continuity test, 5m length	C7000/05		•	
Set of cables for 10A continuity test, 10m length	C7000/10		•	
Case 3x1-5A/1V for connection to external CTs	HT903	•	•	•
Temperature/Humidity probe	HT52/05	•	•	•
Illuminance (Lux) probe	HT53/05	•	•	•
Accessory for Loop impedance with high resolution	IMP57	•	•	•
Power supply adapter 110VAC/12VDC 60Hz	A0053	•	•	•
Set of straps for carrying belt	CN0050	•	•	•
Magnetic adapter for connection to screw heads	606-IECN	•	•	•
Safety flexible alligator clip	6007-IEC#	•	•	•

GSC57

HV000057-0201

GSC53N

HV000059-0201

Optional



IMP57- Accessory for measuring Loop Impedance with high resolution

Standards and directives

The instruments are designed to carry out measurements, verifications and analysis according to:

IEC/EN61557-1
VDE 0100
VDE 0413
IEC/EN61010-1
BS7661 17th issue

ZG47

HV000047-0201

SIRIUS89N

MULTIFUNCTION INSTRUMENT FOR TESTS ON ELECTRIC SYSTEMS AND MAINS ANALYSES IN SINGLE-PHASE SYSTEMS

SIRIUS89N is a multifunction instrument which allows carrying out all necessary tests on civil and industrial electric systems in compliance with IEC 60364 and a complete analysis of the mains quality on single-phase systems (harmonics, voltage anomalies, power checks). SIRIUS89N is also used to analyze environmental measurements (measurements of temperature, humidity, lighting and noise). The instrument also carries out loop/line impedance measurements and calculates the assumed short-circuit current with high-resolution $0.1\text{m}\Omega$ with the aid of the optional accessory IMP57. In this way, it is possible to obtain precise measurement results, also near MT/BT transformation cabs, where the inductive effect due to the presence of the transformer is significant, and therefore also allows correctly choosing the appropriate protections in industrial systems. On the instrument, it is possible to select preset recordings to carry out measurements in the most common situations in a very simple way. Thanks to the PC interface and to the supplied software it is possible to download the data of each measurement carried out, for a practical final print.

FUNCTIONS

Electric system test in compliance with standard IEC/EN61557-1

- Continuity of protective conductors with 200mA
- Insulation with test voltage 50, 100, 250, 500, 1000VDC
- Tripping time and current on RCDs type A, AC, General and Selective up to 500mA
- Total earth resistance without RCD tripping
- Line/loop P-N, P-P, P-PE impedance, also with high resolution ($0.1\text{m}\Omega$) with optional accessory IMP57
- Earth resistance by voltamperometric method with probes
- 4-wire method ground resistivity measurement
- Phase sequence
- Leakage current (with optional clamps HT96U)

Recording and analysis

- Electric parameter measurement (voltage, current, power, energy, PF, frequency) on single-phase or three-phase balanced systems

Possible implementation for generic three-phase systems

- Recording of electric parameters with selectable integration period from 5s to 60min
- Harmonic analysis of voltages and currents up to the 49th component with calculation of THD%
- Analysis of voltage anomalies (dips, peaks) with 10ms resolution
- Numeric display, waveforms and histograms of harmonic analysis
- 5 selectable recordings with preset parameters
- 4-quadrant measurements

Recording and analyses of environmental parameters

- Air temperature measurement ($^{\circ}\text{C} / ^{\circ}\text{F}$)
- Relative humidity measurement (%UR)
- Lighting measurement (Lux)

General characteristics

- Internal memory with 2Mbytes capacity
- Optical interface for connection to the PC
- Graphic LCD display with backlight
- Power supply: 6x1.5V batteries type AA LR6
- Safety: IEC/EN61010-1
- Measurement category: CAT III 600V
- Dimensions (LxWxH): 225x165x105mm
- Weight (batteries included): 1.2kg

ACCESSORIES

Standard

Accessories	Code
3-terminal cable with SHUKO plug	C2033X
Set of 4 cables + 4 alligator clips + 2 test leads	KITGSC5
Set of 4 cables + 4 metal earth probes	KITTERNE
Flexible transducer for $0\div 1000\text{A}$, $0\div 3000\text{A}$ AC currents $\varnothing 174\text{mm}$	HTFLEX33D
Power supply adapter 230VAC 50Hz /12VDC	A0050
PC Windows software + optical / USB cable	TOPVIEW2006
Carrying bag	BORSA2051
ISO9000 calibration certificate	
User manual	

Optional

Transducer for $0\div 5\text{A}$, $0\div 100\text{A}$ AC currents $\varnothing 20\text{mm}$	HT4005N
Transducer for $0\div 200\text{A}$ AC currents $\varnothing 40\text{mm}$	HT4005K
Transducer for $0\div 1\text{A}$, $0\div 100\text{A}$, $0\div 1000\text{A}$ AC currents $\varnothing 54\text{mm}$	HT96U
Transducer for $0\div 10\text{A}$, $0\div 100\text{A}$, $0\div 1000\text{A}$ AC currents $\varnothing 54\text{mm}$	HT97U
Transducer for $0\div 200\text{A}$, $0\div 2000\text{A}$ AC currents $\varnothing 70\text{mm}$	HP30C2
Transducer for $0\div 3000\text{A}$ AC currents $\varnothing 70\text{mm}$	HP30C3
Flexible clamp AC 3000A, diameter 274mm	HTFLEX35
Temperature/Humidity probe	HT52/05
Illuminance (Lux) probe	HT53/05
Magnetic adapter for connection to screw heads	606-IECN
Accessory for Loop Impedance with high resolution	IMP57
AC/DC 115V/50-60Hz mains adapter - US plug	A0053
Free hands kit	CNO050

Optional accessories



IMP57- Accessory for measuring Loop Impedance with high resolution



SIRIUS89N
HV00089N-0201

MACROTESTG3

PROFESSIONAL MULTI-FUNCTION ELECTRICAL SAFETY TESTER

MACROTESTG3 is an innovative instrument capable of carrying out safety tests on civil and industrial electric systems in compliance with IEC/EN61557-1. Its capacitive TFT color touch-screen display, its icon menu, its help-on-line and its user-friendly development make the instrument extremely intuitive even for unskilled users. Its numberless features grant the user a wide range of applications in the world of measurements. MACROTESTG3 allows saving all measures into an internal memory so transferring the saved data to a PC, a PDA or a smartphone by means of USB (provided as standard) or Wi-Fi (C2013 optional accessory) interfaces. The software supplied among standard accessories allows printing testing reports. MACROTESTG3 also drives the optional accessory IMP57 to carry out high resolution (0.1m) loop/line impedance measurements with prospective short-circuit current calculation. This allows accurate measurements even close to power stations enabling the user to correctly size the protection devices in any system. Further possible tests consist in checking breakdown current, tripping current, I2t relative to breakers (MCB) with curves B, C, D, K and fuses type gG as well as aM. Through optional clamp model HT96U it is possible to measure the leakage current. Optional clamp T2100 permits to quickly check the resistance of earth probes without disconnection from earth system.

FUNCTIONS

- Continuity of protection conductors with 200mA
- Insulation resistance with 50, 100,250,500,1000V DC
- Type A, AC, and B general, selective, and delayed RCDs up to 1000mA
- Line/fault impedance with prospective short circuit current calculation
- High resolution line/fault impedance (with IMP57 optional accessory)
- Curve B, C, D, and K MCBs and type gG and aM fuses
- Selection of length, type, and insulation of the cable under test
- Selection of tripping time of the protection device under test
- Earth resistance and soil resistivity with auxiliary rods
- Earth ground resistance (with T2100 optional accessory)
- Non-trip earth loop impedance
- Phase sequence indication
- Leakage current by means of the external transducer HT96U (optional)
- Environmental parameters (C/F, HR%, Lux) by means of optional probes
- TFT display with touch-screen
- Help on-line
- Internal memory
- USB interface to connect to the PC
- Wi-Fi (optional) interface to connect to PDAs, smart phones, etc.
- Rechargeable NiMH batteries (external battery charger)

GENERAL SPECIFICATIONS

Power supply:	6x1.2V type AA rechargeable batteries 6x1.5V type AA alkaline batteries
Display:	TFT, color, 320x240mm, with touch-screen
Internal memory:	999 locations, 3 marker levels
PC interface:	Optical/USB
Safety:	IEC/EN61010-1, IEC/EN61557-1
Insulation:	double insulation
Measurement category:	CAT III 240VAC (to ground) Max 415V between inputs
Dimensions (LxWxH):	225x165x105mm
Weight (battery included):	Approx. 1.2kg

ACCESSORIES

	Code
Standard	
3-terminal cable with SHUKO plug	C2033X
Set of 4 cables + 4 alligator clips + 2 test leads	KITGSC5
Set of 4 cables + 4 metal earth probes	KITERRNE
Carrying bag	BORSA2051
Stylus	PT400
Windows software + optical/USB cable	TOPVIEW2006
Switch probe	PR400
1.2V NiMH rechargeable batteries type AA, 6pcs	YABAT0001000
External battery charger	
ISO9000 calibration certificate	
Quick reference guide	
User manual on CD-ROM	
Optional	
Accessory for Loop impedance with high resolution	IMP57
Magnetic adapter for connection to screw heads	606-IECN
Transducer for 0÷1A, 0÷100A, 0÷1000A AC, diameter 54mm	HT96U
Clamp for probe earth resistance measurement	T2100
Temperature/Humidity probe	HT52/05
Illumination (Lux) probe	HT53/05
Hands-free kit	SP-0400
Optical/WiFi interface	C2013



NEW

With
HTANALYSIS APP
(see pag. 4)

MACROTESTG3
HV005036



T2100 - Earth ground clamp meter



C2013 - Optical/WiFi interface

SIRIUS87 - MACROTEST5035

MULTIFUNCTION INSTRUMENTS FOR COMPLETE TESTS ON CIVIL AND INDUSTRIAL ELECTRIC SYSTEMS

SIRIUS87 and MACROTEST5035 are capable of carrying out complete tests on civil and industrial electric systems in compliance with standard IEC/EN61557-1. Thanks to their simple and intuitive use, these instruments allow saving all measurement results in their internal memory and transferring the saved data onto the PC by means of an optical interface in order to print useful measuring reports, to be attached to Declarations of Conformity, with the aid of the dedicated software supplied. SIRIUS87 and MACROTEST5035 also carry out loop/line impedance measurements and calculate the prospective short-circuit current with high-resolution (0.1mΩ) with the aid of the optional accessory IMP57. In this way, it is possible to obtain precise measurement results, also near HV/LV transformation cabs, where the inductive effect due to the presence of the transformer is significant, and therefore also allows correctly choosing the appropriate protections in industrial systems.

FUNCTIONS

- Continuity of protective conductors with 200mA
- Insulation resistance with 50,100,250, 500,1000VDC
- Line/Loop impedance Phase-Phase, Phase-Neutral, Phase-PE also with high-resolution (0.1mΩ), with optional accessory IMP57
- Prospective short circuit current
- Contact voltage
- AC voltage and frequency
- Tripping time and current on RCDs type A, AC General and Selective with 10,30,100,300,500mA
- Global earth resistance without RCD tripping
- Earth resistance by 2-wire and 3-wire method
- Ground resistivity with 4-wire method
- Phase sequence indication
- Storage in memory up to 350 measurement results
- Optical/USB interface for communication to PC
- Power supply: 6x1.5V alkaline batteries type AA LR03
- Safety: IEC/EN61010-1, CAT III 265V (to ground), CAT III 460V (between inputs)
- Dimensions (LxWxH): 222x165x105mm
- Weight (batteries included): 1.2kg

ACCESSORIES

Standard

	Code
3-terminal cable with SHUKO plug	C2033X
Set of 4 cables + 4 alligator clips + 2 test leads	KITGSC5
Set of 4 cables + 4 metal earth probes	KITTERRNE
PC Windows software + optical / USB cable	TOPVIEW2006
Carrying bag	BORSA2051
ISO9000 calibration certificate	
User manual	

Optional

Accessory for Loop impedance with high resolution	IMP57
Set of straps for carrying belt	CN0050
Magnetic adapter for connection to screw heads	606-IECN
Safety flexible alligator clip	6007-IEC#

Optional accessories



IMP57- Accessory for measuring Loop Impedance with high resolution



SIRIUS87
HV000087-0201

MACROTEST5035
HV005035-0201

COMBI419 - COMBI420

COMBINED MULTIFUNCTION INSTRUMENTS FOR TESTS ON CIVIL AND INDUSTRIAL ELECTRIC SYSTEMS

Models COMBI419 and COMBI420 are innovative instruments for carrying out tests on electric systems in compliance with standard IEC 60364, for measuring and saving environmental parameters (only COMBI420) of leakage current and of electric quantities such as active power, harmonics, PF on single-phase systems (only COMBI420). These instruments are extremely simple to use and have a wide range of functions which can be selected through the practical multi-language menu. Each model also allows carrying out measurements by using a switch probe (optional accessory PR400), which makes it much easier to carry out more measurements one after the other. The help on line, which can be consulted by the user and is available for all functions, provides a very useful help in connecting the instrument to the system to be tested.

FUNCTIONS	COMBI419	COMBI420
Continuity with 200mA	•	•
Insulation with 50,100,250,500,1000VDC	•	•
Tripping time of RCD type A, AC standard and selective up to 500mA	•	•
Tripping current of RCD type A, AC up to 500 mA	•	•
Loop/line P-N, P-P, P-PE impedance also with high resolution (0.1mΩ) (with optional accessory IMP57)	•	•
Total earth resistance without RCD tripping	•	•
Contact voltage	•	•
Phase sequence indication	•	•
AUTO test (total earth resistance, RCD test, insulation test) on the tested sockets	•	•
Measurement of powers and PF in single-phase systems		•
Voltage and current harmonics up to the 49th with calculation of the THD%		•
Environmental parameter measurement (temperature, humidity, illuminance with optional probes)		•
Leakage current measurement (with optional clamp HT96U)	•	•
Activation of measurements with optional remote probe PR400	•	•
Help on line on the display	•	•
Storage of results	•	•
Optical/USB interface for connection to PC	•	•
Dimensions (LxWxH) mm	222x162x57	222x162x57
Weight (batteries included)	1 Kg	1 Kg

ACCESSORIES	Code
Standard	
3-terminal cable with SHUKO plug	C2033X
Set of 3 cables + 3 alligator clips + 1 test leads	UNIVERSALKIT
Carrying bag	BORSA75N
ISO9000 calibration certificate	
User manual on CD-ROM	
Quick reference guide	
Optional	
PC Windows software + optical / USB cable	TOPVIEW2006
Clamp 1-100-1000A/1V AC, diameter 54mm	HT96U
Temperature/Humidity probe (only COMBI420)	HT52/05
Illuminance (Lux) probe (only COMBI420)	HT53/05
Switch probe	PR400
Accessory for Loop impedance with high resolution	IMP57
Hands-free kit	SP-0400
Magnetic adapter for connection to screw heads	606-IECN
Safety flexible alligator clip	6007-IEC#

Some optional accessories



PR400
Switch probe



HT96U
clamp for AC
leakage current



SP-0400
Hands-free kit



COMBI419
HV000419



COMBI420
HV000420



www.youtube.com/user/HTInstruments1

M74 - M75

COMBINED INSTRUMENTS FOR SAFETY TESTS, MULTIMETER FUNCTIONS AND CHECKING OF LAN NETWORK WIRE MAPPING

Models M74 and M75 are innovative instruments with all the characteristics of a multimeter with true RMS value (TRMS), verification tests on civil systems and mapping check on LAN network cables (only M75) in one single unit. The ergonomic and attractive shapes, the innovative electronic function selector, the easiness and rapidity of use when carrying out tests make these instrument suitable for any kind of electric installer.

FUNCTIONS	M74	M75
Continuity with 200mA	•	•
Insulation with 250, 500VDC	•	•
Tripping time on RCDs type AC General, 30mA, 30x5mA, 100mA, 300mA	•	•
Global earth resistance without RCD tripping	•	•
AUTO function (global earth resistance, RCD test, insulation) on the tested socket	•	•
Phase sequence with 1 and 2 leads	•	•
Complete test on LAN network cable mapping with RJ45		•
DC/AC TRMS voltage	•	•
DC/AC TRMS current	•	•
Resistance and continuity test	•	•
Data HOLD, MAX/MIN/AVG	•	•
Voltage and current PEAK measurement	•	•
Leakage current measurement (with optional clamps HT96U)	•	•
Safety	EN61010-1	EN61010-1
Measurement category	CAT III 550V	CAT III 550V
Power supply	4x1.5V Type AA	4x1.5V Type AA
Dimensions (LxWxH) (mm)	240x100x45	240x100x45
Weight (with batteries)	450g	450g

ACCESSORIES	Code
Standard	
Set of 2 cables with test leads + 2 alligator clips	KIT0075
2-terminal cable with SHUKO plug	C2075
Clamp 400A AC, diameter 30mm (only M75)	HT4003
LAN remote unit #1 + patch cable (only M75)	REM1
LAN remote unit #2 + patch cable (only M75)	REM2
FTP patch cable RJ45 (only M75)	YAAMS0000000
Carrying bag	BORSA75
ISO9000 calibration certificate	
User manual on CD-ROM	
Quick reference guide	
Optional	
Clamp 1-100-1000A/1V AC, diameter 54mm	HT96U
Clamp 400A AC, diameter 30mm	HT4003
Clamp 200A/1V AC, diameter 40mm	HT4005K
Clamp 10-100A/1V DC, diameter 32mm	HT4004N
Adapter for connection of HT96U, HT4004N, HT4005K clamps	NOCANBA
LAN remote unit #3 (only M75)	REM3
LAN remote unit #4 (only M75)	REM4
LAN remote unit #5 (only M75)	REM5
LAN remote unit #6 (only M75)	REM6
LAN remote unit #7 (only M75)	REM7
LAN remote unit #8 (only M75)	REM8
6x LAN remote units #3 ÷ #8 (only M75)	REM38



M74
HV000074

M75
HV000075

M73 - SPEED418

MULTIFUNCTION INSTRUMENTS FOR TOTAL EARTH RESISTANCE MEASUREMENT AND TESTS ON DIFFERENTIAL SWITCHES

Models M73 and SPEED418 are innovative instruments for measuring the total earth resistance without causing the differential switch's tripping (typically used in TT systems as an alternative to earth measurement with probes) and for evaluating the tests on differential switches on civil and industrial electric systems. Model SPEED418, differently from M73, allows storing each measurement result in its own internal memory and downloading the saved data onto the PC with the aid of the dedicated software. SPEED418 also allows carrying out measurements by using a switch probe (optional accessory PR400), which makes it much easier to carry out more measurements one after the other. Model M73 is provided with a powerful multi-meter function for measuring quantities in true RMS value (TRMS), which is useful when solving any kind of electric problem.

FUNCTIONS	M73	SPEED418
Tripping time on RCD type A, AC General and Selective with currents 10, 30, 100, 300, 500mA		•
Tripping time on RCD type AC General with currents 30, 30x5, 100, 300mA	•	•
Tripping current on RCD type A, AC General and Selective		•
Global earth resistance without RCD tripping	•	•
Line/Loop impedance, also with high-resolution (0.1mΩ) (with optional accessory IMP57)		•
Prospective short circuit current	•	•
Phase sequence indication	•	•
DC/ACTRMS voltage	•	
DC/AC TRMS current	•	
Resistance and continuity test	•	
Data HOLD, MAX/MIN/AVG	•	
Voltage and current PEAK measurement	•	
Leakage current measurement (with optional clamps HT96U)	•	
Activation of measurements (with optional remote probe PR400)		•
Help on line on the display		•
Storage of results		•
Optical/USB interface for connection to PC		•
Safety	EN61010-1	EN61010-1
Measurement category	CAT III 550V	CAT III 265V
Power supply	4x1.5V	4x1.5V
Dimensions (LxWxH) mm	240x100x45	222x162x57
Weight (with batteries)	450g	1Kg

ACCESSORIES	Code
Standard	
2-terminal cable with SHUKO plug (only M73)	C2075
3-terminal cable with SHUKO plug (only SPEED418)	C2033X
Set of 2 cables with test leads + 2 alligator clips (only M73)	KIT0075
Carrying bag (only M73)	BORSA75
Carrying bag (only SPEED418)	BORSA75N
ISO9000 calibration certificate	
User manual on CD-ROM	
Quick reference guide	
Optional	
PC Windows software + optical / USB cable (only SPEED418)	TOPVIEW2006
Set of 3 cables + 3 alligator clips + 1 test leads (only SPEED418)	UNIVERSALKIT
Clamp 1-100-1000A/1V AC, diameter 54mm (only M73)	HT96U
Clamp 400A AC, diameter 30mm (only M73)	HT4003
Clamp 200A/1V AC, diameter 40mm (only M73)	HT4005K
Clamp 10-100A/1V DC, diameter 32mm (only M73)	HT4004N
Adapter for connection of HT96U, HT4004N, HT4005K clamps (only M73)	NOCANBA
Switch probe (only SPEED418)	PR400
Hands-free kit (only SPEED418)	SP-0400
Magnetic adapter for connection to screw heads	606-IECN
Safety flexible alligator clip	6007-IEC#

Optional accessories



PR400
Switch probe

M73
HV000073



SPEED418
HV000418



M72 - ISO410

MULTIFUNCTION INSTRUMENT FOR MEASURING INSULATION AND CONTINUITY OF PROTECTIVE CONDUCTORS

Models M72 and ISO410 are innovative instruments for carrying out insulation resistance measurements on civil and industrial electric systems in compliance with standard IEC/EN61557-1 but with a great flexibility for use in compliance with standards such as IEC/EN60204-1 (electric machines) or IEC/EN60439-1 (ANS electric panels). Model ISO410, differently from M72, allows storing each measurement result in its own internal memory and downloading the saved data onto the PC with the aid of the dedicated software. ISO410 also allows carrying out measurements by using a remote switch (optional accessory PR400), which makes it much easier to carry out more measurements one after the other. Model M72 is provided with a powerful multi-meter function for measuring quantities in true RMS value (TRMS), which is useful when solving any kind of electric problem.

FUNCTIONS	M72	ISO410
Continuity with 200mA	•	•
Insulation with 250, 500VDC	•	•
Insulation with 50, 100, 250, 500, 1000VDC		•
Insulation measuring range	0.01MΩ-2GΩ	0.01MΩ-2GΩ
Automatic discharge of tested item	•	•
Measuring probe self-calibration	•	•
Limit setting on measurement		•
Phase sequence indication	•	
DC/AC TRMS voltage	•	
DC/AC TRMS current	•	
Resistance and continuity test	•	
Data HOLD, MAX/MIN/AVG	•	
Voltage and current PEAK measurement	•	
Leakage current measurement (with optional clamp HT96U)	•	
Activation of measurements (with optional remote probe PR400)		•
Help on line on the display		•
Storage of results		•
Optical/USB interface for connection to PC		•
Safety	EN61010-1	EN61010-1
Measurement category	CAT III 550V	CAT III 265V
Power supply	4x1.5V bat.type AA	6x1.5V bat.type AA
Dimensions (LxWxH):	240x100x45	222x162x57
Weight (batteries included)	450g	1Kg

ACCESSORIES	Code
Set of 2 cables with test leads + 2 alligator clips (only M72)	KIT0075
Set of 3 cables + 3 alligator clips + 1 test leads (only ISO410)	UNIVERSALKIT
Carrying bag (only M72)	BORSA75
Carrying bag (only ISO410)	BORSA75N
ISO9000 calibration certificate	
User manual on CD-ROM	
Quick reference guide	
Optional	
PC Windows software + optical / USB cable (only ISO410)	TOPVIEW2006
Clamp 1-100-1000A/1V AC, diameter 54mm (only M72)	HT96U
Clamp 400A AC, diameter 30mm (only M72)	HT4003
Clamp 200A/1V AC, diameter 40mm (only M72)	HT4005K
Clamp 10-100A/1V DC, diameter 32mm (only M72)	HT4004N
Adapter for connection of HT96U, HT4004N, HT4005K clamps (only M72)	NOCANBA
Switch probe (only ISO410)	PR400
Hands-free kit (only ISO410)	SP-0400
Magnetic adapter for connection to screw heads	606-IECN
Safety flexible alligator clip	6007-IEC#

Optional accessories



PR400
Switch probe



M72
HV000072



ISO410
HV000410

EQUITEST7051

INSTRUMENT FOR CONTINUITY OF EARTH CONDUCTOR WITH 10A AND LINE/FAULT IMPEDANCE

The EQUITEST5071 model is principally designed to perform the safety verifies of earth equipotential conductors with test current > 10A in compliance with IEC/EN61557, VDE100 and IEC/EN60204-1:2006 guidelines (medical rooms and safety of electrical machines). The instrument performs even continuity measurements with 200mA, Line/Fault impedance also with high resolution (0.1mOhm – with IMP57 optional accessory), global earth resistance without RCDs tripping and phase sequence indication. Each test can be saved inside the internal memory and downloaded to PC by using supplied Windows software.

FUNCTIONS

- Continuity on protective conductors with 200mA
- Continuity on protective conductors with 10A and voltage <12V
- Continuity with 10A in compliance with IEC/EN60204-1:2006
- 4 wires measurement method
- Line/Loop impedance with calculation of the prospective short circuit current
- Line/Loop impedance with high resolution (with IMP57 optional accessory)
- Global earth resistance without RCDs tripping
- Contact voltage
- Phase rotation with 3 wires method
- Save results inside memory
- Recall measured test at display
- Optical/USB interface for PC communication
- Auto Power OFF
- Backlight

ACCESSORIES

Standard

	Code
Cable 3 wires with Shuko plug	C2033X
Set 3 cables + 3 alligator clips + 1 test lead	UNIVERSALKIT
Power cord for test 10A	C5700
Set of cables for 10A test, length 3m	C7000
Soft carrying bag	BORSA2051
Windows software + optical/USB cable C2006	TOPVIEW2006
ISO9000 calibration certificate	
User manual on CD-ROM	
Quick reference guide	

Optional

Set cables for 10A test, 5m length	C7000/05
Set cables for test 10A, 10m length	C7000/10
Accessory for high resolution Loop/Line Impedance	IMP57
Set of straps for use of meter on neck	CN0050
Connector for banana cables, black color	1066-IECN



EQUITEST5071
HV005071

M70

COMBINED INSTRUMENT FOR MEASURING INSULATION AND CONTINUITY OF PROTECTIVE AND EQUIPOTENTIAL CONDUCTORS

Model M70 is an innovative instrument, perfectly portable and mainly suitable for measuring insulation resistance with test voltage up to 1000VDC and continuity of protective and equipotential conductors with a current of 200mA, in compliance with the requirements of standard IEC/EN61557-1 in civil and industrial electric systems. The instrument can also be used for measuring insulation on electric panels in compliance with standard IEC/EN60439-1. Thanks to the LOCK function, insulation measurement can be carried out continuously over time, thus testing the insulation of the item being tested, by carrying out duration tests. Measurement with programmable timer between 2 and 60s is also possible. The functions also include measurement of AC/DC voltage, measurement of resistance and continuity test with buzzer, as a common digital multimeter. The wide and backlit custom display for comfortably reading measures also in poorly lit environments, the ergonomic structure with small overall dimensions, the innovative electronic selector and the extremely light weight make M70 an indispensable instrument for all industrial installers and/or testers.

FUNCTIONS

- Insulation with 250, 500, 1000VDC test voltage
- Measuring range up to 4GΩ
- Automatic discharge of tested item
- LOCK function for continuous measurements
- Insulation with programmable timer between 2 and 60s
- Continuity of protective conductors with 200mA
- Measuring probe self-calibration
- AC/DC voltage up to 600V
- Resistance and continuity test with buzzer
- Wide backlit display
- AutoPowerOFF
- Weight: approx. 2kg

TECHNICAL SPECIFICATIONS

Insulation resistance

Test voltage:	250, 500, 1000VDC
Measuring range:	0.001MΩ ÷ 4GΩ
Resolution:	0.001MΩ ÷ 1MΩ
Basic accuracy:	±(2.0%rdg + 5dgt)
Overload protection:	605V max rms

Continuity of protective conductors

Test current:	>200mADC
Measuring range:	0.01Ω ÷ 19.99Ω
Resolution:	0.01Ω
Basic accuracy:	±(2.0%rdg + 3dgt)
Overload protection:	605V max rms

AC/DC voltage

Measuring range:	0.1V ÷ 600V
Resolution:	0.1mV
Basic accuracy:	±(0.5%rdg + 1dgt)
Overload protection:	600V AC rms

GENERAL SPECIFICATIONS

Display with backlighting:	LCD, 4 dgt, 10000 points
Power supply:	4x1.5V batteries type AA
AutoPowerOFF:	after 15 min of idleness
Safety:	IEC/EN61010-1
Measurement category:	CAT III 550V
Dimensions (LxWxH):	240x100x45mm
Weight (batteries included):	450g

ACCESSORIES

Standard
Set of 2 cables + 2 alligator clips + 1 test lead
Batteries
Carrying bag
CE declaration of conformity
User manual

M70
HV000070



HT7052

PROFESSIONAL 10kV INSULATION TESTER

HT7052 is a portable battery/mains powered test instrument intended for the testing of insulation resistance by using high test voltages of up to 10kV. It is a professional high voltage insulation tester with added diagnostics tools such as Polarization Index (PI), Dielectric Absorption Ratio (DAR) and Dielectric Discharge (DD). HT7052 is specially well suited for: power transformers, measuring transducers in distribution networks, testing insulation resistance of rotating machinery and cables, production line periodic testing and maintenance, troubleshooting and analysis of all kinds of insulation problems, etc. Because of its robustness (CAT IV protection), it is best suited for industrial environment. A dot matrix LCD offers easy-to-read results and all associated parameters. The operation is straightforward and clear to enable the user to operate the instrument without the need for special training. Test results can be stored on the instrument and transferred to the PC for further analysis.

FUNCTIONS

- Insulation resistance up to 10TΩ
- Diagnostics tools (PI, DAR, DD)
- Step voltage insulation test
- Test voltage from 500V up to 10kV DC, adjustable in 25V steps
- Maximum charging current 5mA
- Automatic discharge of capacitive loads
- Digital and bar graph results with date and time
- PC software for downloading and analyzing test results and test report printing
- RS232 and USB isolated communication ports
- High quality accessories including shielded test leads in standard set
- Mains and rechargeable battery power supply
- High EM interference protection

GENERAL SPECIFICATIONS

Display:	LCD custom with backlight and bargraph
External power supply:	90-260V AC, 45-65Hz, 70VA
Internal power supply:	rechargeable battery
Battery life:	4h operation at 10kV
Internal memory:	1000 locations
PC connection:	RS232 and USB
Insulation:	double insulation
Pollution degree:	2
Mechanical protection:	IP53 (closed case)
Installation category:	CAT IV 600V
Dimensions (LxWxH):	330x360x160mm
Weight:	5.5kg

ACCESSORIES

Standard

- 10kV shielded 2m test lead with probe
- Set of 2 10kV shielded 2m test leads
- Set of alligator clips
- Guard 2m test lead (green)
- Guard alligator clip (green)
- Set of 6 NiMH 1.2V type D batteries
- Mains cable
- ISO9000 calibration certificate
- User manual
- PC software + RS232 and USB cables

Optional

- Set of 2 10kV shielded 8m test leads
- Set of 2 10kV shielded 15m test leads



HT7052
HV007052

HT7051

METER FOR INSULATION RESISTANCE MEASUREMENTS PROGRAMMABLE UP TO 5kV DC

HT7051 is a meter designed to perform professional insulation resistance measurements with test voltage up to 5kV DC. This feature permits a wide range of applications in industrial plants as maintenance of rotating equipments, transformers, high voltage insulation systems, electrical cables, etc. Automatic, manual timer and programmable modes are available for both models. In programmable mode the user can be select up to three ramp features in order to completely customize the times and values of test voltage application. Other integrated available measurements are the Polarization Index (PI) and the Dielectric Absorption Ratio (DAR). The model have internal memory to save the results and a PC RS-232 interface for PC connection. All effort have been spent to create products which can be adjusted according to the standard amendments in the field of insulation measurements.

FUNCTIONS

- Insulation test with test voltage from 100 to 5kV DC
- Measurement range up to 10TΩ
- Measurements with fixed test voltages
- Up to 3 voltage/time test ramps available in programming mode
- SMOOTH feature for stable measurement results
- Dielectric leakage current measurements
- Polarization index (P.I.) measurement
- Dielectric Absorption Ratio (D.A.R) measurement
- Discharging capacitance measurement
- DC/AC TRMS voltage measurement up to 600V
- Rechargeable NiMH internal battery
- GUARD input terminal
- Automatic object discharge after test

GENERAL SPECIFICATIONS

Display:	LCD custom with backlight and bargraph
External power supply:	220-240V, 50/60Hz, 20VA
Internal power supply:	rechargeable NiMH battery
Protection fuse:	T 200mA H 250V
Battery life:	> 1000 test (@ 5kV on 5M)
AutoPowerOFF:	After 5 minutes of idleness
Internal memory:	700 locations
Serial interface:	RS-232 optoinsulated
Safety:	IEC/EN61010-1, IEC/EN61557-1
Insulation :	double insulation
Pollution degree :	2
Mechanical protection :	IP53 (closed case)
Category of measure:	CAT IV 600V (to ground)
Dimensions (LxWxH):	360x310x195mm
Weight:	3.5kg

ACCESSORIES

Standard

Accessory	Code
Set of 3 cables with alligator clips + 2 cables with test leads	KIT14000
Power supply cord	C7001
Carrying bag for accessories	BORSA2000N
PC software + RS-232 serial cable	TOPVIEW
ISO9000 calibration certificate	
User manual	
Optional	
USB to RS232 adapter	C2009



HT7051
HV007051

M71 - GEO416

INSTRUMENTS FOR MEASURING EARTH RESISTANCE AND GROUND RESISTIVITY

Models M71 and GEO416 are innovative instruments for measuring ground resistance with 2-wire and 3-wire methods and ground resistivity (only GEO416) with 4-wire method in compliance with reference standards. The instruments allow carrying out measurements with a wide measuring range (50k Ω) and an efficient internal compensation of the disturbance effects present on systems. Model GEO416, differently from model M71, allows storing each measurement result in its own internal memory and to download the saved data with the aid of the dedicated software.

FUNCTIONS	M71	GEO416
2-wire earth measurement	•	•
3-wire earth measurement	•	•
Measuring range	0.01 Ω -50k Ω	0.01 Ω -50k Ω
4-wire method ground resistivity		•
Compensation of disturbance voltages	•	•
Compensation of test cables	•	•
Storage of results		•
Optical/USB interface for connection to PC		•
Safety	EN61010-1	EN61010-1
Measurement category	CAT III 240V	CAT III 265V
Power supply	4x1.5V bat.type AA	6x1.5V bat.type AA
Dimensions (LxWxH)	240x100x45	222x162x57
Weight (batteries included)	630g	1kg

ACCESSORIES	Code
Standard	
Set of 3 cables + 3 alligator clips 2 metal probes (only M71)	KIT0071
Set of 4 cables + 4 metal probes (only GEO416)	KITERRNE
Set of 4 alligator clips (only GEO416)	COC4-UK
Carrying bag (only M71)	SP-6085
Carrying bag (only GEO416)	BORSA2000N
ISO9000 calibration certificate	
User manual on CD-ROM (only M71)	
Quick reference guide (only M71)	
Optional	
PC Windows software + optical / USB cable (only GEO416)	TOPVIEW2006



M71
HV000071



GEO416
HV000416

T2000 - T2100

EARTH GROUND CLAMP METERS

The T2000 and T2100 models are designed for the resistance measurement on earth probes with ground loop method without the disconnection of parts of plants under test. This type of measurement carried out by the instruments can be used for evaluation of single rods' resistances within an earth installation assuming they do not affect each other. The inner part of the instrument is made of 2 jaws one for current and one for voltage. The voltage toroid generates a potential (E) on the loop during resistance 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 value R calculated as their ratio. The T2000 model also performs AC current up to 20A and leakage current with 0.05mA resolution and the setting of alarm thresholds on measurements is possible. The T2100 is equipped with a half-duplex RS-232 interface for connection with MACROTESTG3 instrument only and transfer the saved data on it. The instruments are compliance with IEC/EN61010-1, CAT III 150V and is ideal for simple measurements both in domestic and industrial environments.

FUNCTIONS

- Resistance measurement on earth probes with ground loop method
- Direct measurement on earth probes without any cable breaking
- Measurement of leakage current on earth installations (*only T2000*)
- RS-232 half-duplex interface (*only T2100*)
- Calculation of parallel of probe resistance (*only T2100*)
- Setting of alarm thresholds on measurements with buzzer
- Storage of measurement results
- Detection of current noise on measurement
- Data HOLD function
- Backlight
- Auto Power OFF

GENERAL SPECIFICATIONS

Power supply:	4x1.5V type AA LR6 alkaline batteries
Display:	4 LCD, sign, decimal point and backlight
Internal memory:	99 locations
RS-232 interface:	half duplex, 4800 baud (<i>only T2100</i>)
Safety:	IEC/EN61010-1
Insulation:	double insulation
Pollution degree:	2
Max cable diameter:	32mm
Measurement category:	CAT III 150V (to ground), max 20A
Auto Power OFF:	after 5 minutes of idleness
Dimensions (LxWxH):	293 x 90x 66mm
Weight (battery included):	approx. 1.3kg

ACCESSORIES

Standard

- Resistive test loop
- RS-232 connection cable, 1.5m length (*only T2100*)
- Batteries
- Carrying case
- ISO9000 calibration certificate
- User manual

NEW

T2000
HP002000



NEW

T2100
HP002100



FULLTEST3

MULTIFUNCTION INSTRUMENT FOR TESTS ON ELECTRICAL MACHINES (IEC/EN60204-1:2006) AND ELECTRICAL PANELS (IEC/EN61439-1)

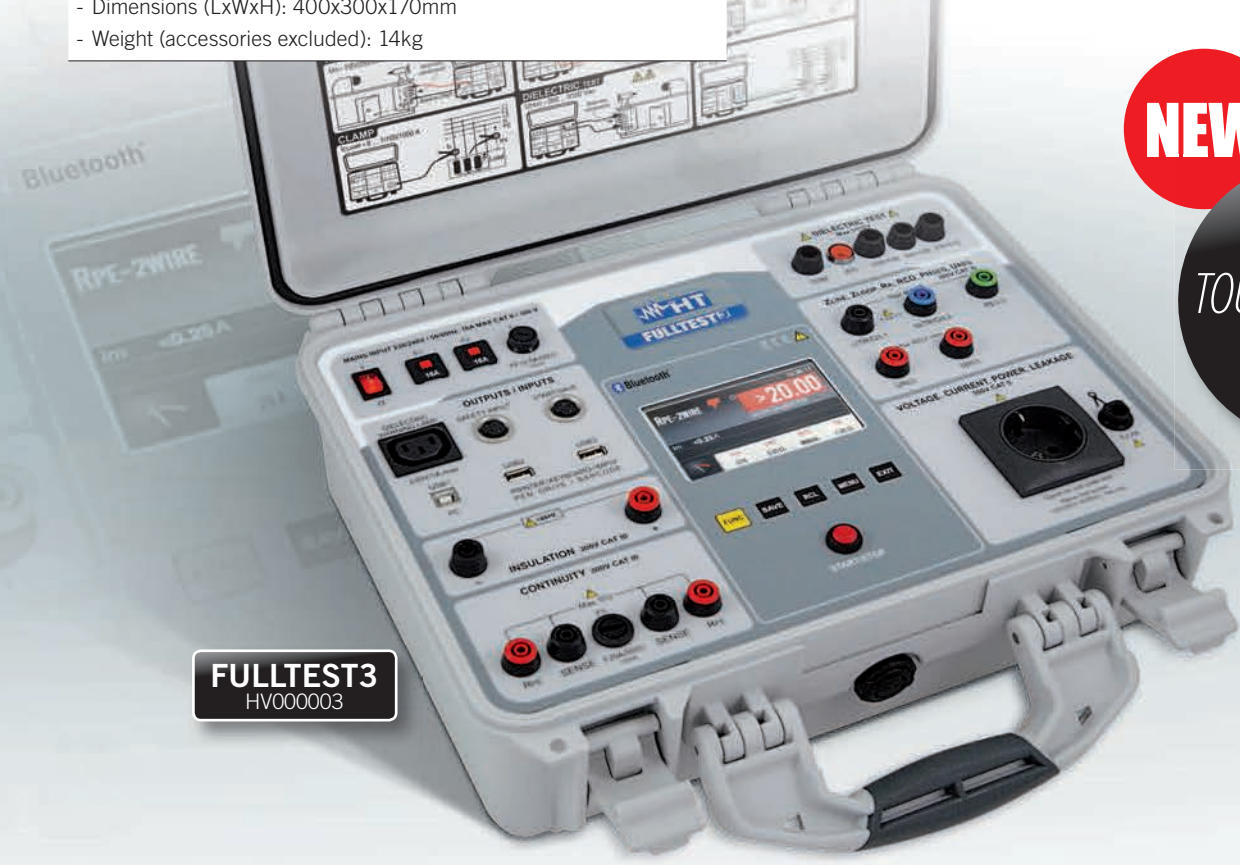
The innovative model FULLTEST3 was designed to perform safety tests on electric machines and panel boards in compliance with IEC/EN60204-1 and IEC/EN61439-1. Thanks to its features the instrument allows to carry out several tests with a high flexibility of use so fully or partially complying with other standards (e.g. routine tests according to IEC/EN60335-1). In addition to insulation, withstanding and continuity measurements on protective conductors FULLTEST3 is capable of performing tests on both general and selective RCDS type A, AC and B as well as Line/Fault impedance with high resolution 0.1 mΩ (with optional accessory model IMP57), overall earth resistance without RCD tripping and leakage current with current transducer. The instrument is provided with a modern color touch-screen graphic LCD, three USB ports for connection to PC, USB pen drive, USB printers and any bar code reader.

FUNCTIONS

- Continuity of earth conductors with 200mA
- Continuity of earth conductors with I>10A, V<12V
- Continuity of earth conductors with I>25A, V<12V
- Insulation with 100, 250, 500, 1000VDC
- Withstanding test with test voltage from 250V to 5100V
- Withstanding test in BURN mode
- Discharging time on DUT's plug and internal circuits
- Leakage current on machine's socket
- General and selective type A, AC and B RCD tripping time and current (up to 1000mA nominal current)
- Contact voltage
- Line/Fault impedance and prospective short circuit/fault current
- Line/Fault impedance with high resolution (0.1mΩ) with IMP57 optional accessory
- Prospective short circuit/fault current
- Global earth resistance without RCD's tripping
- Phase sequence
- Leakage current by means of HT96U optional accessory
- Adjustable timer
- Adjustable thresholds
- Touch screen color display
- Internal memory
- Fuse-protected inputs
- USB port for PC connection
- USB ports to connect memory sticks, USB printers, barcode readers, etc.
- Power supply: 230V, 50/60Hz
- Safety: IEC/EN61010-1, IEC/EN61557-1-2-3-4-6-7
- Dimensions (LxWxH): 400x300x170mm
- Weight (accessories excluded): 14kg

ACCESSORIES

Standard	Code
Power cable	
Set of 2x 2.5mm ² red 3m long cables	
Set of 0.75mm ² blue and green 3m long cables	
Set of 2x 5kV withstanding test cables	
Bananas to schuko-plug cable	
3x CATIII test lead	
3x CATII test lead	
3x alligator clip	
Windows software with USB cable	
Carrying bag for accessories	
ISO9000 calibration certificate	
User manual	
Optional	
Accessory for loop impedance with high resolution	IMP57
Leakage current transducer	HT96U



FULLTEST3
HV000003

NEW
WITH
TOUCH-SCREEN
DISPLAY

HT2055

STEP/CONTACT VOLTAGE METER UP TO 50A

HT2055 is composed of a power unit and a meter designed to perform step/contact voltage measurements on electrical installations such as HV power stations (TN systems, electrical substations) with rated test current up to 50A according to international guidelines. Both units, initially synchronized in time and current, can perform an exact calculation of step and contact voltage values applying the real test current measured by the station. A internal DSP filter also performs the automatic compensation of noise voltage disturbances affecting the measuring circuit. The instrument permits also measurement of earth resistance with 3-wire method and ground resistivity with 4-wire Wenner method. All results can be saved into an internal memory and downloaded to PC through Windows software.

GENERAL SPECIFICATIONS

Power unit

- Power supply: 110/230V AC, 50/60Hz
- Output power: 900VA
- Output current: max 55A
- Test frequency: 55Hz
- Voltage measurement: 0.1 ÷ 999V
- Resolution: 0.1 ÷ 1V
- Basic accuracy: ±2% reading
- Display: LCD 240x128 counts + backlight
- Memory: 2000 locations
- Communication interface: RS-232
- Measurement category: CAT II 300V
- Protection: fuse T 6.3A/250V
- Pollution degree: 2
- Mechanical protection: IP40 (closed cover)
- Dimensions (L x W x H): 335x335x160mm
- Weight: 28kg

Voltmeter unit

- Voltage measurement: 0.1 ÷ 999V
- Resolution: 0.1 ÷ 1V
- Resistance measurement: 0.001 ÷ 99.99Ω
- Resolution: 0.01Ω
- Basic accuracy: ±2% reading
- Input impedance: 1kΩ / 1MΩ selectable
- Display: LCD 240x128 counts + backlight
- Memory: 2000 locations
- Communication interface: RS-232/USB
- Power supply: 6x1.2V rechargeable batteries type AA
- Pollution degree: 2
- Mechanical protection: IP40
- Dimensions (L x W x H): 230x115x103mm
- Weight: 1.3kg

ACCESSORIES

Standard

- Power unit
- Voltmeter unit
- Power cord for power station
- Metal current probe, 1m length
- Metal voltage probe, 60cm length
- Metal plate (200x100mm), 2 pcs
- Test cable, 50m, 10mmq, with alligator clip on reel
- Test cable, 10m, 10mmq, with alligator clip
- Black test cable, 3 m, with industrial plugs, 2 pcs.
- Red test cable, 50m
- Green test cable, 10m
- Black test cable, 1.5m
- Red test cable with crocodile, 1m
- Alligator clips, 4 pcs
- USB cable
- RS-232 cable
- Soft carrying bag, 2 pcs
- Neck strap
- 6 x 1.2V rechargeable batteries NiMH type AA, LR03
- External adapter 100-240V AC / 12V DC
- Windows software on CD-ROM
- User manual
- ISO9000 calibration certificates

Optional

- Metal current probe, 1m length
- Metal voltage probe, 60cm length

FUNCTIONS

- Measurement of Step/Contact voltage through separate units
- Synchronization between units
- Test current up to 50A
- LCD dot matrix display on both units
- Earth resistance measurement
- Internal memory for data storage
- USB and RS-232 ports for communication between units and PC
- DSP filtering for compensation of noise disturbances
- Windows software



HT2055
HN002055

IMP57

ACCESSORY FOR MEASURING HIGH-RESOLUTION LOOP IMPEDANCE AND ASSUMED SHORT-CIRCUIT CURRENT UP TO 400kA

The accessory IMP57 has been conceived for technical departments and measuring technicians, in order to measure, in combination with HT ITALIA instruments fault loop impedance / line impedance and to calculate the assumed short-circuit current, which is essential for determining the dimension of the protections provided in common industrial electric systems. The high generated test current (max. 200A) allows carrying out high-resolution measurements (0.1mΩ) and, therefore, obtaining correct and precise results, even near MT/BT transformers. IMP57 consists in a practical and resistant suitcase structure, it has no display and it can be interfaced by RS232 serial connection to the above-mentioned instruments (called Master) in order to obtain the results' reading. The 4-terminal measurement allows ignoring the effect of the resistance of the supplied cables and, therefore, no preliminary calibrations are necessary.

FUNCTIONS	
Type of measurement:	P-N, P-P, P-PE Loop/Line impedance and short circuit current calculation
Resolution of measurement:	0.1mΩ (Zloop) ; 1A (Ipsc)
Test current:	approx: 200A
Frequency range:	50Hz ± 5%
Dimensions (LxWxH):	340x300x150mm
Weight:	4.1kg

ACCESSORIES	Code
Standard	
2 test cables, 3m length, with alligator clips	C7000
RS-232 serial cable	C2001
Carrying bag	B80
ISO9000 calibration certificate	
User manual on CD-ROM	
FW upgrading CD-ROM	

*It measures the short circuit current up to **400kA***

