

TCTCDK Compact Digital Compliance Kit

- This kit is supplied in a sturdy case and foam cut out to secure each instrument



TCTCS - Case
TCTCDKFM - Foam

T1151 1000V Digital Insulation Tester



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T1120 Digital Tester



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TEL1TLB ELCB Polarity Socket Tester



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T1125 LOOP/PSC Tester



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TBM3030 Digital Clamp Meter



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T890 Safety Phase Detector



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TCTRP Analogue Compliance Kit

- This kit is supplied in a sturdy case and foam cut out to secure each instrument



TCTCS - Case
TCTRPFM - Foam

T1800 Insulation Tester



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T1805 Analogue Earth Resistance Tester



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TEL1TLB ELCB Polarity Socket Tester



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T1825 Loop/PSC Tester



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TBM811 Digital Multimeter



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T860 Phase Rotation and Motor Rotation



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TCTDT Digital Compliance Kit

- This kit is supplied in a sturdy case and foam cut out to secure each instrument



TCTCS - Case
TCTDTFM - Foam

T1851 Digital Insulation Tester



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T1820 Digital Earth Resistance Tester



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TEL1TLB ELCB Polarity Socket Tester



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T1825 Loop/PSC Tester



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TBM3030 Digital Clamp Meter



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T887 LCD Phase Rotation



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Compliance Testers

T419 Compliance Testers (23kA L-N) (40kA L-L)

- Insulation (50,100,250,500,1000V)
- Loop resistance
- Line impedance
- Global earth
- Phase rotation
- 350 Memory locations

COMBITEST T419 is a multifunction tester that joins, in a single unit, features and functions which can be traditionally found in separate instruments.

COMBITEST T419 carries out testing on electrical installations according to IEC 61557, continuity test of earth, protective and potential equalising conductors with test current higher than 200mA and open circuit voltage ranging from 4V to 24V, insulation resistance with voltage of 50V,100V, 250V, 500V or 1000V tests on general and selective RCD's type A and AC (tripping time, tripping current, contact voltage, total earth resistance without RCD tripping), line and /or fault loop impedance measurement with calculation of prospective short circuit current and phase sequence indication.

Functions

- Continuity (>200mA)
- Insulation (50,100,250,500,1000V)
- A, AC and selective RCD tripping time
- A and AC and selective current
- Loop resistance
- Line impedance
- Loop impedance
- Global earth resistance
- Short circuit/loop current calculation
- Phase rotation



Optional Accessories:
TOPVIEW2006 - C2006
USB Cable and Software



Model Specification T419

Optional Accessories	Software & USB cable (TOPVIEW)
Standard Accessories	Test leads Carry case English instruction manual Calibration certificate ISO9000
Dimensions (mm)	240(L) x 170(W) x 80(H)
Power Source	6 x 1,5 AA Batteries
Weight	1000g

Technical Specification

Function	Range	Basic Accuracy	Resolution
Low OHM (I _{test} >200ma R _s ≤16Ω) I _{test} >40ma R>16Ω)	0,0 ÷ 9,99Ω 10,0 ÷ 99,9Ω	±(2% reading + 2 Digit)	0,01Ω 0,1Ω
Insulation	0,01 mΩ ÷ 99,9MΩ/50V 0,01mΩ ÷ 199,9MΩ/100V 0,01mΩ ÷ 249MΩ/250V 0,01mΩ ÷ 499,9MΩ/500V 0,01mΩ ÷ 1999MΩ/1000V	±(5% reading + 2 Digit)	0,01Ω - 0,1Ω 0,01Ω - 1,0Ω 0,01Ω - 1,0Ω 0,01Ω - 1,0Ω 0,01Ω - 1,0Ω
RCD Tripping Time	10,30,100,300,500mA/1 ÷ 999ms (1/2IΔN, IΔN) 10,30,100,300,500mA/1 ÷ 200ms (2IΔN, RCD Type G) 10,30,100,300,500mA/1 ÷ 250ms (5IΔN, RCD Type S) 10,30,100,300mA/0 ÷ 50ms (5IΔN, RCD Type G) 10,30,100,300mA/0 ÷ 160ms (5IΔN, RCD Type S)	±(2% reading + 2 Digit)	1ms
RCD Tripping Current	(0,5 ÷ 1,4) IΔN (RCD type AC) (0,5 ÷ 2,0) IΔN (RCD type A)	±10%IΔN	0,1% IΔN
RCD Loop Resistance	0 ÷ 2kΩ/test = (1/2IΔN)	±(2% reading + 2 Digit)	1Ω
RCD Contact Voltage	50,100v	±(2% reading + 2 Digit)	0,1V
Line/Loop Impedance (I _{test} =6,64a For 230v / 11,5a for 400v)	0,01 ÷ 19,99Ω 10,0 ÷ 199,9Ω 200 ÷ 1999Ω (P - PE)	±(5% reading + 2 Digit)	0,01Ω 0,1Ω 1Ω
Line/Loop Impedance	0,01 ÷ 19,99Ω 10,0 ÷ 199,9Ω 200 ÷ 1999Ω (P - PE)	±(5% reading + 3 Digit)	0,01Ω 0,1Ω 1Ω
Global Earth Resistance	0,01 ÷ 9,99Ω 10,0 ÷ 1999,9Ω 200 ÷ 1999Ω (P - PE)	±(5% reading + 3 Digit)	0,01Ω 0,1Ω 1Ω
Phase Rotation	0 ÷ 415V Single - phase system Display: 123 Correct - 132 Incorrect	±(2% reading + 2 Digit) ±(5% reading + 5 Digit)	±0,5Hz
Voltage	0 ÷ 415V two-phase or three-phase system	±(5% reading + 5 Digit)	0,1V

T89 Compliance / Single Phase Power Analyser (23kA L-N) (40kA L-L)

- Insulation (50,100,250, 500,1000V)
- Loop resistance
- Line impedance
- Global earth
- Phase rotation
- 350 Memory locations
- Power
- Voltage anomalies
- Harmonics
- Power factor
- Single phase power tested individually
- **Memory: 2Mb**

Includes:
TOPVIEW2006 - C2006
USB Cable and Software



Meter
Supplied With
Calibration
Certificate

Technical Specification

Resistivity Measurement					
Range p	0.60 ÷ 19.99Ωm	20.0 ÷ 199.9Ωm	200 ÷ 1999Ωm	2.00 ÷ 99.99kΩm	100.0 ÷ 125.6Ωm
Resolution	0.01Ωm	0.1Ωm	1Ωm	0.01kΩm	0.1kΩm
Accuracy	±(5% reading + 3 digit)				

Voltage Measurement - Single Phase System (Auto Range)		
Range	15 ÷ 310V	310 ÷ 600V
Resolution	0.2V	0.4V
Input Impedance	300kΩ (phase-neutral)	300kΩ (phase-phase)
Accuracy	± (0.5% + 2 Digits)	

Voltage Sag and Surge Detection - Single Phase System (Manual Range)		
Range	15 ÷ 310V	30 ÷ 600V
Resolution (Voltage)	0.2V	0.4V
Input Impedance	300kΩ (phase-neutral)	300kΩ (phase-phase)
Resolution (time)	10ms (1/2 period)	
Accuracy (Voltage)	±(1.0% Reading + 2 Digit)	
Accuracy (rif 50Hz)(time)	±(1.0% Reading + 2 Digit)	

Current Measurement - Single Phase Systems (Auto Range)		
Range	0.005 ÷ 0.26V	0.26 ÷ 1V
Resolution	0.1V	0.4V
Accuracy	±(0.5% Reading + 2 Digit)	
Input Impedance	200kΩ	
Overload Protection	5V	

Cosφ Measurement - Single Phase System			
Cosφ	0.20	0.50	0.80
Accuracy in Degree	0.6°	0.7°	1.0°
Resolution	0.01 Digit		

VOLTAGE and Current Harmonic MEASUREMENT - Single Phase System			
Range	DC - 25H	26H - 33H	34H - 49H
Accuracy in Degree	5% + 2 Digits	10% + 2 Digits	15% + 2 Digits
Resolution	0.1V/0.1A		

Leakage Current Measurement	
Range	0.5 ÷ 999.9mA
Resolution	0.1mA

Model Specification

Standard Accessories	300 - 3000A Flex clamps (HTFLEX33DE) Test leads Earth test leads & spikes Power cable Power adaptor TA0050 (Also for T76) TOPVIEW2006 Software & cable RS232 Carry case Instruction manual Calibration certificate ISO9000
Dimensions (mm)	225(L) x 165(W) x 105(H)
Power Source	6 x 1,5 AA Batteries
Weight	1.7kg

POWER MEASUREMENT - Single Phase System (Auto Range)				
Active Power				
Range	0 ÷ 999.9W	1 ÷ 999.9W	1 ÷ 999.9MW	1000 ÷ 9999MW
Resolution	0.1W	0.1KW	0.1MW	1MW
Accuracy	±(1.0% Reading + 2 Digit)			
Reactive Power				
Range	0 ÷ 999.9VAR	1 ÷ 999.9VAR	1 ÷ 999.9VAR	1000 ÷ 9999MVAR
Resolution	0.1VAR	0.1KVAR	0.1MVAR	1MVAR
Accuracy	±(1.0% Reading + 2 Digit)			
Apparent Power				
Range	0 ÷ 999.9VA	1 ÷ 999.9kVA	1 ÷ 999.9MVA	1000 ÷ 9999MVA
Resolution	0.1VA	0.1kVA	0.1MVA	1MVA
Accuracy	±(1.0% Reading + 2 Digit)			
Active Energy (Classe2 en61036)				
Range	0 ÷ 999.9Wh	1 ÷ 999.9kWh	1 ÷ 999.9MWh	1000 ÷ 9999MWh
Resolution	0.1Wh	0.1kWh	0.1MWh	1MWh
Accuracy	±(1.0% Reading + 2 Digit)			
Reactive Energy (classes3 IEC1268)				
Range	0 ÷ 999.9VARh	1 ÷ 999.9VARh	1 ÷ 999.9VARh	1000 ÷ 9999VARh
Resolution	0.1VARh	0.1kVARh	0.1MVARh	1MVARh
Accuracy	±(1.0% Reading + 2 Digit)			
ENVIRONMENTAL Parameter Measurement				
Range	-20° -80°C	0 ÷ 100% UR	0.001Lux ÷ 20.00Lux	0.1Lux ÷ 2000Lux
Resolution	0.1°C	0.1% UR	0.001 ÷ 0.02 Lux	0.1 ÷ 20 Lux
Accuracy	±(2% Reading + 2 Digit)			

MACROG3 (23kA L-N) (40kA L-L)

MACROTEST G3 is an innovative multifunction installation tester capable of carrying out safety tests on civil and industrial electric systems in compliance with IEC/EN61557-1. Its resistive TFT color touch-screen display, icon menu, 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. The multifunction installation tester MACROTEST G3 allows saving all measures into an internal memory so transferring the saved data to a PC by means of USB (provided as standard) or built in Wi-Fi interfaces with an iOS and Android smartphones or tablets. The software supplied among standard accessories allows printing testing reports. The multifunction installation tester MACROTESTG3 also drives the optional accessory IMP57 to carry out high resolution (0.1mOhm) 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, I_{2t} relative to breakers (MCB) with curves B, C, D, K and fuses type gG as well as aM and the percentage voltage drop on the main power lines. The test on earth leakage relay testers RCDs up to 10A (with optional accessory RCDX10) is also possible with the instrument. Through optional clamp model HT96U it is possible to measure the leakage current. The multi function installation tester MACROTESTG3 has as 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
- Test on earth leakage relay RCDs (with RCDX10 optional accessory)
- 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
- Voltage drop on main power lines
- Power analysis, harmonic analysis up to 25th harmonic
- 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
- Built-in Wi-Fi interface to connect to iOS and Android devices
- Rechargeable NiMH batteries (external battery charger)

Model Specifications

Power supply:	6x1.2V type AA rechargeable batteries 6x1.5V type AA alkaline batteries
Display:	TFT, color, 320x240mm, with touchscreen 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

Standard

- 3 Terminal cable with SHUKO plug
- Set of 4 cables + 4 alligator clips + 2 test leads
- **TEARTHKIT** - Set of 4 cables + 4 metal earth probes
- Carrying bag
- **TOPVIEW2006** - Windows software + optical/USB cable
- **PR400** - Switch probe
- 1.2V NiMH rechargeable batteries type AA, 6pcs
- External battery charger
- ISO9000 calibration certificate

Application video



<http://www.hellermannnyton.co.za/downloads.html>



OPTIONAL ACCESSORIES



T2100 - Earth ground clamp meter

T53 Compliance / 3 Phase Power Analyser (23kA L-N) (40kA L-L)

- TRMS voltage value
- TRMS current value with clamp adaptors
- Voltage frequency
- Harmonic analysis of voltages and currents up to the 49th harmonic
- Voltage changes beyond the set thresholds (voltage sags and surges) with minimum resolution 10ms
- Active power
- Reactive power
- Apparent power
- Active energy
- Reactive energy
- Cosφ
- Storing and recording of measured quantities

Recording autonomy higher than one month with 64 quantities and IP =15 minutes

Memory: 2Mb

Functions

- Tests on low voltage electrical installations
- Power quality measurement and analysis
- Network disturbances
- Measurement and analysis of environmental parameters



Includes:
TOPVIEW2006 - C2006
USB Cable and Software



CAT III
600V
IEC61010-1

Meter
Supplied With
Calibration
Certificate

Model Specification

Standard Accessories	3 x 300 - 3000A Flex clamps Test leads Earth test leads & spikes Power cable T0050 Power adaptor TOPVIEW2006 Software & cable RS232 Carry case Instruction manual Calibration certificate ISO9000
Dimensions (mm)	225(L) x 165(W) x 105(H)
Power Source	6 x 1,5 AA Batteries
Weight	1.7kg

Technical Specification

Continuity Test on Protective Conductors		Measurement of Earth Resistance and Ground Resistivity	
DC Open Circuit test voltage	> 4 < 24V	Measurement of earth resistance with 4 auxiliary earth rods	0.01 ~ 1999Ω
Test Current	0.2A	Measurement of ground resistivity with 4 earth rods (Wenner Method)	0.01Ω ~ 199.9kΩ
Basic Accuracy	± 2%	Base Accuracy	±2%
Measuring Range	0.01 ÷ 99.9Ω	Measurement of earth resistance from the plug of a TT electrical plant with voltage drop	
Compensation of test cable resistance			
Insulation Resistance Measurement		Phase Sequence Indication	
Test Voltage	50, 100, 250, 500, 1000VDC	Voltage	100 ~ 400V
Measuring Range	0.01 ÷ 99.99MΩ for 50VDC test voltage 0.01 ÷ 199.99MΩ for 100VDC test voltage 0.01 ÷ 499MΩ for 250VDC test voltage 0.01 ÷ 999MΩ for 500VDC test voltage 0.01 ÷ 1999MΩ for 1000VDC test voltage	Direct Measurement of Leakage Current to the Earth	
Base Accuracy	±2%	With Clamp on meter in the range	0 ~ 1A
		Accuracy	±2%
		Tests on Electrical Installations in Medical Rooms	
		Continuity Test on Protective Conductors	
Test of Tripping Time and Current on RCD's (Type A, Ac, General and Selective)		AC Open circuit test voltage	>4 <12V
Tripping Current	10-30-100-300-500mA	Test Current	10A
Tripping Current Ramp	0.5 ~ 1.4 IΔn for type AC 0.5 ~ 2.0 IΔn for type A	Accuracy	±2%
Tripping Time Measurement	1/2 IΔn - IΔn - 2IΔn - 5IΔn & automatic	Measuring range	0.001 ~ 0.999Ω
Base Accuracy	± 5%	4-Wire Measurement	
		Power Quality Analysis According to EN50160	
Measurement of Line and Fault Loop Impedance with Calculation of Prospected Short Circuit Current and Co-Ordination Test of RCDs in TN Systems		The instruments, suitable for measurement on single-phase and three-phase systems with and without neutral, both for balanced and unbalanced loads, indicate the following rated values:	
Measuring range for line impedance phase to phase to neutral	0.01 ~ 199.9Ω	Measurable Voltage	Up to 600V
Measuring range for loop impedance phase to earth	0.01 ~ 1999Ω	Current with clamp-on meters, output	1V
Indication of measured values of Zs, Isc		Frequency	50 ~ 60Hz
Base Accuracy	±5%	Basic Accuracy (Instrument)	±0.5%
Possibility of effecting measurement of fault loop phase to earth without causing RCD tripping		Basic Accuracy (transient)	±1%
		Measurement Selection	
Test of Environmental Parameters (Optional)		The selection of the quality or type of measurement is made by rotating a switch and pressing selection keys	
Measurement and recording of temperature with an adaptor			
Measurement and recording of humidity with an adaptor		Management Software	
Measurement and recording of air speed with an adaptor		The management software is compatible with Microsoft Windows	
Measurement and recording of lux with an adaptor		Operating system: Windows 95/98, Windows NT and Windows 2000	
Measurement and recording of noise and Leq with an adaptor (dB) Type 1			