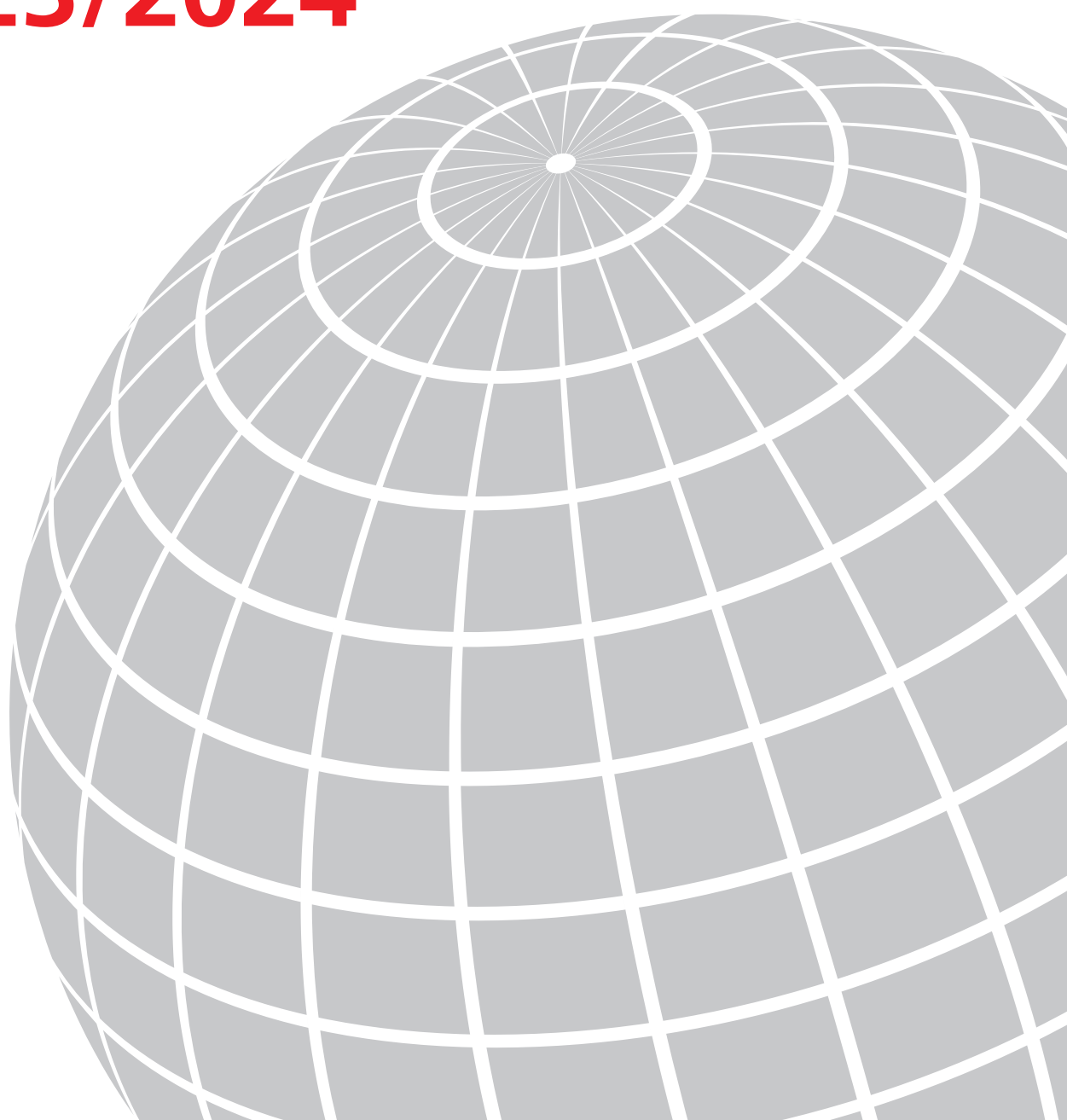


HellermannTyton

Catalogue: **Tools and Instruments** **2023/2024**



Interesting Facts



4 800 m²

Total manufacturing area



8 300m²

Total Warehouse area



9

Number of independent production processes



1 400 tons

Annual volume of plastic raw material converted



>800 million

Annual volume of products produced



22

Number of injection moulding machines



7

Number of plastic extrusion machines



4 tons

Maximum mould handling capacity



12

Number of CNC machining centres



6 500

Number of stocked SKU's



IATF

Accredited

NOTE: Some images and technical specifications may differ from what is included in this catalogue.

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MADE FOR REAL[®]

Global Leader combined with Local Strength

HellermannTyton is a leading global supplier of engineered cable management solutions, electrician tools and test instruments. We offer a comprehensive product basket that can be used in the most basic electrical installation to the technically advanced aeronautical and automotive industries.

We are a local BBBEE compliant manufacturer, operating to IATF 16949 2016 quality management and the ISO 14001 environmental management standards, committed to producing quality products and customised engineered plastic injection moulded solutions.

Locally, we have more than 50 years of experience and knowledge, from product development to complete systems solution tailored to your requirements.



Linbro Business Park, Johannesburg

HellermannTyton has stocking branch offices in Johannesburg, Durban, Cape Town and Port Elizabeth and distributors throughout Southern Africa. Whether selecting the right product for your application, to discussing optimal product design or customised manufacturing, our knowledgeable sales and engineering team is available to assist.



Cape Town



Durban



Gqeberha (Port Elizabeth)

We are committed to training and development, not only of our staff, but also the electrical industry. The HellermannTyton Training Academy confirms our continued investment in our future and to promote a culture of lifelong learning. The vision of the HellermannTyton Academy around the globe is to provide practical, measurable and identified training to truly make a difference to staff and our customers.



The training encompasses both theoretical and practical applications including videos to upskill and gain a better understanding of the electrical environment we work in and has been accepted by ESKOM as an entry level requirement for site staff.

Your Partner of Choice!

Our extensive product range includes electrical cable management solutions, interconnection components, test instruments and tools. Furthermore our range of products can be used in the harshest and most hazardous conditions to basic every-day applications. All are tested and approved to the relevant local standards and where these standards do not exist to the relevant international standard applicable for the product. We are also a proud member of SAFEHouse; a self-regulating industry association ensuring the customer that it's affiliated members will always deliver a safe, quality product.



Cable Ties and Fixings

Our vast range of high performing cable ties and fixings, provides system solutions which can meet practically any challenge, even in extreme conditions. Safety and quality are synonymous with HellermannTyton cable ties, whether nylon or stainless steel, they all meet the highest international test standard.



Heat Shrink

Heat shrink is used to insulate electrical cables and wires, and to protect them from mechanical, chemical environmental and electrical influences. With a wide range of heat shrink products in different materials, colours, sizes, wall-thicknesses and shrink ratios (2:1 to 4:1) HellermannTyton offers the right product for every application.



Cable Protection

From excellent flexibility, to high flame-retardant properties to exceptional mechanical protection, HellermannTyton guarantees the highest quality and safety in all our cable protection products.

Our cable protection products range from high quality plastic and metal cable protection conduits through spiral binding, braided sleeving to re-sealable and therefore reusable protective tubing.



Electrical Installations and Accessories

To assist electricians and engineers make their work safer and more efficient, we are constantly developing practical and durable solutions for electrical installations.

Cable Accessories include grommet strips, edge protection grommets, din rail, connector strips, a range of wire connectors, line taps and electrical wall boxes



Identification Systems

Whether it is cable and wire labelling, asset identification, or security labelling, from indoor to extreme weather conditions, we offer first class products to match these requirements.



Crimping Terminals

We offer a full range of SABS approved cable lugs complimented by a range of mechanical or hydraulic crimping tools to ensure safe electrical cable connections.



Test Instruments

Our test instrument range is designed to ensure accuracy, precision, repeat performance and longevity. Our vast selection of instruments includes the most basic multi-meter, to technically advanced photovoltaic instruments. We continuously include the latest technology to save time without compromising the results. On selected instruments we offer a lifetime warranty.



Electricians Tools

The selection of the correct tools for the different application is paramount to the safety of all. Understanding the different applications from general and industrial through to high voltage, we have the best-fit solution for all applications. Most tools are covered by a lifetime warranty.



Network Connectivity

We are an established and innovative leader in the provision of global network infrastructure solutions, from structured cabling products, fibre enclosures and fibre management options, including Integrated Routing System, to FTTX applications.



Customised Solutions

We continuously invest in new technology which embraces new challenges to solve our customers' needs. Our local engineering team considers a host of variables relative to productivity, function, performance, compliance and value.

Balance of System Solutions

Understanding your needs to ensure fit for purpose solutions whether it is green fields, balance of plant or individual products, we are your partner of choice. Based on customer requirements, we offer an integrated approach to customised design and assembly of products according to international standards such as IATF, IEC and ISO as well as local requirements.

Investing in customised system solutions from HellermannTyton, can make a huge difference in performance and life of system costs, which greatly enhances your personnel health and safety, bottom line and reputation.

We Serve Your Industry

From strength to weight reduction through to health and safety – we understand that every industry has its own unique demands. With our global network of specialist and know-how, we develop tailor-made solutions for different markets and industries, even under extreme conditions. HellermannTyton is your one-stop-shop - from in-house product design to development and manufacturing, you can count on us. Applying the latest cutting edge design applications and software modelling techniques, our team, uses state-of-the-art CNC machine tools, plastic injection moulding machines, extrusion machines and printing equipment to produce world class products in compliance with international quality standards.

Our mission is to provide innovative solutions with customer satisfaction as our first priority. We are committed to being the customer's partner of choice through our offering of an extensive range of quality products backed by exceptional service.



Automotive



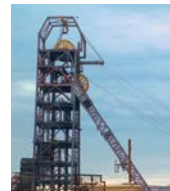
Aviation & Defence



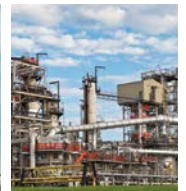
Construction



Food and Beverage



Mining



Petrochemical



Rail



Renewable Energy

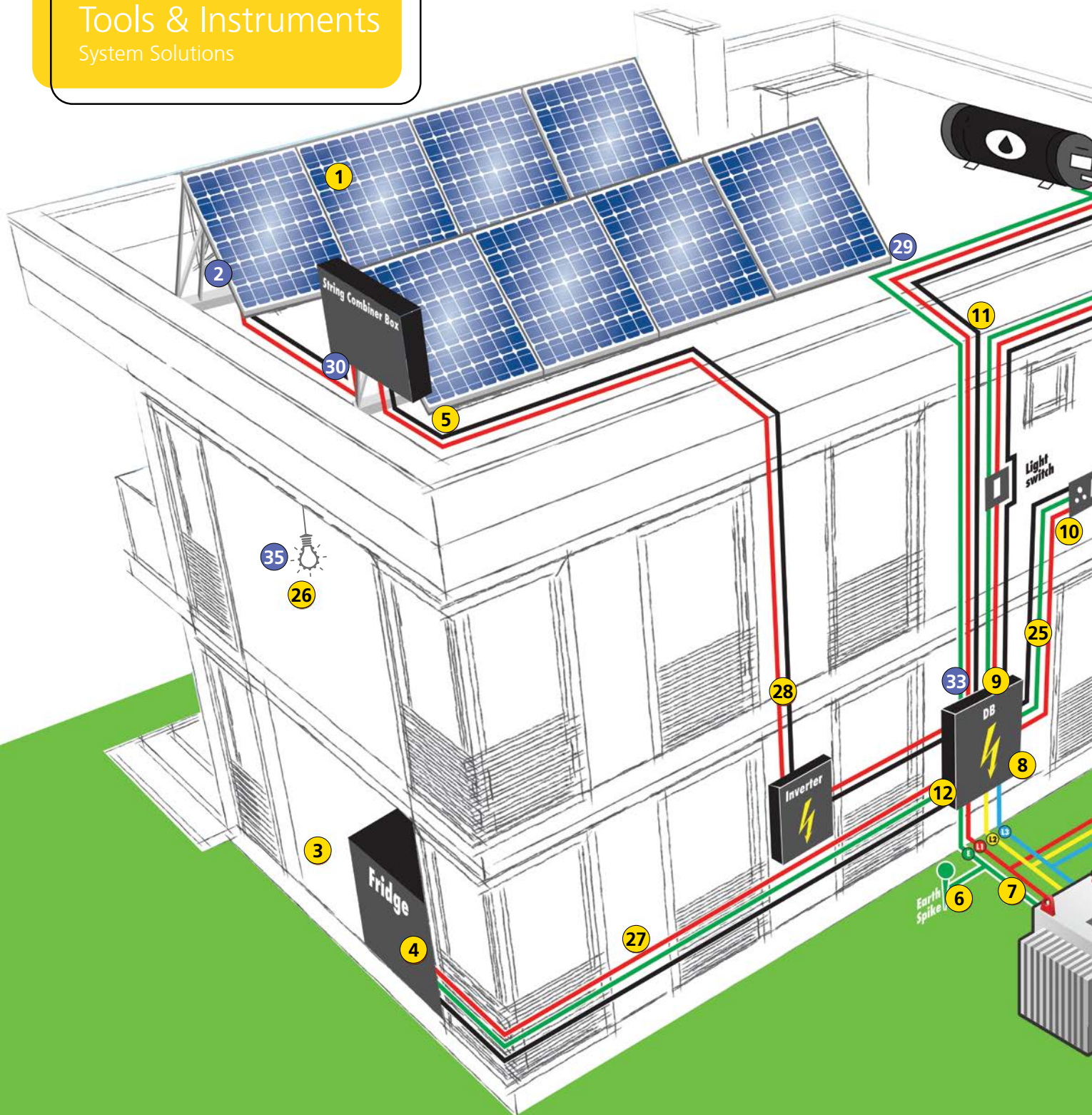


Telecommunications

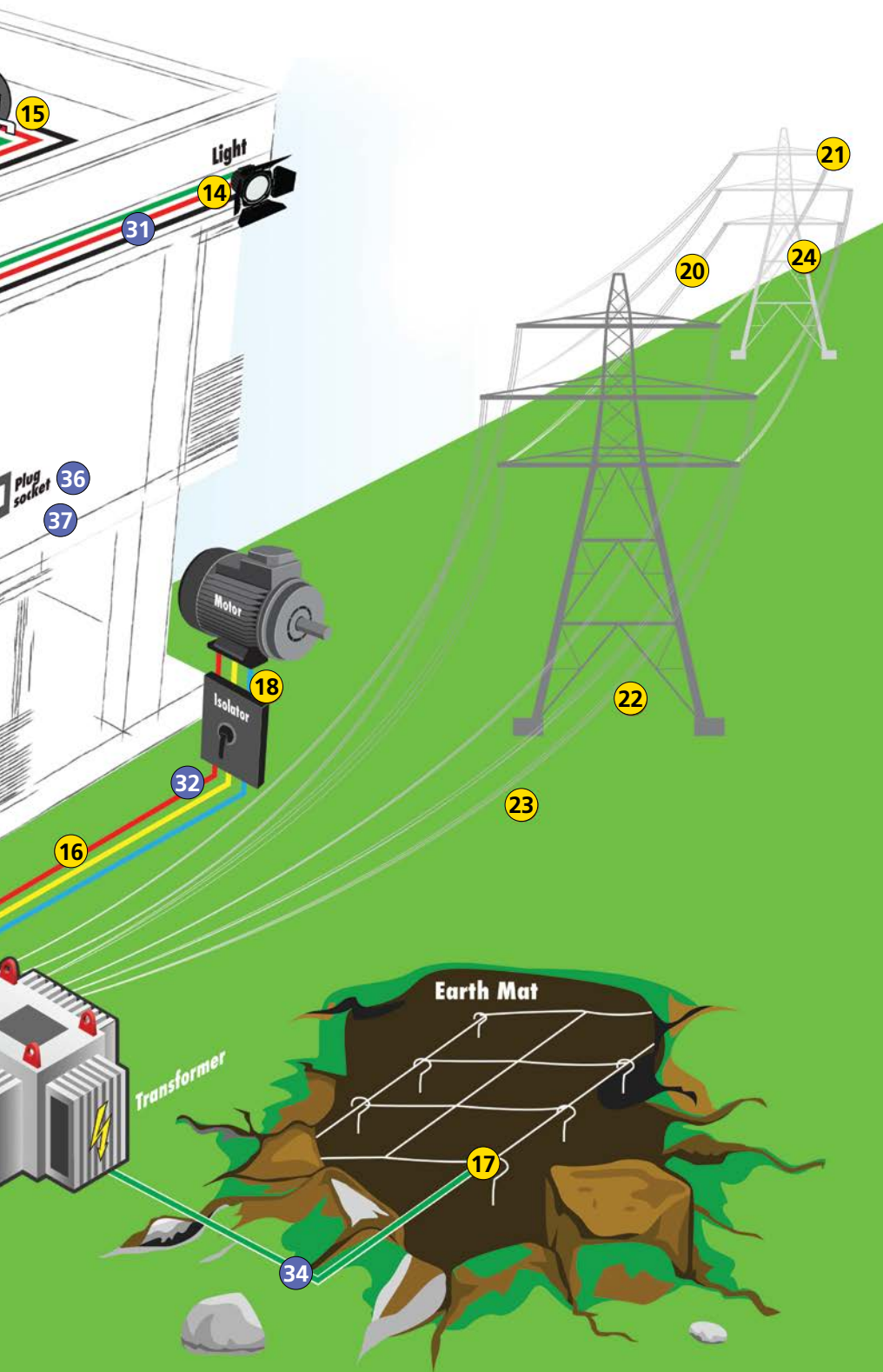
Global Footprint

HellermannTyton South Africa is a subsidiary of the HellermannTyton Group which operates globally in 39 countries, employs over 4000 people and generates revenue in excess of 700 million Euro.





- | | |
|---|--|
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| ⑦ TIMP57: Line Loop Adapter - P46 | ⑳ THS25F: Link Stick - P58 |
| ⑨ TBM197: Clamp Meter - P26 | ㉑ T175HP: High Voltage Tester - P57 |
| ⑩ TEL2TLB :ELCB and Polarity Testers - P49 or
TSP1A: Surge Protection Plug – P52 | ㉒ THVD: High Voltage Tester - P60 |
| ⑪ TLVD17: Voltage Tester - P54 | ㉓ T77N: Clamp Meter - P21 |
| ⑫ T60: Compliance Tester - P31 | ㉔ WIBRE1000: Voltage Tester - P55 |
| ⑬ CAT4PLUS: Cable Route Tracer - P61 | ㉕ INSSET: Insulated Screwdriver Set 1000V - P128 |
| | ⑳ RCS0425: Rotary Stripper - P121 |



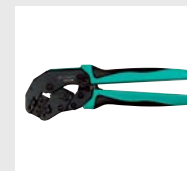
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- 32 HCP200: Electrician's Pliers 1000V - P120
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- 35 TCT8KT: Tungsten Holesaw Kit: 8 Piece - P125
- 36 TP200K: Cordless Soldering Iron Kit: 3-in-1 - P136
- 37 HL1821S: Steinel Heat Gun - P141



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14 T630
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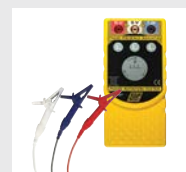
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18 T887
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INSTRUMENT	NEPTUNE	JUPITER	MAC-ROG3	T1805	T1120	T1820	T2000	T1800	T1832	T1151	T1851	T1825
PAGE NO.	13	13	29	36	37	37	38	41	41	42	42	45
Continuity of bonding	•	•	•					•	•	•	•	
Resistance of earth continuity conductor	•	•	•					•	•	•	•	
Continuity of ring circuits (if applicable)	•	•	•					•	•	•	•	
Earth loop impedance test: at main switch		•	•									•
Prospective short-circuit current at point of control (PSCC) for sub-distribution boards		•	•									•
Elevated voltage between incoming neutral and external earth	•	•	•						•+	•		
Earth resistance at electrode (if required)			•	•	•	•	•					
Insulation resistance	•		•					•	•	•	•	
Voltage at main distribution board with no load for each phase to neutral	•	•	•						•	•		•
Voltage at main distribution board with load (as calculated for full load) for each phase	•	•	•									•
Voltage at available load (worst condition as calculated for full load) for each phase to neutral	•	•	•									•
Operation of earth leakage units		•	•									
Polarity of points of consumption	•	•	•									•
Phase rotation at points of consumption for three-phase systems	•	•	•									
All switching devices, make-and-break circuits	•	•	•					•	•	•	•	

+ Indication only

NOTE:

Testing of operation of earth leakage test button, no instrument is required. The above is only a guide as many other instruments can be used.



All these instruments are used for SANS10142 testing



T416	T60	T70	T860	T890	TBM 076	TBM 079	TBM 3030	TBM 812	TBM 878	TEL11	TEL28	TEL2 TLB
36	31	51	50	49	19	22	19	10	12	48	48	49
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All these instruments are used for SANS10142 testing



FEATURES	T820	T835	T1300H	T235H	T48	T85D	IRONMETER
PAGE NO.	7	7	7	7	7	8	8
LCD Display (Counts)	1 999	1 999	1 999	1 999	1 999	5 999	4 000
LCD Display (Digits)	3½	3½	3½	3½	3½	3⅚	4
TRUE RMS							
Transistor HFE			•		•		
Logic					•		
Max AC Voltage (V)	600	600	500	750	750	600	600
Max DC Voltage (V)	600	600	500	1 000	1 000	600	600
Max AC Current (A)				20	20	10	10
Max DC Current (A)	10	10	10	20	20	10	10
Max Resistance (Ω)	20M	20M	200M	200M	200M	60M	40M
Continuity Beeper	•		•	•	•		•
Diode Test	•		•	•	•	•	•
Autoranging							•
Frequency (Hz)		20KHZ			200K	40~1KHZ	10K
Capacitance (F)				200μ	200μ	600μ	400μ
Temperature (°C)		1 000		1 000	1 000	40	
MIN/MAX Display							•
Data Hold	•	•	•	•	•		
Crest (Peak hold)							
Backlight			•		•		•
Splash and Dust Proof							
Transient Proof (kV)							
Relative Reference							
Bar Graph							
Auto Power Off		•		•			
USB Interface							
Data Logger							
EF Detect							
Safety Category				 	 		
Intrinsically Safe							
Dual Display							
Fuse: mA Rating	250mA 250V	250mA 250V	250mA 250V	250mA 250V	250mA 250V		
Fuse Size (mm)	5 x 20	5 x 20	5 x 20	5 x 20	5 x 20		
Fuse: A Rating					12A 250V		
Fuse: Size (mm)					5 x 20		
IP Rating							
Lifetime Warranty							
Dimensions (mm) LxWxH	138 x 72 x 35	150 x 73 x 35	150 x 73 x 35	190 x 88 x 27	189 x 97 x 35		120 x 65 x 45
Weight (g)	150	156	156	320	400		200



FLASHMETER	TBM805	TBM252	TBM239R	TBM525	TBM812	TBM869	TBM812XEX	T64	TBM319	TBM878	NEPTUNE	JUPITER	MERCURY	TBM27	TBM789
8	9	9	9	10	10	10	11	11	12	12	13	13	14	14	15
4 000	4 000	6 000	6 000	10 000	10 000	500 000	10 000	6 000	6 000	6 000	9 999	9 999	6 000	6 000	60 000
4	3 ³ / ₄	3 ⁵ / ₆	3 ⁵ / ₆	3 ⁹ / ₁₀	3 ⁹ / ₁₀	5 ⁴ / ₅	3 ⁹ / ₁₀	4 ¹ / ₂	3 ⁵ / ₆	3 ⁵ / ₆	4	4	3 ⁵ / ₆	3 ⁵ / ₆	
						•			•	•					
600	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000			1 000	600	1 000
600	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	1 000	999.9	690	1 000	600	1 000
	10	8	10	10	10	10	10	10	10	10	3 000M	3 000	10	2 000µA	10
	10	8	10	10	10	10	10	10	10	10		199.9	10	2 000µA	10
400	40M	60M	60M	60M	60M	60M	60M	60M	60M	60M	1 999		60M	6M	60M
	•	•	•	•	•	•	•	•	•	•		•		•	•
	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	1M	1M	50K	1M	1M	1M	1M	1M	1k	5k	999.9	999.9	10M	10 to 30k	50kHz - 1MHz
	3 000µ	3 000µ	2 000µ	25m	20m	25m	20m	20m	200µ	30m			6000µ	2 000µ	10.00mf
	300	1 000	400	1 000		1 000		1 350	1 000	1 000			1 000		1 000
	MAX	•	•	•		•		•	•	•	•	•	•		•
	•	•	•	•	•	•	•	•	•	•	•	•	•		•
				•		•					•	•	•		•
•	•			•		•		•	•	•		•	•		•
		•	•	•	•	•	•	•	•	•			•		8kv
	6.5	6.0	6.0	12	12	12	12	12	12	12					•
	•	•	•	•	•	•	•	•	•	•					•
		•		•	•	•	•	•	•	•	•	•		•	•
	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		•		•	•	•	•	•							•
				•									•		
•		•	•											•	
				•	•	•	•	•	•	•					
		630mA 500V		44mA 1 000V	1A 600V	44mA 1 000V	44mA 1 000V		630mA 500V	630mA 500V					
		6 x 32		10 x 37	10 x 38	10 x 38	10 x 38	x 35	6 x 32	6 x 32					
		10A 600V	11A 1 000V	11A 1 000V	10A 600V	11A 1 000V	11A 1 000V		6.3A 500V	6.3A 500V					10A 600V
	6 x 25	10 x 38	6 x 38	6 x 38	6 x 38	10 x 38	6 x 38		6 x 38	6 x 38					6 x 38
IP67				IP54	IP54	IP54	IP54				IP40	IP40	IP65		
140 x 75 x 40	189 x 97 x 55	161 x 80 x 50	161 x 80 x 50	198 x 97 x 55	208 x 103 x 64.5	208 x 103 x 64	208 x 103 x 64.5	190 x 94 x 48	160 x 80 x 50	208 x 103 x 64	175 x 85 x 55	175 x 85 x 55	190 x 75 x 55	113 x 53 x 10.2	193 x 89 x 51
220	396	340	334	430	635	635	635	460	340	635	420	420	555	78	365



T820

- Continuity test
- Diode test
- Large LCD display
- Low battery indication
- Sampling rate 3 times/s

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	200mV/ 2/ 20/ 200/ 600V	±0.5% + 4 Digit
AC Voltage (V)	200/ 600V	±1.2% + 10 Digit
DC Current (A)	20µA/200µA/ 2mA/ 20mA/ 200mA/ 10A	±1.5% + 3 Digit
Resistance (Ω)	200/ 2kΩ/ 20kΩ/ 200kΩ/ 20MΩ	±0.8% + 5 Digit
AC Frequency Response (Hz)	40-400Hz	
Input Impedance(Ω)	10MΩ	
Display	3½ Digits	1 999 Counts

Model Specification

Power Source	1 x 9V Battery
Standard Accessories	Test Leads



T235H

- Capacitance
- Transistor test
- Data Hold
- Non-contact voltage EF detection (NCV)
- Auto Power Off
- Backlight
- Temperature
- Torch

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	200mV/ 2/ 20/ 200/ 1000V	±0.5% + 3 Digit
AC Voltage (V)	2/ 20/ 750V	±1.2% + 10 Digit
DC Current (A)	20µA/ 2µA/ 20mA/ 200mA/ 20A	±0.8% + 3 Digit
AC Current (A)	20mA/ 200mA/ 20A	±2.0% + 5 Digit
Resistance (Ω)	2kΩ/ 20kΩ/ 200kΩ/ 200/ 2MΩ/ 20MΩ	±1.2% + 4 Digit
AC Frequency Response	40 - 400Hz	
Temperature (°C)	-20 to +1000°C	±0.8% + 4 Digi
Input Impedance	10MΩ	
Capacitance (F)	2nF/ 20nF/ 200nF / 2000µF/ 20mF	±2.5 % + 20 Digit
Display	3½ Digits	1 999 Counts

Model Specification

Power Source	1 x 9V Battery
Standard Accessories	Temp Probe TBMTEMPPROBE , Test Leads, Instruction Manual



T1300H

- Diode test
- Continuity test
- Data Hold
- Backlight
- Capacitance test
- Auto power off
- Non-contact voltage EF detection (NCV)
- Torch

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	200mV/ 2/ 20/ 200/ 600V	±0.5% + 3 Digit
AC Voltage (V)	200/ 600V	±1.2% + 10 Digit
DC Current (A)	20mA/ 200mA/ 10A	±1.0% + 2 Digit
AC Current (A)	200mA/ 10A	±3.0% + 10 Digit
Capacitance (F)	20nF/ 200nF/ 2µF/ 20µF/ 200µF/ 2000µF	±5.0% + 10 Digit
Frequency (Hz)	10/ 100Hz/ 1kHz / 10kHz/ 100kHz/ 2mHz	±1.0% + 10 Digit
Resistance (Ω)	200/ 20kΩ/ 200kΩ/ 2MΩ	±2.5% + 5 Digit
Display	3½ Digits	1 999 Counts

Model Specification

Power Source	1 x 9V Battery
Standard Accessories	Test Leads



T48

- Capacitance
- Inductance
- Frequency
- hFE Function
- Backlight
- Temperature

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	200mV/ 2/ 20/ 200/ 1000V	±0.5% + 3 Digit
AC Voltage (V)	200mV/ 2/ 20/ 200/ 750V	±0.8% + 5 Digit
DC Current (A)	2mA/ 20mA/ 200mA/ 20A	±0.8% + 3 Digit
AC Current (A)	2mA/ 20mA/ 200mA/ 20A	±1.0% + 5 Digit
Inductance (H)	2mH/ 20mH/ 200mH/ 2/ 20H	±2.5% + 20 Digit
Resistance (Ω)	200/ 2kΩ/ 200kΩ/ 2M/ 20M/ 2000MΩ	±0.8% + 3 Digit
Frequency (Hz)	20K/ 200K/ 2000/ 10MHz	±0.5% + 4 Digit
Temperature (°C)	-20 to +1000°C	±1.0% + 4 Digit
Input Impedance	10MΩ	
Capacitance (F)	20nF/ 200nF/ 2µF/ 20µF/ 200µF	±2.5% +20 Digit
Display	3½ Digits	1 999 Counts

Model Specification

Power Source	1 x 9V Battery
Standard Accessories	Temp Probe TBMTEMPPROBE , Test Leads



T835

- Continuity test
- Diode test
- Data Hold
- Backlight
- Temperature
- Auto power off
- Non-contact voltage EF detection (NCV)
- Torch

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	200mV/ 2/ 20/ 200/ 500V	±0.5% + 2 Digit
AC Voltage (V)	200/ 500V	±1.2% + 10 Digit
DC Current (A)	200mA/ 2mA/ 20mA/ 200mA/ 10A	±1.0% + 2 Digit
Resistance (Ω)	200/ 2kΩ/ 20kΩ/ 200kΩ/ 20MΩ	±0.8% + 5 Digit
Temperature (°C)	-20 to +1000°C	±1.0% + 3 Digit
Display	3½ Digits	1 999 Counts

Model Specification

Power Source	1 x 9V Battery
Standard Accessories	Temp Probe TBMTEMPPROBE , Test Leads



T85D

- LCD digital display
- Full intelligent automatic range
- Diode & Capacitance test
- Flashlight
- Firewire recognition
- Backlight
- Non-contact EF detection (NCV)

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	6/ 60/ 600V	±1.0% + 10 Digit
AC Voltage (V)	6/ 60/ 600V	±1.2% + 10 Digit
DC Current (A)	600mA/ 6A/ 10A	±2.0% + 5 Digit
AC Current (A)	600mA/ 6A/ 10A	±3.0% + 10 Digit
Resistance (Ω)	600Ω/ 6kΩ/ 60kΩ/ 600kΩ/ 6MΩ/ 60MΩ/	±2.0% + 5 Digit
Temperature (°C)	0 to +40°C <75%RH	
Capacitance (F)	60nF/ 600nF/ 6µF/ 60µF/ 600µF/ 6mF/ 60mF	±2.0% +4 Digit
Frequency response (Hz)	40 - 1KHz	
Display	3½ Digits	5 999 Counts

Model Specification

Power Source	2 x 1.5V AAA Battery
Standard Accessories	Test Leads, User manual
Dimensions (mm)	146(L) x 72(W) x 50(H)
Weight (g)	210
Certificates	IEC61010-1

IRONMETER - TRMS AC/DC Unbreakable

- Integrated LED flashlight
- Automatic polarity indication
- "OL" over-range indication
- Diode and Continuity Test
- MAX/MIN Hold
- Autoranging
- Backlight
- Double insulation



Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	400mV/ 4/ 40/ 600V	±1.0% +3 Digit
AC Voltage (V)	4/ 40/ 400/ 600V	±1.0% +3 Digit
DC Current (A)	400µA/ 4000µA/ 40mA/ 400mA/ 4/ 10A	±1.2% +3 Digit
AC Current (A)	400µA/ 4000µA/ 40mA/ 400mA/ 4/ 10A	±1.2% +3 Digit
Resistance (Ω)	400/ 4kΩ/ 40kΩ/ 400kΩ/ 4MΩ/ 40MΩ	±1.5% +5 Digit
Frequency (Hz)	10Hz – 10kHz	±1.2%
Capacitance (F)	40nF/ 400nF	±4.5% +10 Digit
	4µF/ 40µF	±3.0% +5 Digit
	400µF/ 4000µF	±5.0% +5 Digit
Display	4 Digits	4 000 Counts



CAT III 600V

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Test Leads, Transport Bag and User Manual
Certificates	IEC/EN61010-1, EMC: IEC/EN61326-1

FLASHMETER – Unbreakable and Water Resistant

- Automatic measurement selection
- Detects AC Voltage without contact (NCV)
- Automatic polarity indication
- "OL" over-range indication
- Integrated white light illuminator
- Auto Hold
- Backlight



IP67

CAT IV 600V

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	400/ 600V	±1.0% +5 Digit
AC Voltage (V)	400/ 600V	±1.0% +5 Digit
Resistance (Ω)	40/ 400Ω	±2.0% +18 Digit
	4kΩ/ 40kΩ/ 400kΩ	±2.0% +10 Digit
Display	4 Digits	4 000 counts

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Test Leads, Transport Bag and User Manual
Certificates	IP67, EMC 2014/30/EU, EMC: IEC/EN61326, IEC/EN61010-1, LVD 2014/35/EU

T921

- Auto Range
- Integrated test leads
- Auto off function
- Shock Proof case
- Data hold
- Diode test / continuity buzzer
- Low battery indication
- Duty cycle measurement
- Compact Pocket DMM



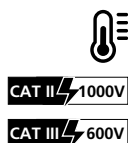
CAT II 600V

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	200mV/2v/20v/200v/600v 400mv/4v/40v/400v/600v	± 0.5% + 4
AC Voltage (V)	200/600v 400mv/4v/40v/400v/600v	± 0.8% +4
DC Current (A)	20uA/200uA/2mA/20mA/200mA/10A	
Resistance (Ω)	400Ω/2kΩ/20kΩ/200kΩ/20mΩ 400Ω/4kΩ/40kΩ/400kΩ/4mΩ/40mΩ	± 0.8% +4
Capacitance (F)	4nF/40nF/400nF/4uF/40uF/2000uF	± 3.5%+8
Frequency response (Hz)	100Hz/1000Hz/10kHz/100kHz/1MHz/10MHz	± 0.5% +4

Model Specification

Power Source	2 x AAA
Standard Accessories	Integrated test leads
Certificates	CE

**TBM805**

- Beep-Jack™ warning
- Data Hold
- Frequency
- Capacitance
- MAX/MIN Hold
- Relative zero
- Rugged Construction

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	400mV/ 4/ 40/ 400/ 1000V	±1.0% + 4 Digit
AC Voltage (V)	400mV/ 4/ 40/ 400/ 1000V	4 -400V ±1.5% + 5 Digit, 1000V ±4.0% + 5 Digit
DC Current (A)	400μA/ 4000μA/ 40mA/ 400mA/ 4/ 10A	±1.2% + 3 Digit
AC Current (A)	400μA/ 4000μA/ 40mA/ 400mA/ 4/ 10A	±1.8% + 4 Digit
Resistance (Ω)	400/ 4kΩ/ 40kΩ/ 400kΩ/ 4MΩ/ 40MΩ	±2.0% + 4 Digit
Temperature (°C)	-20 to +300°C	±2.0% + 3°C
Capacitance (F)	500nF/ 5μF/ 50μF/ 500μF/ 3000μF	±3.5% + 6 Digit
Frequency (Hz)	50/ 500/ 5kHz/ 50kHz/ 500kHz/ 1MHz	±0.5% + 4 Digit
Display	3 ¹ / ₄ Digits	4 000 Counts

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Temp Probe TBMTEMPPROBE , Test Leads
Certificates	UL, IEC61010-1, Certificate of Conformance

**TBM252**

- USB Interface
- Non-contact EF detection (NCV)
- Frequency
- Separate battery compartment
- Capacitance
- Beep-Jack™ warning

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	60mV/ 600mV/ 6/ 60/ 600/ 1000V	±0.2% + 3 Digit
AC Voltage (V)	60mV/ 600mV/ 6/ 60/ 600/ 1000V	±1.0% + 5 Digit
DC Current (A)	600μA/ 6000μA/ 60mA/ 600mA/ 6/ 8A	±0.5% + 3 Digit
AC Current (A)	600μA/ 6000μA/ 60mA/ 600mA/ 6/ 8A	±1.0% + 3 Digit
Resistance (Ω)	600/ 6kΩ/ 60kΩ/ 600kΩ/ 6MΩ/ 60MΩ	±0.5% + 4 Digit
Temperature (°C)	-50 to +1000°C	±0.3% + 3 Digit
Capacitance (F)	60nF/ 600nF/ 6μF/ 60μF/ 600μF/ 3 000μF	±1.5% + 5 Digit
Frequency (Hz)	5Hz - 1MHz	±0.003% + 2 Digit
Display	3 ¹ / ₄ Digits	6 000 Counts

Model Specification

Power Source	1.5V AAA Battery
Standard Accessories	Temp Probe TBMTEMPPROBE , Test Leads
Optional Accessories	USB Cable and Software TBU20X (P16), USB Adaptor (P16)
Certificates	UL, IEC61010-1, Certificate of Conformance

**TBM239R**

- 3-Phase rotation
- VFD V Hz
- Hz of line level voltage
- Beep-Jack™ warning
- Non-contact EF detection (NCV)
- Temperature

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	60mV/ 600mV/ 6/ 60/ 600/ 1000V	0.03% + 2 Digit
AC Voltage (V)	6V/ 60V/ 600V/ 1000V	0.7% + 3 Digit
DC Current (A)	200μA/ 2000μA/ 6A/ 10A	0.7% + 3 Digit
AC Current (A)	200μA/ 2000μA/ 6A/ 10A	1.0% + 3 Digit
Resistance (Ω)	600Ω - 60MΩ	0.3% + 3 Digit
Temperature (°C)	-40 to +400°C	1.0% + 1°C
Capacitance (F)	2 000nF/ 20μF/ 200μF/ 2 000μF	1.5% + 2 Digit
Frequency (Hz)	10Hz - 50KHz	0.03% + 2 Digit
VDF ACV	10Hz - 440Hz/ 600V/ 1000V	1.0% + 3 Digit - 10% + 3 Digit
Display	3 ¹ / ₄ Digits	6 000 Counts

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Temp Probe TBMTEMPPROBE , Test Leads, Crocodile Clips
Optional Accessories	Magnetic Hanger TBMH01
Certificates	EN6101-1/2-2-030/-2-033



TBM525

- Data logger (140 hours at 60s intervals)
- 87 000 Points single display mode
- 43 000 Points dual display mode
- Optional USB PC interface
- T2 Dual Type-K temperature readings

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	60mV/ 600mV/ 6/ 600/ 1000V	±0.08% + 2 Digit
AC Voltage (V)	60mV/ 600mV/ 6/ 600/ 1000V	±0.08% + 2 Digit
DC Current (A)	600μA/ 6000μA/ 60mA/ 600mA/ 6/ 10A	±0.8% + 6 Digit
AC Current (A)	600μA/ 6000μA/ 60mA/ 600mA/ 6/ 10A	±0.8% + 6 Digit
Resistance (Ω)	0.1Ω - 60MΩ	±0.8% + 10 Digit
Temperature (°C)	-50 to +1000°C	±0.3% + 2°C
Capacitance (F)	60nF/ 600nF/ 6μF/ 60μF/ 600μF/ 25mF	±5.0% + 5 Digit
Frequency (Hz)	5Hz to 1MHz	±0.004% + 4 Digit
Display	3 ¹ / ₁₀ Digits	10 000 Counts

Model Specification

Power Source	1 x 9V Battery
Standard Accessories	Temp Probe TBMTEMPPROBE , Test Leads
Optional Accessories	USB Cable and Software TBU86X (P16), Magnetic Hanger TBMH01
Certificates	IP54, UL, IEC61010-1, Certificate of Conformance



TBM869

- Crest mode
- Dual K-Type temperature inputs
- Capacitance
- Beep-Jack™ warning
- Duty cycle
- Dual display
- VFD

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	500mV/ 5/ 50/ 500/ 1000V	±0.02% + 2 Digit
AC Voltage (V)	500mV/ 5/ 50/ 500/ 1000V	±1.2% + 40 Digit (20Hz-45Hz)
DC Current (A)	500μA/ 5000μA/ 50mA/ 500mA/ 5/ 10A	±0.15% + 20 Digit (0.5% + 50 Digit at 500μA)
AC Current (A)	500μA/ 5000μA/ 50mA/ 500mA/ 5/ 10A	±0.5% + 50 Digit
Resistance (Ω)	500/ 5kΩ/ 50kΩ/ 500kΩ 5MΩ/ 50MΩ	±0.07% + 10 Digit
Temperature (°C)	-50 to +1000°C	±0.3% + 1.5°C
Capacitance (F)	50nF/ 500nF/ 5μF/ 500μF/ 25mF	±0.8% + 3 Digit
Frequency (Hz)	10Hz - 3kHz	±0.002% + 4 Digit
Line Logic	5Hz - 1MHz	±0.002% + 4 Digit
Display	5 ¹ / ₂ Digits	500 000 Counts

Model Specification

Power Source	1 x 9V Battery
Standard Accessories	K-Type Temp Probe TBMTEMPPROBE , Test Leads, Holster
Optional Accessories	USB Cable and Software TBU86X (P16)
Certificates	IP54, UL, IEC61010-1, Certificate of Conformance



TBM812

- General Purpose
- Splash/Drop proof
- 1 000V AC/DC
- Optional USB PC interface
- Backlight dual display
- 41 Segment analogue bar graph 60/s
- Audible and visual Beep-Jack™ warning

Technical Overview

Feature	Parameter	Accuracy	Protection
DC Voltage (V)	60mV/ 600mV/ 6/ 600/ 1000V	±0.08% + 2 Digit	1050Vrms, 1450V peak
AC Voltage (V)	60mV/ 600mV/ 6/ 600/ 1000V	±2.0% + 3 Digit	1050Vrms, 1450V peak
DC Current (A)	600μA/ 6000μA/ 6mA/ 600mA/ 6/ 10A	±0.2% + 4 Digit	0.44A/1000V Fuse (IR10kA) 11A/1000V Fuse (IR20kA)
AC Current (A)	600μA, 6000μA, 60mA, 600mA, 6/ 10A	±1.0% + 4 Digit	0.44A/1000V Fuse (IR10kA) 11A/1000V Fuse (IR20kA)
Resistance (Ω)	40.1Ω - 60MΩ	±1.5% + 5 Digit	1.2V DC open circuit
Capacitance (F)	60nF/ 600nF/ 6μF/ 60μF/ 600μF/ 20mF	±5.0% + 5 Digit	
Frequency (Hz)	5Hz - 1MHz	±0.5% + 4 Digit	
Transient Protection			12kV surge (1.2/50 μs) surge
Display	3 ¹ / ₁₀ Digits	10 000 Counts 6 000 Counts	AC/DC Voltage/ Hz/ nS mV/ μA/ A/ mA/ Ω/ F

Model Specification

Power Source	1 x 9V Battery
Optional Accessories	Test Leads, USB Cable and Software TBU86X , USB Adaptor (P16), Magnetic Hanger TBMH01
Certificates	UL, IEC61010-1 Ed:3.0, Certificate of Conformance, IP54



TBM812XEX – Intrinsically Safe

- Hazardous environment
- 1 000V AC/DC
- 1A/1kV (IR10kA) for μ A and mA (1000V HRC Fuse)
- 11A/1kV (IR20kA) for A (1000V HRC Fuse)
- Backlight dual display
- 41 Segment analogue bar graph 60/5
- Audible and visual Beep-Jack™ warning

Technical Overview

Feature	Parameter	Accuracy	Protection
DC Voltage (V)	60mV/ 600mV/ 6/ 600/ 1000V	$\pm 0.08\% + 2$ Digit	1050Vrms, 1450V peak
AC Voltage (V)	60mV/ 600mV/ 6/ 600/ 1000V	$\pm 2.0\% + 3$ Digit	1050Vrms, 1450V peak
DC Current (A)	600 μ A/ 6000 μ A/ 6mA/ 600mA/ 6/ 10A	$\pm 0.2\% + 4$ Digit	0.44A/1000V Fuse (IR10kA) 11A/1000V Fuse (IR20kA)
AC Current (A)	600 μ A, 6000 μ A, 60mA, 600mA, 6/ 10A	$\pm 1.0\% + 4$ Digit	0.44A/1000V Fuse (IR10kA) 11A/1000V Fuse (IR20kA)
Resistance (Ω)	40.1 Ω - 60M Ω	$\pm 1.5\% + 5$ Digit	1.2V DC open circuit
Capacitance (F)	60nF/ 600nF/ 6 μ F/ 60 μ F/ 600 μ F/ 20mF	$\pm 5.0\% + 5$ Digit	
Frequency (Hz)	5Hz - 1MHz	$\pm 0.5\% + 4$ Digit	
Transient Protection			12kV surge (1.2/50 μ s) surge
Display	3 $\frac{3}{10}$ Digits	10 000 Counts 6 000 Counts	AC/DC Voltage/ Hz/ nS mV/ μ A/ A/ mA/ Ω / F



Model Specification (Refer to TBM812 model specification)

Certificates	IECSANS 60079-0:2012, IEC/SANS 60079-11:2012 Electrical apparatus for explosive gas atmospheres: • Part 0 - General requirements • Part 1 - Intrinsic Approved explosive protection rating is suitable for use in Zone 1 hazardous area. Group I (coal mines) underground and Group II (surface).
Meter Markings	• Ex ib IIA T4 Gb • Ex ib I Mb • Ex ib falls under Zone 1 which is an area where flammable gas can occur in normal operating conditions • IA Number: MTEX - MS/19.0358 X



T64 - TRMS/AC+DC with Data Logger (Colour Display)

- Data logger and graph
- Diode, Continuity and Resistance tests
- Automatic polarity indication
- "OL" over-range indication
- Colour TFT, 6000 pixels backlit display
- MAX/MIN/AVG Data Hold
- LoZ voltage measurement
- PEAK 1ms
- Double insulation
- 4-20mA% Passive signal measurement

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	600mV/ 6/ 60V 600/ 1000V	$\pm 0.1\% + 5$ Digit $\pm 0.2\% + 5$ Digit
AC TRMS Voltage (V)	600mV/ 6/ 60V 600/ 1000V	$\pm 0.1\% + 5$ Digit $\pm 0.2\% + 5$ Digit
AC+DC TRMS Voltage (V)	6/ 60/ 600/ 1000V	$\pm 3.0\% + 20$ Digit
DC Current (A)	600 μ A/ 6000 μ A/ 60mA 600mA 10A	$\pm 0.9\% + 5$ Digit $\pm 0.9\% + 8$ Digit $\pm 1.5\% + 8$ Digit
AC, AC+DC TRMS Current (A)	600 μ A/ 6000 μ A/ 60mA/ 600mA 10A	$\pm 1.2\% + 5$ Digit $\pm 1.5\% + 5$ Digit
Resistance (Ω)	600 Ω 6k Ω / 60k Ω / 600k Ω / 6M Ω 60M Ω	$\pm 0.8\% + 10$ Digit $\pm 0.8\% + 5$ Digit $\pm 2.5\% + 10$ Digit
Frequency (Hz)	60/ 600/ 6kHz/ 60kHz/ 600kHz/ 1MHz	$\pm 0.9\% + 5$ Digit
Temperature ($^{\circ}$ C):	-40 to +1350 $^{\circ}$ C	$\pm 105\% + 3^{\circ}$ C
Capacitance (F)	60nF/ 600nF/ 6000 μ F/ 60 μ F/ 600 μ F/ 6mF	$\pm 1.5\% + 20$ Digit
Display	4 $\frac{1}{2}$ Digits	6 000 Counts



Model Specification

Power Source	1 x 7.2V Li-ION Rechargeable Battery
Standard Accessories	K-Type Wire Temperature Probe, Test Leads, Transport Bag
Optional Accessories	Clamp transducer AC (HT96U), Standard Clamp DC Current (HT98U), Flexible Clamp (F3000U) (P21), 400A Clamp (HT4006)
Certificates	EMC: IEC/EN61326, IEC/EN61010-1, Calibration certificate ISO 9000



CAT II 1000V

TBM319 - Automotive Tester

- Splash/Drop proof
- Selectable 4-stroke /2-stroke
- Sensitivity on RPM
- Selectable 1 to 12 cylinders
- Bar graph indication 40s

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	60mV/ 600mV/ 6/ 60/ /600/ 1000V	±0.4% + 3 Digit
AC Voltage (V)	60mV/ 600mV/ 6/ /60/ 600/ 1000V	±2.0% + 5 Digit
DC Current (A)	600μA/ 6000μA/ 60mA/ 600mA/ 6/ 10A	±0.7% + 3 Digit
AC Current (A)	600μA/ 6000μA/ 60mA/ 600mA/ 6/ 10A	±2.2% + 5 Digit
Resistance (Ω)	600/ 6kΩ/ 60kΩ/ 600kΩ/ 6MΩ/ 60MΩ	±0.5% + 5 Digit
Temperature (°C)	-50 to +1000°C	±0.5% + 3 Digit
Capacitance (F)	6μF/ 60μF/ 600μF/ 2 000μF	±2.0% + 5 Digit
Frequency (Hz)	10Hz - 1kHz	±0.1% + 3 Digit
RPM	240-20 000RPM (Inductive), 60-20 000RPM (Contact)	2RPM
DWELL Angle	0 - 360°	±1.2°/kRPM + 1 Digit
Fuel Injector (ms)	0.05 - 250ms	±0.05ms + 1 Digit
Display	3 1/2 Digits	6 000 Counts

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Temp Probe TBMTEMPPROBE , Banana Plug, Inductive Pickup Clip BP300
Certificates	UL, IEC61010-1, Certificate of Conformance



CAT III 1000V

CAT IV 600V

TBM878 - Insulation/Combination

- Industrial test probe
- Earth bond resistance, 200mA
- VFD AC Voltage
- Relative zero
- Hz Line level frequency
- Earth Continuity
- BeepJack™ warning
- Autoranging
- Continuity and Diode test
- Dual digital display
- Data Hold

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	60mV/ 600mV/ 6/ 600/ 1000V	±0.09% + 3 Digit
AC Voltage (V)	60mV/ 600mV/ 6/ 600/ 1000V	±2.0% + 3 Digit
DC Current (A)	60mA/ 600mA	±0.4% + 3 Digit
AC Current (A)	60mA/ 600mA	±1.5% + 3 Digit
Resistance (Ω)	600/ 6kΩ/ 60kΩ/ 600kΩ/ 6MΩ/ 60MΩ	±1.5% + 3 Digit
Insulation Resistance (Ω)	50V(3M-55MΩ)/ 100V(3M-110MΩ)/ 250V(3M-275MΩ) 550V(3M-550MΩ)/ 1000V (3M-25GΩ)	±1.5% + 5 Digit
Temperature (°C)	-50 to +1000°C	±9.0% + 2.0°C
Capacitance (F)	3μF/ 30μF/ 300μF/ 3 000μF/ 30mF	±1.5% + 5 Digit
Frequency (Hz)	10Hz - 5kHz	±0.02% + 4 Digit
Display	3 1/2 Digits	6 000 Counts

Model Specification

Power Source	4 x 1.5V AA Batteries
Standard Accessories	Temp Probe TBMTEMPPROBE , Crocodile Clips TBM878CLIP , Test Lead Adaptor TBM878TIPS , Test Lead TBM878LEAD , Industrial Test Probe TBM878PROBE
Certificates	UL, IEC61010-1, Certificate of Conformance

**IP40****CAT III 1000V**to ground and
between inputs**CAT IV 600V****NEPTUNE - Insulation and Continuity Tester 1000V**

- Harmonics analyser up to 25th harmonic and THD%
- Bar graph
- Automatic polarity indication
- Automatic range & detection of AC/DC signals
- Dynamic INRUSH
- Continuity of earth conductors (LoΩ)
- Phase sequence rotation with 1-wire method
- MAX/MIN/PEAK Hold
- Polarisation Index (PI)
- Dielectric absorption ratio (DAR)
- Continuity of Protective and equipotential conductors (PE)

Technical Overview

Feature	Parameter	Accuracy
Insulation Voltage DC	50/ 100/ 250/ 500/ 1000V	±5.0% + 2 Digit
DC Voltage (V)	0 - 999.9V	±0.5% + 2 Digit
AC, AC+DC, LoZ TRMS Voltage (V)	0.5 - 999.9V	±0.5% + 2 Digit
DC, AC, AC+DC Current (A) – Standard Rigid Clamp	1 - 1000mV	±0.5% + 2 Digit
AC TRMS Current (A) Flexible Clamp	1 - 3000mV	±0.5% + 2 Digit
Inrush Current: DC, AC, AC+DC TRMS – Standard Rigid and Flexible Clamp	1 - 1000mV	±2.0% + 2 Digit
Inrush Current: AC TRMS – Flexible Clamp	1 - 3000mV	±2.0% + 2 Digit
Resistance (Ω)	0 - 1999Ω	±1.0% + 5 Digit
Frequency (Hz)	32 - 999.9Hz	±0.1% + 1 Digit
Harmonic Voltage and Current (Hz)	DC: 42.5 - 69Hz	±5.0% + 20 Digit
	1 - 25: 42.5 - 69Hz	±5.0% + 10 Digit
	THD%: 42.5 - 69Hz	±10.0% + 10 Digit
Display	4 Digits	9 999 Counts

Model Specification

Power Source	4 x 1.5V AAA Batteries
Standard Accessories	Test Leads, Pouch
Optional Accessories	Flexible Clamp (F3000U) (P21), 400A Clamp HT4006
Certificates	IP40, IEC/EN61010-1, IEC/EN61010-2-030, IEC/EN61010-2-033, IEC/EN61326-1, Calibration Certificate ISO9000

JUPITER – Loop and RCD Tester

- RCD tests
- Bar graph
- Phase sequence rotation with 1-wire method
- Automatic polarity indication
- Automatic detection of AC/DC signals
- Continuity check 200mA
- Dynamic INRUSH
- Harmonics analyser up to 25th harmonic and THD%
- MAX/MIN/PEAK Hold

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	0 - 690V	±0.5% + 2 Digit
AC, AC+DC, LoZ TRMS Voltage (V)	0.5 - 690V	±0.5% + 2 Digit
DC, AC, AC+DC Current (A): Standard Rigid and Flexible Clamp	1 - 1000A	±0.5% + 2 Digit
AC TRMS Current (A): Flexible Clamp	1 - 3000A	±0.5% + 2 Digit
Inrush Current: DC, AC, AC+DC TRMS – Standard Rigid and Flexible Clamp	1 - 1000mV	±2.0% + 2 Digit
Inrush Current: AC TRMS – Flexible Clamp	1 - 3000mV	±2.0% + 2 Digit
Resistance (Ω)	0 - 199.9Ω	±1.0% + 5 Digit
Voltage/Current Frequency (Hz)	33 - 999.9Hz	±5.0% + 10 Digit
Harmonic Voltage and Current (Hz)	DC: 42.5 - 69Hz	±5.0% + 20 Digit
	1 - 25: 42.5 - 69Hz	±5.0% + 10 Digit
	THD%: 42.5 - 69Hz	±10.0% + 10 Digit
Display	4 Digits	9 999 Counts

LOOP Impedance L-N, L-L, RA+RA+RCD (NO RCD TRIPPING)

L-PE, L-N, L-L Voltage range: 100V - 690V, 42.5 - 69Hz

Model Specification

Power Source	4 x 1.5V AAA Batteries
Standard Accessories	Test Leads, Pouch
Optional Accessories	Flexible Clamp (F3000U, P21), 400A Clamp HT4006
Certificates	IP40, IEC/EN61010-1, IEC/EN61010-2-030, IEC/EN61010-2-033, RCD Test: IEC/EN61557-6, · LOOP P-P, P-N, P-PE, RA+ Test, IEC/EN61557-3, Phase Sequence Rotation: IEC/EN 61557-7, IEC/EN61326-1, Calibration Certificate ISO9000

**IP40****CAT III 690V**to ground and
between inputs**CAT IV 600V**

Test	Test Current (A)	Range (Ω)	Accuracy
RA+RCD	15mA	1 - 1999Ω	+5.0% +3Ω
L-N, L-L, RA+	100mA	0.1 - 199.9Ω	+5.0% +3Ω



MERCURY – Built-in Infrared Camera

- Data logger: max 16 recordings, 10 hours
- Automatic polarity indication
- “OL” over range indication
- Bluetooth Connectivity with HTMercury APP
- Laser pointer
- Micro SD card memory, screenshots in BMP format
- White LED illuminator

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	600mV/ 6/ 60V	±0.09% + 5 Digit
	600/ 1000V	±0.2% + 5 Digit
AC Voltage (V)	6/ 60/ 600/ 1000V	±0.8% + 5 Digit
DC Current (A)	600µA/ 6000µA/ 60mA	±0.9% + 5 Digit
	600mA	±0.9% + 8 Digit
	10A	±1.5% + 8 Digit
AC Current (A)	600µA/ 6000µA/ 60mA/ 600mA	±1.2% + 5 Digit
	10A	±1.5% + 5 Digit
DC Current (A) with Transducer clamp	1000mA/ 10/ 40/ 100/ 400/ 1000A	±0.8% + 5 Digit
AC, AC+DC TRMS Current (A) with transducer clamp	1000mA/ 10/ 40/ 100/ 400/ 1000A	±0.8% + 5 Digit
AC TRMS Current (A) with Flexible clamp	30/ 300/ 3000A	±0.8% + 5 Digit
Resistance (Ω)	600/ 6kΩ/ 60kΩ/ 600kΩ/ 6MΩ/ 60MΩ	±5.0% + 20 Digit
Frequency (Hz)	60/ 600/ 6kHz/ 60kHz/ 600kHz/ 1MHz/ 10MHz	±0.09% + 5 Digit
Temperature (°C)	-40 to +1000°C	±1.5% + 3°C
Capacitance (F)	60nF/ 600nF/ 6µF/ 60µF/ 600µF/ 6000µF	±2.5% + 20 Digit
Colour TFT Display		6 000 Counts



IP65

CAT III 1000V

CAT IV 600V

Model Specifications

Power Source	1 x 7.2V Li-ION Rechargeable Battery (1500mAh)
Standard Accessories	Test Leads, Micro SD card (8GB card) K-Type Temperature Probe, Pouch
Optional Accessories	Flexible Clamp (F3000U, P21), 400A Clamp HT4006
Certificates	IP65, IEC/EN61010-1, IEC/EN61326-1

Infrared Temperature

Feature	Parameter	Accuracy
Temperature (°C)	-20 to +260°C	±3°C or ±3% (@ env temp: 10 - 35°C, object temp >0°C)
Thermal sensitivity	<0.1°C @ 30°C / 100mK	
Colour palettes	4 (Iron, Rainbow, Grey, Grey Inverted)	
Field of View (FOV)	21° x 21° / 7.5mm	
IFOV (@1m)	4.53mrad	
Image frequency	50Hz	
IR Resolution	UFPA (80 x 80pxl, 34µm)	
Emissivity correction	0.01 to 1.00	
Measurement cursors	3 (FIXED, MAX, MIN)	
Automatic Focusing	Min distance 0.5m	



CAT II 600V

CAT III 300V

TBM27 - Card Sized Meter

- AutoCheck™
- EF detection
- Autoranging
- Diode test
- Audible continuity
- Capacitance
- Low impedance (LoZ)

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	6/ 60/ 450/ 600V	±0.5% + 3 Digit to 2.0% + 5 Digit
AC Voltage (V)	6/ 60/ 450/ 600V	±1.5% + 5 Digit
DC Current (A)	400µA/ 2000µA	±1.2% + 3 Digit
AC Current (A)	2000µA	±1.5% + 3 Digit
Resistance (Ω)	600/ 6kΩ/ 60kΩ/ 600kΩ/ 6M	±2.0% + 6 Digit
Capacitance (F)	2000µF	
Frequency (Hz)	30kHz (Auto)	
Display	3 1/2 Digits	6 000 Counts

Model Specification

Power Source	3V CR2032 Button Battery
Certificates	UL61610B-1



CAT IV 600V

CAT III 1000V

TBM789

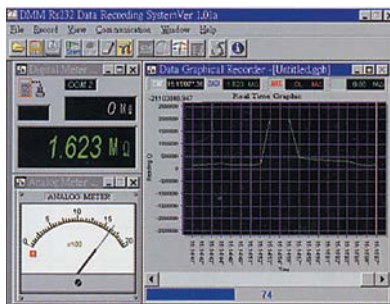
- AutoHold Real-Read™
- BeepLit™ Continuity
- Paper white backlight display
- High resolution fast readings
- Hi-Lo EF Detection
- Non-contact EF detection (NCV)
- VFD-V & VFD-Hz fundamental measurements
- %4-20mA loop current
- 31 Segment Analogue Bar graph
- slimline over-moulded body
- BeebJack Input Warning

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	600mV/ 6/ 60/ 600/ 1000V	±0.15% + 5 Digit
AC Voltage (V)	600mV/ 6/ 60/ 600/ 1000V	±4.0% + 40 Digit
DC Current (A)	600μA/ 6000μA/ 60mA/ 600mA/ 6A/ 10A	±0.3% + 30 Digit
AC Current (A)	600μA/ 6000μA/ 60mA/ 600mA/ 6A/ 10A	±1.0% + 30 Digit
Resistance (Ω)	600Ω/ 6kΩ/ 60kΩ/ 600kΩ/ 6MΩ/ 60MΩ	±2.0% + 5 Digit
Temperature (°C)	-200 to +1000°C	±1.0% + 1 Digit
Capacitance (F)	10nF/ 100nF~1000nF/ 10.00μF~1.000mF/ 10mF	±2.0% + 4 Digit
Frequency (Hz)	Line: 99.999Hz - 50kHz Logic: 99.9999Hz - 1MHz	
BeepLit™ Diode Tester (V)	3V	±1.0% + 20 Digit
Display	4 ⁵ / ₆ Digits	60 000 Counts

Model Specification

Power Source	3 x 1.5V AAA Batteries
Standard Accessories	Test lead pair, User's manual, Banana plug K-type thermocouple x 1
Optional Accessories	Magnetic Hanger TBMH02
Dimensions (mm)	193(L) x 89(W) x 51(H)
Weight (g)	635
Certificates	UL, IEC61010-1 Ed:3.0, Certificate of Conformance



TBU Software

- Optical interface adaptor
- USB cable and software
- Software free to download (<http://www.brymen.com/download1.html>)

Digital Multimeters

Code	TBRUSB	TBM252	TBM812	TBM525	TBM869
Page No.	16	9	10	10	10
TBU20X	TBRUSB (USB Adaptor)				
TBU86X					

Digital Clamp Meters

Code	TBRUSB	TBM157	TBM198PV
Page No.	16	27	26
TBU13X	TBRUSB (USB Adaptor)		



FEATURES	T6016	TBM3030	TBM031	TBM175D	TBM072	TBM076	TBM086	T98
PAGE	19	19	19	19	19	19	20	20
MAX AC Current (A)	600	600	600	600	600	600	1000	1000
MAX DC Current (A)				2				
MAX AC Voltage (V)	500	600	600	600	600	600	1000	750
MAX DC Voltage (V)	500	600	600	600	600	600	1000	1000
MAX Resistance (Ω)	2000	40M	6k	6M	60k	60k	60k	2k
Jaw Size (mm)	30	26	30	30	30	30	51	42
Temperature (°C)				400		400	400	
Continuity	•	•	•	•	•	•	•	•
Frequency (Hz)		100k		1000k	100k	100k	100k	
Capacitance (F)		3000μ		2500μ		2500μ	2500μ	
Diode	•	•	•	•	•	•	•	•
Display (Counts)	1 999	4 000	6 000	4 000	6 000	6 000	6 000	1 999
Backlight				•	•	•	•	•
Autoranging	•			•	•	•	•	•
Data Hold	•	•		•	•	•	•	•
MIN/MAX Display		•	•	•	•	•	•	•
AmpTip™			•	•	•	•	•	
TRUE RMS								
Lifetime Warranty								
Data Logging								
Safety Category			 					
Dimensions (mm) LxWxH	165 x 68 x 28	190 x 63 x 32	188 x 66 x 32	217 x 76 x 37	223 x 76 x 37	223 x 76 x 37	258 x 94 x 44	250 x 99 x 43
Weight (g)	180	187	158	186	186	186	312	460

															
T260D	T77N	TF3000	F3000U	T223	TBM037	TBM079	T8056	TBM162	TBM089	T2608	T261	TBM198PV	TBM157	TR1000P	ECLIPSE
20	21	21	21	22	22	22	23	23	24	24	25	25	26	26	27
1000	100	3000	3000	100	600	600	1000	800	1000	1500	200	2000	1000	1000	1000
				100	600	600	1000	1000	1000	2000	200	2000		1000	1000
750				600	600	600	700	600	1000	750	600	1000	600	1000	1000
1000				600	600	600	1000	600	1000	1000	600	1500	600	1000	1500
2M				10k	6000k	60k	40M	40M	60k	40M	600k	40M	999.9	9999	60M
60	40	110	110	12.5	26	35	42	50	51	57	20	55	45	51	40
					400	400	750		400			1000			1000
•				•	•	•	•	•	•	•	•	•	•	•	
		500			999.9	400	100k	1000k	400k	400k		400	500	100k	600k
					2500μ	2500μ	40μ	3000μ	2500μ	40μ	1000μ	2000μ		30μ	6000μ
•					•	•	•	•	•	•	•	•	•	•	•
1 999	6 000	3 000	3 000	4 000	6 000	6 000	4 000	4 000	6 000	4 000	6 000	6 000	6 000	3 000	6 000
	•	•	•			•		•	•		•	•	•		
	•	•		•		•	•	•	•	•	•	•	•		
•	•	•		•		•	•	•	•	•	•	•	•	•	•
		•		•	•	•	•	•	•	•		•	•	•	
					•	•			•						
	TRMS	TRMS	TRMS		TRMS	TRMS		TRMS	TRMS	TRMS	TRMS	TRMS	TRMS	TRMS	TRMS
						LIFETIME WARRANTY			LIFETIME WARRANTY						
												•	•		•
CAT II 1000V CAT III 600V	CAT III 300V	CAT IV 600V	CAT III 1000V CAT IV 600V	CAT III 300V	CAT III 600V CAT IV 300V	CAT III 600V	CAT III 600V	CAT III 600V	CAT IV 600V	CAT III 1000V	CAT III 600V CAT IV 300V	CAT IV 1000V	CAT III 600V	CAT III 1000V CAT IV 600V	CAT III 1000V CAT IV 600V
235 x 96 x 46	200 x 70 x 40	280 x 120 x 25	280 x 125 x 25	202 x 70 x 34	188 x 66 x 32	223 x 76 x 37	250 x 99 x 43	227 x 78 x 40	258 x 94 x 44	277 x 102 x 49	232 x 72 x 35	264 x 97 x 43	224 x 78 x 40	270 x 90 x 70	190 x75 x 55
268	265	170	170	180	202	234	480	290	392	540		608	224	500	555



T6016 - 600A AC

- Jaw size: 30mm
 - Diode test
 - Continuity buzzer
- Data Hold
 - Autoranging
 - Dimensions (mm): 165(L) 68(W) x 28(H)
 - Weight (g): 180

Technical Overview

Feature	Parameter	Accuracy
AC Current (A)	200mA/ 20/ 200/ 600A	±2.0% ± 1 Digit
AC Voltage (V)	500V	±1.2% ± 5 Digit
DC Voltage (V)	500V	±0.8% ± 5 Digit
Resistance (Ω)	2000Ω	±1.0% ± 5 Digit
Input impedance	10MΩ	
Display	3½ Digits	1 999 Counts

Model Specification

Power Source	2 x 1.5 AAA Batteries
Standard Accessories	Test Leads
Certificates	IEC1010-1



TBM3030 - 600A AC

- Jaw size: 30mm
 - Diode test
 - Continuity test
- Relative zero
 - Data Hold
 - Large LCD display

Technical Overview

Feature	Parameter	Accuracy
AC Current (A)	40/ 400/ 600A	±1.5% + 8 Digit
AC Voltage (V)	4/ 40/ 400/ 600V	4/ 40/ 400V ±1.5% + 5 Digit, 600V ±2.0% + 5 Digit
DC Voltage (V)	400mV/ 4/ 40/ 400/ 600V	±1.0%+ 4 Digit
Resistance (Ω)	400/ 4kΩ/ 40kΩ/ 400kΩ/ 4MΩ/ 40MΩ	4k/ 40k/ 400kΩ ±0.6% + 4 Digit, 4MΩ ±1.0% + 4 Digit, 40MΩ ±2.0% + 4 Digit
Capacitance (F)	500nF/ 5μF/ 50μF/ 500μF/ 3000μF	±3.5% + 6 Digit
Frequency (Hz)	10Hz - 100kHz	±0.5% + 4 Digit
Display	3¾ Digits	4 000 Counts

Model Specification

Power Source	1 x 3V Battery CR2032
Standard Accessories	Carry Pouch, Test Leads
Certificates	UL, IEC61010-1, Certificate of Conformance



TBM031 – TRMS 600A AC

- Jaw size: 30mm
 - AmpTip™
 - BeepLit™ Continuity and Diode tests
- NCV
 - Crest MAX/MIN (PEAK Hold)
 - In-rush currents (5ms)
 - Dimensions (mm): 188(L) 66(W) x 32(H)
 - Weight (g): 158

Technical Overview

Feature	Parameter	Accuracy
AC Current (A)	60/ 600A	±1.0% + 5 Digit
DC Current (A)	600A	±1.5% + 5 Digit
AC Voltage (V)	600V	±1.5% + 5 Digit
DC Voltage (V)	600V	±1.0% + 5 Digit
Resistance (Ω)	600Ω, 6KΩ	±1.0% + 5 Digit
Display	3¾ Digits	6 000 Counts

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Test Leads, Carry Pouch
Certificates	UL, EN61326-1



TBM175D - 600A AC

- Jaw size: 30mm
 - AmpTip™
 - Rotary selector switch
 - Dual display
- Non-contact EF detection (NCV)
 - VFD, V & Hz feature
 - DCμA - HVAC flame sensor via probe

Technical Overview

Feature	Parameter	Accuracy
AC Current (A)	60 - 600A	±1.5% + 5 Digit
DC Current (A)	200mA, 2mA	±1.0% + 5 Digit
AC Voltage (V)	4/ 40/ 400/ 600V	±1.0% + 5 Digit
DC Voltage (V)	400mV/ 4/ 40/ 400/ 600V	±1.0% + 5 Digit
Temperature (°C)	-40 to +400°C	±1.0 + 1°C
Resistance (Ω)	600kΩ/ 6kΩ/ 60kΩ 600kΩ/ 60MΩ	±1.0% + 5 Digit ±1.5% + 5 Digit
Capacitance (F)	5200nF/ 2500μF	2.0% + 4 Digit
Frequency (Hz)	10Hz - 1000kHz	0.5% + 4 Digit
Display	4¾ Digits	6 000 Counts

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Carry Pouch, Test Leads
Certificates	UL, IEC61010-1, EMC EN61326-1:2013, Certificate of Conformance



TBM072 - 600A AC

- Jaw size: 30mm
 - AmpTip™
 - Rotary selector switch
 - DCμA - HVAC flame sensor via probe
- Continuity test
 - Data Hold
 - Non-contact EF detection (NCV)
 - Large LCD display

Technical Overview

Feature	Parameter	Accuracy
AC Current (A)	40/ 600A	±1.8% + 5 Digit
AC Voltage (V)	4/ 40/ 400/ 600V	4/ 40/ 400V ±1.5% + 5 Digit, 600V ±1.2% + 7 Digit
DC Voltage (V)	400mV/ 4/ 40/ 400/ 600V	±1.0% + 5 Digit
Resistance (Ω)	600/ 6kΩ/ 60kΩ	±1.0% + 5 Digit
Frequency (Hz)	5Hz - 100kHz	±0.5% + 4 Digit
Display	3¾ Digits	6 000 Counts

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Carry Pouch, Test Leads
Certificates	UL, IEC61010-1, Certificate of Conformance



TBM076 - 600A AC

- Jaw size: 30mm
 - AmpTip™
 - 3-Phase rotation for mains and motor
 - Non-contact EF detection (NCV)
- DCμA - HVAC flame sensor via probe
 - Rotary selector switch
 - Continuity test
 - Data Hold

Technical Overview

Feature	Parameter	Accuracy
AC Current (A)	40/ 600A	±1.8% + 5 Digit
DC Voltage (V)	400mV/ 4/ 40/ 400/ 600V	±1.0% + 5 Digit
AC Voltage (V)	4/ 40/ 400/ 600V	440/ 400V ±1.5% + 5 Digit, 600V ±1.2% + 7 Digit
Resistance (Ω)	600/ 6kΩ/ 60kΩ	±1.0% + 5 Digit
Temperature (°C)	-40 to +400°C	±1.0% - 1°C
Frequency (Hz)	5Hz - 100kHz	±0.5% + 4 Digit
Capacitance (F)	200μF/ 2500μF	±2.0% + 4 Digit
Display	3¾ Digits	6 000 Counts

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Carry Pouch, K-Type Temp Probe TBMTEMPPROBE
Certificates	UL, IEC61010-1, Certificate of Conformance



TBM086 - 1000A AC Ultra Slim

- Jaw size: 51mm
- AmpTip™ AC
- 3-Phase rotation for mains and motor
- DCµA - HVAC flame sensor via probe
- Non-Contact EF detection (NVC)
- Rotary selector switch
- Peak RMS 80ms in-rush current
- Backlight

Technical Overview

Feature	Parameter	Accuracy
AC Voltage (V)	600/ 1000V	±1.8% + 5 Digit
DC Voltage (V)	600/ 1000V	±0.8% + 5 Digit
AC Current (A)	60/ 600/ 1000A	4/ 40/ 400V ±1.5% + 5 Digit, 600V ±1.2% + 7 Digit
Resistance (Ω)	600/ 6kΩ/ 60kΩ	4k/ 40k/ 400kΩ ±0.6% + 4 Digit, 4mΩ ±1.0% + 4 Digit, 40mΩ ±2.0% + 4 Digit
Temperature (°C)	-40 to +400°C	±1.0% - 0.8°C, 100°C - 400°C ±1.0% - 1°C
Frequency (Hz)	5Hz - 100kHz	±0.5% + 4 Digit
Capacitance (F)	200µF/ 2500µF	±2.0% + 4 Digit
Display	3 1/2 Digits	6 000 Counts



CAT III 1000V

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Carry Pouch, K-Type Temp Probe TBMTEMPPROBE, Crocodile Clips
Certificates	UL, IEC61010-1, Certificate of Conformance, CE



T98 - 1000A AC

- Jaw size: 42mm
- Continuity test
- Data Hold
- Backlight
- Temperature

Technical Overview

Feature	Parameter	Accuracy
AC Current (A)	20/ 200/ 1000A	±2.0% + 5 Digit
AC Voltage (V)	750V	±1.0% + 5 Digit
DC Voltage (V)	1000V	±1.0% + 2 Digit
Resistance (Ω)	200/ 2000Ω	±1.0% + 3 Digit
Temperature (°C)	-40 to +750°C	±1.0% + 5 Digit
Display	3 1/2 Digits	1 999 Counts



CAT II 1000V

CAT III 600V

Model Specification

Power Source	1 x 9V Battery
Standard Accessories	Carry Pouch, K-Type Temp Probe TBMTEMPPROBE
Certificates	IEC61010-1



T260D - 1000A AC

- Jaw size: 50mm
- Combination Clamp
- Diode test
- Continuity buzzer
- Data Hold
- Dimensions (mm): 235(L) 96(W) x 46(H)
- Weight (g): 268

Technical Overview

Feature	Parameter	Accuracy
AC Current (A)	20/ 200/ 1000A	±2.5% + 5 Digit
AC Voltage (V)	200/ 750V	±1.0% + 5 Digit
DC Voltage (V)	200mV/ 2/ 20/ 200/ 1000V	±0.5% + 3 Digit
Resistance (Ω)	200Ω/ 2kΩ/ 20kΩ/ 2000kΩ/ 20MΩ	±1.0% + 8 Digit
Frequency (Hz)	2kHz	±2.0% + 5 Digit
Temperature (°C)	0 to +750°C	
Insulation Test	2000MΩ	±4.0% + 2 Digit
Display		2 000 Counts

RoHS✓



CAT II 1000V

CAT III 600V

Model Specification

Power Source	1 x 9V Battery
Certificates	ETL, IEC61010-1, Certificate of Conformance

**T77N - 100A AC**

- Earth Leakage
- Data Hold
- Low pass filter with high stability 100Hz
- Autoranging
- Bar graph
- Frequency compare function
- Backlight

Technical Overview

Feature	Parameter	Accuracy
AC Current (A)	0.1mA/ 6mA	±1.0% + 8 Digit
	60A	±1.0% + 8 Digit
	100A	±2.0% + 10 Digit
Display	4 Digits	6 000 Counts

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Carry Pouch
Certificates	UL, IEC61010-1

**TF3000 - 3000A AC**

- Jaw size: 110mm
- Flexible jaw length: 54mm
- Sample rate (4 times/second)
- Data Hold
- Backlight

Technical Overview

Feature	Parameter	Accuracy
AC Current (A)	0.1A, 30A	±3.0% + 5 Digit
	300A	±3.0% + 5 Digit
	3000A	±3.0% + 5 Digit
Display	4 Digits	3 000 Counts

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Carry Pouch
Certificates	UL, IEC61010-1, Certificate of Conformance

**F3000U - 3000A AC TRMS Transducer Flexible Clamp**

- Jaw size: 110mm
- Flexible jaw length: 254mm
- Backlit LCD
- Cable connection to JUPITER, NEPTUNE and MERCURY series
- Dimensions (mm): 280(L) 125(W) x 25(H)
- Weight (g): 170

Technical Overview

Feature	Parameter	Accuracy
AC TRMS Current (A)	0.3 – 30A	±3.0% + 5mV Digit
	30 – 300A	±3.0% + 3mV Digit
	300 – 3000A	
Display	4 Digit	3 000 Counts

Model Specification

Power Source	2 x 1.5V AAA Alkaline Batteries
Standard Accessories	Banana Connectors, Cable Length 1m
Certificates	IP40, IEC/EN61010-1, IEC/EN61010-2-032





T223 - 100A AC/DC

- Jaw size: 12.5mm
- Concurrent reading
- Resistance
- Continuity test

Technical Overview

Feature	Parameter	Accuracy	Protection
DC Current (A)	1mA/ 10mA/ 10/ 100A	±2.0% + 10 Digit	150A RMS
AC Current (A)	1mA/ 10mA/ 10/ 100A	±2.0% + 10 Digit	150A RMS
DC Voltage (V)	100mV/ 600V	±0.08% + 2 Digit	660V RMS
AC Voltage (V)	100mV/ 600V	±2.0% + 3 Digit	660V RMS
Resistance (Ω)	1.10kΩ	±1.0% + 3 Digit	
Display		4 000 Counts	



CAT III 300V

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Carry Pouch, Test Leads



TBM037 - TRMS 600A AC/DC

- Jaw size: 26mm Hall-effect
- AmpTip™
- BeepLit™
- Non-contact EF detection (NCV)
- Crest max/min (Peak hold)
- In-rush currents (5ms)
- DCμA for HVAC flame sensors
- Dimensions (mm): 188(L) 66(W) x 32(H)
- Weight (g): 202

Technical Overview

Feature	Parameter	Accuracy
AC Current (A)	60 – 600A	±1.0% + 5 Digit
DC Current (A)	60/ 600A	±1.0% + 5 Digit
DC Current (μA)	200μA/ 2000μA	±1.0% + 5 Digit
AC Voltage (V)	600V	±1.5% + 5 Digit
DC Voltage (V)	600V	±1.0% + 5 Digit
Frequency (Hz)	5Hz - 999.9Hz	Line-level AC V
Resistance (Ω)	600/ 6kΩ/ 60kΩ/ 600kΩ/ 6000kΩ	±1.0% + 5 Digit
Temperature (°C)	-40 to +400°C	±1.0% + 1°C
Capacitance (F)	200μF/ 2500μF	±2.0% + 4 Digit
Display	3 ¹ / ₂ Digits	6 000 Counts



CAT III 600V

CAT IV 300V

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Test Leads, K-Type Thermocouple, Carry Pouch
Certificates	UL, EN61326-1



TBM079 - 600A AC/DC

- Jaw size: 35mm
- AmpTip™
- 3-Phase rotation for mains and motors
- Non-contact EF detection (NCV)
- Rotary selector switch
- Data Hold

Technical Overview

Feature	Parameter	Accuracy
DC Current (A)	60/ 600A	±2.0% + 5 Digit
AC Current (A)	40/ 600A	±1.8% + 5 Digit
DC Voltage (V)	400mV/ 4/ 40/ 400/ 600V	±1.0% + 5 Digit
AC Voltage (V)	4/ 40/ 400/ 600V	4/ 40/ 400V ±1.5% + 5 Digit, 600V ±1.2% + 7 Digit
Resistance (Ω)	600/ 6kΩ/ 60kΩ	±0.6 - 2.0% + 4 Digit
Temperature (°C)	-40 to +400°C	±1.0% + 1°C
Frequency (Hz)	50Hz - 400Hz	±2.0% + 4 Digit
Capacitance (F)	200μF/ 2500μF	2.0% + 4 Digit
Display	3 ¹ / ₂ Digits	6 000 Counts



LIFETIME WARRANTY

CAT III 600V

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Carry Pouch, Temp Probe TBMTEMPPROBE, Test Leads, Crocodile Clips
Certificates	UL, IEC61010-1, Certificate of Conformance



CAT II 1000V

CAT III 600V

T8056 - 1000A AC/DC

- Jaw size: 42mm
- Duty cycle
- Diode test
- Continuity test
- Auto power off
- Relative zero
- Data Hold

Technical Overview

Feature	Parameter	Accuracy
DC Current (A)	400/ 1000A	±3.0% + 3 Digit
AC Current (A)	400/ 1000A	±3.0% + 3 Digit
DC Voltage (V)	0.4/ 4/ 40/ 400/ 1000V	±0.7% + 1 Digit
AC Voltage (V)	4/ 40/ 400/ 700V	±0.8% + 10 Digit
Resistance (Ω)	400/ 4kΩ/ 40kΩ/ 400kΩ/ 4MΩ/ 40MΩ	±2.0% + 3 Digit
Temperature (°C)	-40 to +750°C	±1.0% + 6 Digit
Frequency (Hz)	40/ 400/ 4k/ 40k/ 100kHz	±2.0% + 1 Digit
Capacitance (F)	4nF/ 40nF/ 400nF/ 4μF/ 40μF	±4.0% + 10 Digit
Display	3 ³ / ₄ Digits	4 000 Counts

Model Specification

Power Source	1 x 9V Battery
Standard Accessories	Carry Case, Temp Probe TBMTEMPPROBE , Test Leads
Certificates	UL, IEC61010-1, Certificate of Conformance



CAT III 600V

TBM162 - 1000A AC/DC

- Jaw size: 50mm
- MAX Hold
- Continuity test
- Diode test
- Large display
- Backlight

Technical Overview

Feature	Parameter	Accuracy
AC Current (A)	400/ 800A	400A, ±2.0% + 5 Digit, 800A, 5.0% + 30 Digit
DC Current (A)	400/ 1000A	±0.5% + 3 Digit
AC Voltage (V)	600V	±2.0% + 5 Digit
DC Voltage (V)	600V	±2.0% + 5 Digit
Resistance (Ω)	400/ 4kΩ/ 4MΩ/ 40MΩ	±1.0% + 4 Digit
Capacitance (F)	500nF/ 5μF/ 50μF/ 500μF 3000μF	±3.5% + 6 Digit
Frequency (Hz)	15Hz - 1000Hz	2.0% + 5 Digit
Display	3 ³ / ₄ Digits	4 000 Counts

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Carry Pouch, Test Leads
Certificates	UL, IEC61010-1, Certificate of Conformance



TBM089 - 1000A AC/DC

- Jaw size: 51mm
- 3-Phase rotation for mains and motors
- AmpTip™
- Non-contact EF detection (NCV)
- Hall Effect AC/DC
- Rotary selector switch
- Continuity test
- Flashlight

Technical Overview

Feature	Parameter	Accuracy
DC Current (A)	60/ 600/ 1000A	±1.8% + 5 Digit
AC Current (A)	60/ 600/ 1000A	±1.8% + 5 Digit
DC Voltage (V)	600/ 1000V	±1.0% + 5 Digit
AC Voltage (V)	600/ 1000V	±1.2% + 7 Digit
Resistance (Ω)	600/ 6kΩ/ 60kΩ	±1.0% + 5 Digit
Temperature (°C)	-40 to +400°C	±1.0% + 0.8°C
Frequency (Hz)	5Hz - 400kHz	±0.5% + 4 Digit
Capacitance (F)	2500μF	±2.0% + 4 Digit
Display	3½ Digits	6 000 Counts

Model Specification

Power Source	2 x 1.5V AA Batteries
Standard Accessories	Carry Pouch, Temp Probe TBMTEMPPROBE , Test Leads, Crocodile Clips
Certificates	UL, IEC61010-1, Certificate of Conformance



T2608 - 2000A DC/ 1500A AC

- Jaw size: 57mm
- MIN/MAX Hold
- Data Hold/Peak Hold
- Auto power off
- Diode test
- Continuity test
- Bar graph

Technical Overview

Feature	Parameter	Accuracy
DC Current (A)	400/ 2000A	±1.5% + 5 Digit
AC Current (A)	400/ 1500A	±1.5% + 5 Digit
DC Voltage (V)	400mV/ 4/ 40/ 400/ 1000V	±0.5% + 1 Digit
AC Voltage (V)	400mV/ 4/ 40/ 400/ 750V	±1.5% + 4 Digit
Resistance (Ω)	400/ 4kΩ/ 40kΩ/ 400kΩ/ 4MΩ/ 40MΩ	±1.0% + 4 Digit
Frequency (Hz)	10/ 1kHz/ 10kHz/ 100kHz/ 400kHz	±0.1% + 4 Digit
Capacitance (F)	4nF/ 40nF/ 400nF/ 4μF/ 40μF	±1.0% + 4 Digit
Display	3¾ Digits	4 000 Counts

Model Specification

Power Source	1 x 9V Battery
Certificates	UL, IEC61010-1, Certificate of Conformance



CAT IV 300V

CAT III 600V

T261 – TRMS 200A AC/DC

- Jaw size: 20mm
- 1mA Current resolution
- Built in LED backlight
- Auto ranging
- Continuity and Diode test
- Data Hold
- Dimensions (mm): 232(L) 72(W) x 35(H)
- Weight (g): 230

Technical Overview

Feature	Parameter	Accuracy
AC/DC Current (mA)	4000mA	±2.0% + 5 Digit
AC/DC Current (A)	40/ 100/ 200A	±2.0% + 5 Digit
AC+DC Current (mA/A)	4000mA/ 40/ 200A	±2.5% + 5 Digit
AC Voltage (V)	6/ 60/ 600V	±1.2% + 5 Digit
DC Voltage (V)	6/ 60/ 600V	±1.0% + 2 Digit
AC+DC Voltage (V)	6/ 60/ 600V	±1.2% + 5 Digit
Resistance (Ω)	600/ 6KΩ/ 60kΩ/ 600kΩ	±1.0% + 3 Digit
Capacitance (F)	1μF/ 10μF/ 100μF/ 1000μF	±3.0% + 8 Digit
Display	3 ¹ / ₆ Digits	6 000 Counts

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Test Leads, Carry Pouch
Certificates	EN61010



CAT III 1500V (DC)

CAT IV 1000V (AC/DC)

TBM198PV - Multimeter Clamp PV 2000A

- Jaw size: 55mm
- VFD-V, VFD-Hz (Variable frequency drivers)
- Update rate: 5 per second
- Ghost-Voltage-Buster
- Backlit Dual display
- Non-contact EF detection (NCV)
- Data logging (PC-Comm interface)
- 5mS Crest-Max capture mode
- Auto Ranging Relative-Zero mode

Technical Overview

Feature	Parameter	Accuracy
AC Current (A)	0 – 2000A	±3.5% ± 5 Digit
DC Current (A)	0 – 2000A	±3.0% ± 5 Digit
DC + AC Current (A)	0 – 2000A	±3.5% ± 8 Digit
AC Voltage (V)	6/ 60/ 600/ 1000V	±1.2% ± 5 Digit
DC Voltage (V)	6/ 60/ 600/ 1000V / 1500V	±0.5% ± 5 Digit
AC+DC Voltage (V)	6/ 60/ 600/ 1000V	±1.4% ± 7 Digit
Capacitance (F)	60nF/ 600nF/ 6μF/ 60μF/ 600μF/ 2000μF	±4.0% ± 5 Digit
Resistance (Ω)	600/ 6k/ 60k/ 600k/ 6M/ 40MΩ	±2.3% ± 5 Digit
Diode Tester	1V	1.0% ± 3 Digit
Temperature (°C)	-50°C to +1000°C	±0.3% ± 4 Digit
Input impedance	10MΩ	
Display	3 ¹ / ₆ Digits	6 000Counts (+1999 dual display)

Model Specifications

Power Source	2 x 1.5 AA Batteries
Standard Accessories	Test Leads, K-Type Thermocouple TBMTEMPPOBE , Soft Carrying Pouch
Optional Accessories	USB interface kit TBU19X (P16)
Certificates	IEC/EN/BS/EN/CSA_C22.2_No./UL standards of 61010-1 Ed. 3.1, 61010-2-032 Ed. 4.0, 61010-2-033 Ed. 2.0
Dimensions (mm)	264(L) 97 (W) x 43(H)
Weight (g)	608



TBM157 - Power Clamp 1000A AC

- Jaw size: 45mm
- 3-Phase Power Clamp
- Total power factor
- kWhr Recording
- 3-Wire, 4-wire unbalanced-load
- Peak inrush 65ms
- PC-Comm (Optical) Isolated PC interface

Technical Overview

Feature	Parameter	Accuracy
AC Current (A)	40/ 400/ 1000A	2.5% + 5 Digit
DC Voltage (V)	600V	0.5% + 5 Digit
AC Voltage (V)	600V	1.5% + 5 Digit
Resistance (Ω)	999.9 Ω	1.0% + 6 Digit
Frequency (Hz)	5 ~ 500Hz	0.5% + 4 Digit
Power	0.00 ~ 600kVA, 0.00 ~ 600kW 0.00 ~ 600kVAR	±3.5% + 6 Digit
THD%-F Total Harmonic Distortion	0% ~ 450%	Fundamental 1.5% + 6 Digit 2-51 Harmonics 2.5 - 10% + 6 Digit
Display	3½ Digits	6 000 Counts

Model Specification

Power Source	2 x 1.5V AAA Batteries
Standard Accessories	Carry Case, Test Leads
Optional Accessories	RS232 Cable and Software TBU13X , USB Adaptor (P16)
Certificates	UL, IEC61010-1, Certificate of Conformance



TR1000P – 3 Phase Power Clamp AC/DC 1000A

- Jaw size: 51mm
- Continuity and Diode test
- Non-contact Voltage Detection (NCV)
- Active, Reactive and Apparent Power
- Harmonic measurement up to 49th Harmonic & THD%
- Power Factor
- Inrush/Peak Value Measurement (100ms)
- Data hold Max/Min
- LPF Mode for VFD
- Bar graph scale
- Rotating Clamp Jaws
- Dimensions (mm): 90(W) x 270(L) x 70(H)
- Weight (g): 500

Technical Overview

Feature	Parameter	Accuracy
AC Current (A)	0.1 – 1000A	±1.5% + 5 Digit
DC Current (A)	0.1 – 1000A	±1.5% + 5 Digit
AC Voltage (V)	0.1V - 1000V	±0.25% + 1 Digit
DC Voltage (V)	0.1V – 1000V	±0.25% + 1 Digit
Active Power (W)	1W – 1000/ 3000/ 1732kW	±2.0% + 5 Digit
Reactive Power (kVAR)	1W – 1000/3000/1732kVAR	±2.0% + 5 Digit
Apparent Power (kVA)	1W – 1000/3000/1732kVA	±2.0% + 5 Digit
Energy (kWh)	0.001kWh – 9999kWh	±3.0% + 5 Digit
Resistance (Ω)	9 999Ω	±0.4% + 1 Digit
Frequency (Hz)	1Hz – 100kHz	±0.5% + 1 Digit
Capacitance (F)	10F - 30μF	±1.0% + 3 Digit
Display	3½ Digits	3 000 Counts

Model Specification

Power Source	9V DC Battery
Standard Accessories	PT1000 Temperature Probe, Test Leads
Certificates	IP50, IEC 61010-1-2010



IP40

CAT III 1000V
to ground

CAT IV 600V

F3000U
(Optional)

AOMCY



Test Leads

TBMTEMPROBE

ECLIPSE - AC/DC TRMS Thermal Clamp 1500V DC

- Jaw size: 40mm
- Detects AC voltage without contact
- Data logger and graph
- Diode test
- Bluetooth connectivity with HTMercury APP
- Laser pointer
- White LED illuminator

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	600mV/ 6/ 60/ 600/ 1500V	±0.8% + 5 Digit
AC TRMS Voltage (V)	6/ 60/ 600/ 1000V	±2.5% + 5 Digit
AC +DC TRMS Voltage (V)	6/ 60/ 600/ 1000V	±2.5% + 20 Digit
DC Current (A)	60/ 600/ 1000A	±2.0% + 8 Digit
AC TRMS Current (A) INRUSH Current	60/ 600/ 1000A	±2.5% + 5 Digit
AC TRMS Current (A) with Flexible clamp	30/ 300/ 3000A	±3.0% + 5 Digit
Resistance (Ω)	600/ 6kΩ/ 60kΩ/ 600kΩ/ 6MΩ/ 60MΩ	±1.0% + 10 Digit
Frequency (Hz)	40 – 10kHz	±0.09% + 5 Digit
	60/ 600/ 6kHz/ 60kHz/ 600kHz/ 6MHz/ 10MHz	±0.2% + 5 Digit
Temperature (°C) K-Type	-40 to +1000°C	±1.5% + 3°C
Capacitance (F)	60nF/ 600nF/ 6μF/ 60μF/ 600μF/ 6000μF / 60mF/ 100mF	±3.0% + 8 Digit
Colour TFT Display	6 000 dots	

Infrared Temperature

Feature	Parameter	Accuracy
IR Sensor Resolution	80 x 80pxl	
Temperature (°C)	-20 to +260°C	±3°C or ±3% (@ env temp: 10 - 35°C, object temp > 0°C)
Thermal sensitivity	<0.1°C @ 30°C / 100mK	
Colour palettes	5 (Iron, Rainbow, Grey, Reverse Grey, Feather)	
Field of View (FOV)	21° x 21° / 7.5mm	
IFOV (@1m)	4.53mrad	
Image frequency	50Hz	
Emissivity correction	0.01 to 1.00	
Measurement cursors	3 (FIXED, MAX, MIN)	
Focusing	Automatic	

Model Specifications

Power Source	1 x 7.2V Li-ION Rechargeable Battery (1200mAh)
Standard Accessories	Test Leads, Micro SD card (8GB card) K-Type Temperature Probe, Pouch (TBMTEMPROBE)
Optional Accessories	Flexible Clamp (F3000U), 400A Clamp HT4006
Certificates	IP40, IEC/EN61010-1, IEC/EN61326-1
Dimensions (mm):	190(L) x 75(W) x 55(H)
Weight (g)	555



ELECTRIC SAFETY MEASUREMENTS	MACROG3	EASYTEST	COMBI521	T60	JUPITER	NEPTUNE
PAGE NO.	29	30	30	31	13	13
True RMS	•		•	•	•	•
Insulation with voltage 50, 100, 250, 500, 1000V DC	•	•	•	•		•
Continuity of protective conductors with 200mA/10A	•	•	•	•		150mA
Tripping time and current of RCDs type B, A, AC Standard, Selective and Delayed up to 1A	200mA	A, AC, A+B general and selective	Only A, AC general and selective	200mA	Only A, AC 300mA	
Tripping time and current of earth leakage relays type B, A, AC Standard, Selective and Delayed up to 10A	RCDX10*		X	RCDX10*		
Non-trip earth resistance	•		•	•	•	
Earth resistance with rods	•			•		
Earth resistance with stakeless testing method	T2100*			T2100*		
Ground resistivity by 4-wire method	•			•		
Loop/Line impedance, Phase-Phase, Phase-Neutral, Phase-PE	•		•	•	•	
Loop/Line impedance Phase-Phase, Phase-Neutral, Phase-PE with high resolution (0.1mΩ) Index (PI)	TIMP57*		TIMP57*	TIMP57*		
Measurement of percentage voltage drop on the line	•			•		
Contact Voltage	•	•	•	•	•	•
Phase Sequence	•		•	•	•	•
Leakage current with optional clamp meter	•		•	•		•
Dielectric absorption ratio (DAR), Polarisation (Index PI)						•
POWER ANALYSIS						
Measurement of Voltage, Current, Active, Reactive, Apparent Power	(1)			•		
Measurement of Cosphi, Power Factor	(1)			•		
Voltage and current harmonics up to the 49th with calculation of THD%	25th			•	25th	25th
ADDITIONAL CHARACTERISTICS						
Automatic test (Ra, RCD, Insulation)			•	•		
Measurement of environmental parameters (°C, %Relative Humidity, Lux)	TIMP57*			HT52/05*		
Test with remote lead PR400	•		•	•		
Help on screen display	•		•	•		
Internal memory for measured data saving	•		•	•		
USB PC connection	•	•	•	•		
Integrated WiFi connection and compatibility with HTANALYSIS App	•			•		
Safety category	CAT III ⚡ 240V		CAT III ⚡ 240V	CAT III ⚡ 300V	CAT III ⚡ 1000V CAT IV ⚡ 600V	CAT III ⚡ 690V CAT IV ⚡ 600V
Reference standard for safety	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
IP Rating	50		50	50	40	40
Dimensions (mm) LxWxH	222 x 162 x 57		222 x 162 x 57	222 x 162 x 57	175 x 85 x 55	175 x 85 x 55
Weight (batteries included) Kg	1.2		1.2	1.2	420	420

* Optional accessories

(1) Single-phase or balanced three-phase system



PR400



KITERRNE



TOPVIEW2006



VAS07



UNIVERSALKITG3



%Rh

IP40



CAT IV 300V

(to ground),
max 415V between inputs

MACROG3 – Compliance Single Phase

Advanced multifunction device for verification of domestic and industrial electric systems

- All SANS10142 electrical safety verifications
- (23kA L-N) (40kA L-L)
- Earth resistance by voltammetric method with 2 or 3 poles in TT, TN and IT systems
- Ground resistivity with 4-wire method
- Measurement of electric parameters in single-phase installations (V, I, W, VAR, VA, PF)
- Test of RCDs type A, AC, B up to 1A
- Test earth leakage relays with test current up to 10A (with optional accessory RCDX10)
- Loop/Line impedance P-N, P-P, P-PE also with high resolution (0.1mΩ) with optional accessory **TIMP57** (P48)
- Insulation resistance test with 50, 100, 250, 500, 1000V DC
- PSC/LOOP impedance tests P-P, P-N, P-PE
- Continuity of protective conductors with 200mA
- Phase Sequence and leakage currents verification
- Touch-screen colour display (320x240pxl)
- PC interface with optical USB and Wi-Fi
- 999 Memory locations, 3 levels of markers

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	100/ 250/ 500/ 1 000V	±5.0% +2 Digit
Voltage (RCD, LOOP, Phase sequence)	15 – 460V	±3.0% +2 Digit
AC TRMS Voltage (V)	15 – 459.9V	±1.0% +1 Digit
Frequency (Hz)	47 – 63.6Hz	±0.1% +1 Digit

Model Specification

Power Source	6 x 1.2V type AA rechargeable batteries or 6 x 1.5V type AA alkaline batteries
Standard Accessories Selection Guide (P70)	UNIVERSALKITG3 - 4 cables, 4 Crocodile clips, 3 test leads KITERRNE - 4 Earth rods and cables in soft carry bag PR400 - Remote switch probe PR400 - Stylus VAS07 - Rigid hard case TOPVIEW2006 - PC software and optical-USB connection cable
Optional Accessories Selection Guide (P70)	HT96U - Clamp transducer AC 1-100-1000A/1V, diameter 54mm TIMP57 - High resolution impedance measurement adapter T2100 - Earth ground clamp transducer for Stakeless measurements
Certificates	IP40, Calibration Certificate ISO9000, IEC/EN61557-1 Certificate of Conformance

EVTEST100

Is an adapter that can be used in conjunction with the MACROG3 tester for testing safety of electric car charging stations.



CAT III 300V

Technical Overview

Feature	Parameter	Accuracy
Input voltage	Max 415V AC Phase-Phase, 50/60Hz	±5%
Connection to EVSE system:	Integrated cable with Type 2 plug, length 60cm	
Recharging stations	Charging modes 2 and 3	
PP Simulation:	NC, 13A, 20A, 32A, 63A	
CP Simulation:	Status A, B, C, D, ventilation/not ventilation	
Simulation EVSE fault:	Fault PE, Fault E	
CP output signal:	PWM communication protocol, 12V	
Allowed output load:	240V, 50/60Hz, max 10A AC	
Protection fuse:	Fast type 250V/10A (5x20mm) (0.2x0.8in)	
Max operating altitude:	2000m (6562ft)	

Please Note: Compatibility only applies to MACROG3 models 2018 to date, to verify compatibility send us your serial number and firmware version and our technical teams will confirm compatibility.



COMBI521 – Multi Function

Electrical Installation and EVSE safety tester with power quality analysis

- Auto sequence
- Continuity of conductors
- Insulation resistance
- Polarity test
- RCD type AC, A and B general and selective
- Line/fault impedance and prospective short-circuit/fault current
- MCB and fuses › Phase sequence › Voltage drop › Leakage and absorbed current
- Power quality analysis
- Environmental parameters
- EVSE AUTO-sequence safety testing › Internal memory and connection to the PC
- Wi-Fi connection to Android and iOS smartphones and tablet

Technical Overview

Feature	Parameter
Insulation resistance	Insulation resistance
Continuity of the protection cable	200mA
RCD tripping time and current, manual / auto / ramp test	A, AC, B General, Selective
RCD nominal currents (mA) (Molded case type)	6, 10, 30, 100, 300, 500, 650, 1000
L-PE resistance no trip RCD	(2-wires, 3-wires)
Automatic test sequence	(Ra, RCD, MOhm)
GUI (Graphic user interface)	Black/White Graphic display
Memory recall and clear	(999 locations)
PC Interface	(optical/USB)



EASYTEST – Multi Function Electrical

Installation and EVSE safety tester with power quality analysis

- Auto sequence
- Continuity of conductors
- Insulation resistance
- Polarity test
- RCD type AC, A and B general and selective
- Line/fault impedance and prospective short-circuit/fault current
- MCB and fuses › Phase sequence › Voltage drop › Leakage and absorbed current
- Power quality analysis
- Environmental parameters
- EVSE AUTO-sequence safety testing › Internal memory and connection to the PC
- Wi-Fi connection to Android and iOS smartphones and tablet

Technical Overview

Feature	Parameter
Insulation resistance	Insulation resistance
Continuity of the protection cable	200mA
RCD tripping time and current, manual / auto / ramp test	A, AC, General, Selective
RCD nominal currents (mA) (Molded case type)	6, 10, 30, 100, 300, 500, 650, 1000
L-PE resistance no trip RCD	(2-wires, 3-wires)
Automatic test sequence	(Ra, RCD, MOhm)
GUI (Graphic user interface)	Black/White Graphic display
Memory recall and clear	(999 locations)
PC Interface	(optical/USB)





CAT III 350V
CAT IV 300V
(to ground)



PR400



KITERRNE



TOPVIEW2006



UNIVERSALKITG3



HTFLEX33E

T60 Compliance/3-Phase Network and Power Analyser

- Touch-screen colour display (320x240pxl)
- Optical/USB PC Connection
- Internal Memory
- Online Help on the display

Electrical Safety

- 362 Parameters over 2 months recording
- Real-time display of wave forms
- Earth resistance by voltammetric method
- 4-Wire ground resistivity method
- RCD type testing, A, AC, B up to 10A
- Insulation resistance up to 1000V DC
- Advanced loop testing of MCBs
- Verification of phase sequence and leakage currents
- Continuity of protective conductors with 200mA
- Resistance of the earth rods with clamp
- Ground resistivity by 4-wire method
- Line/Loop, Phase-Phase, Phase-Neutral, Phase-PE impedance with high resolution (0.1 mΩ) with optional accessory TIMP57 (P45)
- Assumed short-circuit current
- Contact voltage
- Tripping time of General, Selective and Delayed RCDs
- Test current A, AC max 1A and type B max 300mA
- RCD tripping current (Ramp test)
- Phase sequence
- Measurement of percentage voltage drop on the lines
- Test with remote switch probe PR400

Mains Analysis

- Power factor
- Histograms of voltage/current harmonics and THD%
- Voltage anomalies (sags and swells)
- 9 Types of electric systems available:
- AC TRMS voltage in single-/3-phase up to 600V
- AC TRMS current in single-/3-phase systems up to 3000A
- Active, Reactive and Apparent Power/Energy
- Cosphi and Power Factor
- Voltage, Current, DC Power
- Voltage dips and peaks on 20ms @50hz
- Voltage/current waveforms
- Histograms of voltage/current harmonics and THD%
- Voltage/current vector diagram
- Periodical recording with selectable PI
- Max number of simultaneously selectable quantities 632
- Voltage/current harmonic analysis up to the 49th
- Calculation and recording of voltage/current THD%

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	100/ 250/ 500/ 1 000V	±5.0% +2 Digit
Voltage (RCD, Loop, Phase Sequence)	15 – 460V	±3.0% +2 Digit
Frequency (Hz)	47 – 63.3Hz	±0.1% +1 Digit
Continuity Test (Ω)	0.01 – 99.9Ω	±5.0% +3 Digit
Z Line (L-L, L-N, L-PE)	0 – 19999mΩ	±5.0% +1m Ω (TIMP57)
	0.01 – 199.9Ω	±5.0% +3 Digit
RCD Tripping Current		
AC, A	ΔIN = 10mA	- 0%, +10% I _{ΔN}
	10mA < ΔIN ≤ 650mA	- 0%, +5% I _{ΔN}
B	30mA ≤ ΔIN ≤ 100mA	- 0%, +5% I _{ΔN}
Earth Leakage Delay		
AC, A	30mA ≤ ΔIN ≤ 6.5mA	- 0%, +5% I _{ΔN}
B	30mA ≤ ΔIN ≤ 1mA	- 0%, +5% I _{ΔN}
RA – Non-Trip Earth Loop Impedance	Test voltage: 100 - 265V (Line-PE),	50/60Hz ± 5%
Ground Resistance: 3-Wire Method	0.01 – 49.99kΩ	±5.0% +3 Digit
Soil Resistivity: 4-Wire Method	Range (Ωm)	Resolution (Ωm)
	0.06 – 3.14M*	0.01- 0.01M
Phase Sequence Rotation: 1-Wire Method	Voltage range P-N, P-PE[V] 100 - 265	

* With distance d=10m, Distance "d" range

Model Specification

Power Source	6 x 1.2V (rechargeable) AA or 6 x 1.5V AA Batteries or 10W power supply
Standard Accessories	HTFLEX33E - 4pcs 3000A AC flexible clamp, diameter 174mm UNIVERSALKITG3 - Set of 4 cables, 4 Crocodile clips, 3 test leads KITERRNE - 4 earth rods and cables in soft carry bag PR400 - Remote switch probe PT400 - Stylus TOPVIEW2006 - PC software and optical-USB connection cable
Optional Accessories Selection Guide (P70)	HTFLEX35 - 3000A AC flexible clamp, diameter 274mm HT96U - Clamp transducer AC 1-100-1000A/1V, diameter 54mm HT4003 - Clamp transducer 400A AC, diameter 30mm HT4005N - Clamp transducer AC 0-5A, 0-100A diameter 20mm T2100 - Earth ground clamp transducer for Stakeless measurements
Certificates	IP40, EN61010-1, EN61326-1, EN61557-1-2-3-4-5-6-7-10, EN50160, EN60909-0, Calibration Certificate



MACROEVTEST

Is a new product for verification and checks on recharging stations for electric Cars in compliance with IEC/EN60364-7-722.

- **Simplifies:** Easy connection through built in C100EV cable to EV
- **Simulates:** EV-Test100 can simulate the presence of a car being recharged
- **Guides:** To correctly perform all tests all you need to do is to follow the Guided Procedure displayed by this innovative instrument
- **Connects:** Indicates how the cables must precisely be connected
- Automatically provides evaluation of the test outcome if compatible or not for the recharging station safety indicated by a green or red thumb symbol 👍👎
- **Tests:** Continuity, insulation, statuses of the recharging station, overall earth resistance and confirms verification of the RCD's tripping (Type A,B and type B 6ma)
- **Verification, tests & simulates:**
 - Vehicle not present,
 - Present but not being charged
 - Present and being charged
 - Events and anomalies which can be detected in the recharging phase
 - Presence of voltages on the EVSE output connector through LED
 - Verifies during the charging phase the block cable release to enhance safety (More than safe sure)



UNIVERSALKITG3

KITTERRNE



PR400



VAS07



TOPVIEW2006

Technical Overview

Features
Full colour touch screen
Wi-Fi connection
Built in cable Type 2 plug
Auto Function tests very quickly
All tests can be saved to create printable reports
Wi-Fi allows for data transfers to PC, Smart Phones & Tablets

Model Specification

Standard Accessories	C2033X - Three wire cable with Schuko plug UNIVERSALKITG3 - Set of 4 cables + 4 alligator clips + 3 test KITTERRNE - Set of 4 cables + 4 earth probes + carrying bag PR400 - Touchscreen stylus (included inside meter) ZEROLOOP - Loop zero adapter EV-TEST100 - EVSE test adapter RCDX10 - Accessory to test earth leakage relay SP-5100 - Carrying straps TOPVIEW2006 - PC Windows software + optical/USB connection) cable (order code: C2006) VAS07 - Hard carrying case YABAT0003000 - Rechargeable battery NiMH, 1.2V, type AA 6 pcs YABAT0004001 - External charger › YAMUM0058HT0 - Quick reference guide › YAMUM0057HT0 - User's manual on CD-ROM › ISO calibration Report
Optional Accessories Selection Guide (P70)	HT4005K - Standard clamp with 200A/1V AC full scale HT96U - Standard clamp with 1/100/1000A full scale IMP57 - Accessory for Loop impedance measurement with high resolution T2100 - Clamp for earth probe resistance measurement HT52/05 - Temperature/Humidity probe HT53/05 - Illuminance (lux) probe BORSA2051 - Carrying bag 606-IECN - Connector with magnetic tip 1066-IECN - Connector for extension of banana cables 4mm

Please Note: By using external probes (optional), MacroEVtest can measure environmental parameters such as air temperature/humidity, illuminance (Lux). By using the optional amperometric transducer it is also possible to perform measurements of LEAKAGE CURRENTS, COSPHI, POWER and HARMONICS.

TCTCOMP – Compact Compliance Kit

- Kit supplied in a sturdy case with foam cut out to secure each instrument
- Refer to individual products for technical overview



Case Dimensions: 450(L) x 360(W) x 100(H)
Weight: 5.5kg

Code	Description	Page No
T1151	1000V Digital Insulation Tester • Test Voltages (DC): 250V/ 500V/ 1000V LIFETIME WARRANTY CAT III 500V SA DESIGNED SANS10142	42
T1120	Digital Earth Resistance Tester • Earth Resistance (Ω): 20 Ω , 200 Ω , 2k Ω CAT II 300V	37
TEL2TLB	ELCB /Polarity Socket Tester • Rated Tripping Current: 10, 15, 20, 25, 30, 35mA • SANS164-2 plug socket compatible	49
JUPITER	Multifunction Multimeter PSC/Loop Tester • Automatic detection of AC/ DC signals IP40 CAT III 690V to ground and between inputs TRMS CE CAT IV 600V	13

TCTCDK Compact Digital Compliance Kit

- Kit supplied in a sturdy case with foam cut out to secure each instrument
- Refer to individual products for technical overview



Case Dimensions: 540(L) x 460(W) x 160(H)
Weight: 10.5kg

Code	Description	Page No
T1151	1000V Digital Insulation Tester • Test Voltages (DC): 250V/ 500V/ 1000V LIFETIME WARRANTY CAT III 500V SA DESIGNED SANS10142	42
T1120	Digital Earth Resistance Tester • Earth Resistance (Ω): 20 Ω , 200 Ω , 2k Ω CAT II 300V	37
TEL2TLB	ELCB /Polarity Socket Tester • Rated Tripping Current: 10, 15, 20, 25, 30, 35mA • SANS164-2 plug socket compatible SA DESIGNED SANS10142	49
T1825	Loop/PSC Network Tester Analyser • Loop: 0 ~ 2000 Ω • PSC: 0 ~ 6ka at 230v (L-N) LIFETIME WARRANTY CAT III 300V SA DESIGNED SANS10142	45
TBM031	TRMS 600A AC Digital Clamp Meter • Display: 6 000 Counts • Jaw size: 30mm CAT III 600V CAT IV 300V TRMS	19
T860	Phase Rotation and Motor Rotation • Operating Voltage: 100 - 600V AC SA DESIGNED SANS10142 LIFETIME WARRANTY	50

TCTDT Digital Compliance Kit

- Kit supplied in a sturdy case with foam cut out to secure each instrument
- Refer to individual products for technical overview



Case Dimensions: 540(L) x 460(W) x 160(H)
Weight: 11kg

Code	Description		Page No
T1851	1000V Digital Insulation Tester • Test Voltages (V DC): 250V/ 500V/ 1000V	LIFETIME WARRANTY CAT III 500V	42
T1820	Digital Tester • Earth Resistance (Ω): 20Ω, 200Ω, 2kΩ	CAT III 500V	37
TEL2TLB	ELCB /Polarity Socket Tester • Rated Tripping Current: 10, 15, 20, 25, 30, 35mA • SANS164-2 plug socket compatible	SA DESIGNED SANS10142	49
T1825	Loop/PSC Network Tester • Loop: 0 ~ 2000Ω • PSC: 0 ~ 6kA at 230V (L-N) • Symbols: SA designed SANS 10142	LIFETIME WARRANTY CAT III 300V SA DESIGNED SANS10142	45
TBM031	TRMS 600A AC Digital Clamp Meter • Display: 6 000 Counts • Jaw size: 30mm	CAT III 600V CAT IV 300V	19
T887	LCD Phase Rotation • Operating Voltage: 40 - 700V AC	SA DESIGNED SANS10142 LIFETIME WARRANTY	50



FEATURES	T416	T1805	T1820	T1120	T2000
PAGE NO.	36	36	37	37	38
Earth Resistance Test (Ω)	50k	1k	2k	2k	1k
Earth Resistance Test (V)	460	30	200	200	
Micro Processor Controlled	•				
Long Test		•	•	•	•
Auto Power Off (APO)	•				•
PC Connection	TOPVIEW2006 (USB Cable)* 62006				
Data Saving	•				•
On Display Help	•				
Backlight	•				•
Data Hold	•		•	•	•
Test Cables Resistance Compensation	•			•	
Ground Resisting 4 Wire	•				
Detection of Disturbances Currents	•				•
Taut Band Movement		•			
Battery Check	•	•	•	•	
Safety Category	CAT III 265V	CAT III 150V	CAT II 300V	CAT III 200V	CAT III 150V
Lifetime Warranty			LIFETIME WARRANTY		
Dimensions (mm) LxWxH	222 x 162 x 57	170 x 165 x 92	170 x 165 x 92	175 x 85 x 75	293 x 90 x 66
Weight (g)	800	1000	1040	585	1320

*Optional accessory

T416 - Earth Resistance Tester

- 999 Memory locations
- Ground resistivity by 4-wire method
- Earth resistance with 2-wire, 3-wire and 4-wire voltammetric method
- Calculation of earth resistance average value with both 2- and 3- wires (RAVG)
- Calculation of resistivity average value (AVG)
- Compensation of disturbance voltages
- Optical/USB interface with PC



CAT III 265V



KITERRNE

Technical Overview

Feature	Parameter	Accuracy
Range (2-, 3-wire)	0 – 499kΩ	±2.5%+2 Digit
Measuring Frequency (Hz)	125Hz/ 75Hz/ 41.66Hz	±1Hz
Test Current (A)	≤12mA AC	
Open Circuit Voltage	≤25V AC TRMS	
Wave Form of Test Voltage	Sinusoidal	
Resistivity Measurement		
Ωm Range p (4-wire)	0.6 – 3.15MΩ	±2.0%+3 Digit
Measuring Frequency (Hz)	125Hz / 75Hz/41.66Hz	±1Hz
Test Current (A)	≤10mA	
Open Circuit Voltage	≤30V	
Wave Form of Test Voltage	Sinusoidal	
Measurement of Disturbance voltage		
Range	500V	±2.0%+3 Digit

Model Specification

Power Source	6 x 1.5V AA Batteries (about 500 tests)
Standard Accessories	KITTERNE - 4 Earth rods and cables in soft bag Lengths: (RD) - 13m, (BL) - 20m, (GR) - 6m, (BK) - 6m, Carry Case, Instruction manual, Test Leads, Crocodile Clips COGUK,
Optional Accessories Selection Guide (P70)	TOPVIEW2006 - Software and USB Cable VA500 - Hard Case
Certificates	UL, IEC61010-1, Calibration Certificate ISO9000. Certificate of Conformance

T1805 - Analogue Earth Resistance Tester

- Taut band movement
- 2- and 3-Wire tester
- Earth voltage
- 2mA without tripping
- Large display



CAT III 150V

Technical Overview

Feature	Parameter	Accuracy
Earth Resistance (Ω)	10/ 100/ 1000Ω	± 2.5% of full scale
Earth Voltage (V)	30V AC (5kΩ/V)	± 1.0% of full scale
Measuring System	Resistance: (Constant current inverter 820Hz approx, 2mA) Voltage: rectifier type 0 - 30V AC, 40~500Hz	
Withstand Voltage	1.500V AC (1m)	± 1.8% + 4 Digit

Model Specification

Power Source	8 x 1.5V AA Batteries
Standard Accessories	Test Leads (Lengths: (RD) - 1m and 15m, (YL) - 10m, (GR) - 5m, Earth Spikes, Shoulder Belt, TAL36 (P66)
Optional Accessories	T1805LEAD (P65)
Certificates	UL, IEC61010-1, Certificate of Conformance*

* Calibration performed with supplied test leads



CAT II 300V

LIFETIME WARRANTY

T1820 - Digital Earth Resistance Tester

- Earth voltage detection
- 2 and 3 wire testing
- 2mA earth resistance to test

Technical Overview

Feature	Parameter	Accuracy
Earth Resistance (Ω)	20/ 200/ 2k Ω	$\pm 2.0\% + 2$ Digit
Earth Voltage (V)	200V AC (40 - 500hz)	$\pm 1.0\% + 2$ Digit
Measuring System	Earth resistance by constant current inverter, 820Hz, 2mA Approx	
Over Voltage indication	1 (MSD)	
Display	3 $\frac{1}{2}$ Digits	2 000 Counts

Model Specification

Power Source	8 x 1.5V AA Batteries
Standard Accessories	Test Leads (Lengths: ■ (RD) - 1m and 15m, ■ (YL) - 10m, ■ (GR) - 5m), Earth Spikes, Shoulder Belt TAL36 (P66)
Certificates	UL, IEC61010-1, Certificate of Conformance*

* Calibration performed with supplied test leads



CAT II 300V

CAT III 200V

T1120 - Digital Earth Resistance Tester

- Safety voltage protection
- Data Hold
- Low battery indicator
- 2mA Earth resistance test
- Compact design

Technical Overview

Feature	Parameter	Accuracy
Earth Resistance (Ω)	20, 200, 2k Ω	$\pm 2.0\% + 2$ Digit
Earth Voltage (V)	0-200V AC	$\pm 1.0\% + 2$ Digit
Measuring System	Earth resistance by Constant current inverter 820Hz approx, 2mA square signal	
Withstand Voltage	1.500V AC (one minute)	
Display	3 $\frac{1}{2}$ Digits	2 000 Counts

Model Specification

Power Source	8 x 1.5V AA Batteries
Standard Accessories	Test Leads (Lengths: ■ (RD) - 1m and 15m, ■ (YL) - 10m, ■ (GR) - 5m), Earth Spikes, Shoulder Strap, TAL36 (P66)
Certificates	UL, IEC61010-1, Certificate of Conformance*

T2000 - Earth Resistance Clamp

- Jaw size: 32mm
- Direct earth probes measurement
- Leakage current
- Alarm thresholds
- Current noise
- Data Hold
- 99 measurement storage locations



Technical Overview

Feature	Parameter	Accuracy
Resistance (Ω)	0.01 Ω ~0.999 Ω	$\pm 1.0\% + 0.01\Omega$
	0.1 Ω ~0.99 Ω	$\pm 1.0\% + 0.01$
	1 Ω ~49.9 Ω	$\pm 1.5\% + 0.1\Omega$
	5 Ω ~99.9 Ω	$\pm 2.0\% + 0.3\Omega$
	100 Ω ~199.9 Ω	$\pm 3.0\% + 1\Omega$
	200 Ω ~395 Ω	$\pm 6.0\% + 5\Omega$
	400 Ω ~590 Ω	$\pm 10\% + 10\Omega$
AC Current (A)	600 Ω ~1000 Ω	$\pm 20\% + 20\Omega$
	0A~80mA	$\pm 2.5\% + 1mA$
	80~650mA	$\pm 2.5\% + 2mA$
	650~999.5mA	$\pm 2.5\% + 0.003A$
	1~3.995mA	$\pm 2.5\% + 0.01A$
	4~20mA	$\pm 2.5\% + 0.05A$

Model Specification

Power Source	4 x 1.5V AAA Batteries
Standard Accessories	Resistive Test Loop, Carry Case
Certificates	UL, IEC61010-1, Certificate of Conformance

* Calibration performed with supplied test leads



FEATURES	TBM878	T1800	T1832	T1851	T1151
PAGE NO.	12	41	41	42	42
Insulation Tester Voltage (V)	1000	1000	1000	1000	1000
Insulation Resistance Ranges (Ω)	50V/55M 100V/110M 250V/275M 500V/550M 1000V/25G	250V/100M 500V/200M 1000V/400M	250V/100M 500V/200M 1000V/400M	250V/200M 500V/200M 1000V/200M	250V/2G 500V/4G 1000V/200M
Micro Processor Controlled	•			•	•
Bar Graph	•				•
Counting Timer					•
Long Test			•	•	•
Autoranging	•				•
Auto Power Off (APO)	•				•
Auto Discharge		•	•	•	•
External Voltage Warning Indication			•		•
Live Circuit Warning	•		•	•	•
PI (Polarisation Index)					•
DAR (Dialectical Absorption Ratio)					•
Eeprom Calibration					•
Data Hold	•				•
Auto Null			•		•
Fuse Protection	•	•	•	•	•
Mirror Scale			•		
Taut Band Movement		•	•		
AC Measurement (V)	1000	500	500	500	700
DC Measurement (V)	1000		•		950
Hand Free Testing Locker	•	•	•		•
Battery Check		•	•		•
Continuity Test Range (Ω)	2/20	50	3/500	200/2000	1999
Safety Category	CAT III 1000V	CAT III 500V	CAT III 500V	CAT III 600V	CAT III 600V
Lifetime Warranty			LIFETIME WARRANTY		LIFETIME WARRANTY
Dimensions (mm) LxWxH	175 x 85 x 75	170 x 165 x 92	170 x 165 x 92	175 x 85 x 75	175 x 85 x 75
Weight (g)	635	1030	1030	1040	655



T10020C	NEPTUNE	TIN4D	TIN5D	TIN6D	TIN7D	TIN8D
42	13	43	43	44	44	44
1000	1000	5kv	10kv	10kv	10kv	15k
200M	0-1999	500V/25G 1kV/50G 2.5kV/125G, 5kV/250G	1kV/50G 2.5kV/125G 5kV/250G 10kV/500G	500V/25G 1000V/50G 10kV/500G	500V/25G 10kV/500G	500V/700G 15kV/2T
	•	•	•	•	•	•
	•	•	•	•	•	•
		•	•	•	•	•
		•	•	•	•	•
	•	•	•	•	•	•
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	•	•	•	•	•	
500	999.9					
500	999.9					
		•	•	•	•	
	•	•	•	•	•	•
5k	5kΩ					
	CAT IV 600V CAT III 1000V	CAT III 300V	CAT III 300V	CAT III 300V	CAT III 300V	CAT IV 600V
145 x 110 x 70	175 x 85 x 55	330 x 260 x 150	330 x 260 x 150	330 x 260 x 150	330 x 260 x 150	430 x 324 x 127
650	420	1800	1800	3600	3600	6560



CAT III 500V

T1800 - Analogue Insulation Continuity Tester 1000V

- Heavy duty carry case
- Taut band movement
- Auto discharge
- Colour coded scale
- Live circuit indication
- AC Voltage measurement

Technical Overview

Feature	Parameter	Accuracy
Test Voltages (DC) and Measuring Range	250V (0 - 100MΩ), 500V (0 - 200MΩ), 1000V (0 - 400MΩ)	± 5.0% of Indicated value
Short Circuit Terminal Current	145mA DC Approx	
Output Voltage on Open Circuit	Rated test voltage + 10%	
Short Circuit Current (Max)	2mA DC	
Continuity Range	0 to 50Ω	
Open Circuit Terminal Voltage	445mV DC Approx	
AC Voltage (V)	0 to 500 V	2.5% of scale length

Model Specification

Power Source	8 x 1.5V AA Alkaline Batteries
Standard Accessories	Test Leads TAL24 (P63), Pouch, Shoulder Strap
Certificates	UL, IEC61010-1. Certificate of Conformance

T1832 - Analogue Insulation Continuity and Voltage Tester 1000V

- Taut band movement
- Live circuit indication
- >200mA continuity short circuit current
- Auto discharge
- AC voltage measurement
- Audible voltage detector
- Nullifying of test leads
- Continuity buzzer
- Mirror scale

SA DESIGNED
SANS10142

LIFETIME WARRANTY

CAT III 500V

Technical Overview

Feature	Parameter	Accuracy
Test Voltages (DC) and Measuring Range	250V (0 - 100MΩ), 500V (0 - 200MΩ), 1000V (0 - 400MΩ)	± 3.0% of Indicated value
Short Circuit Terminal Current	210mA DC Approx	
Output Voltage on Open Circuit	Rated test voltage + 10%	
Short Circuit Current (Max)	1.3mA	
Continuity Ranges	0 - 3Ω and 0 - 500Ω	
Open Circuit Terminal Voltage	5V DC Approx	
AC Voltage (V)	0 - 600V	± 3.0% of scale length

Model Specification

Power Source	8 x 1.5V AA Alkaline Batteries
Standard Accessories	Test Leads TAL24 (P63), Pouch, Shoulder strap
Certificates	UL, IEC61010-1, Certificate of Conformance



CAT III 600V

T1851 - Digital Insulation Tester 1000V

- Continuity buzzer
- Live circuit warning
- 200mA continuity short circuit current
- AC voltage measurement
- Auto power off
- Auto discharge
- Live circuit indication

Technical Overview

Feature	Parameter	Accuracy
Test Voltages (DC) and Measuring Range	250V (0 - 200MΩ), 500V (0 - 200MΩ), 1000V (0 - 2000MΩ)	±1.5% + 5 Digit
Short Circuit Terminal Current	200mA DC Approx	
Output Voltage on Open Circuit	Rated test voltage + 10%	
Short Circuit Current (Max)	1mA	
Continuity Range	0-2kΩ	
Open Circuit Terminal Voltage	500V DC Approx	
AC Voltage (V)	0 - 500V	±1.5% + 3 Digit
Display	3 1/2 Digits	2 000 Counts

Model Specification

Power Source	8 x 1.5V AA Alkaline Batteries
Standard Accessories	Test Leads TAL24 (P63), Pouch, Shoulder Strap
Certificates	UL, IEC61010-1, Certificate of Conformance



T1151OLED

CE

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SANS10142

LIFETIME WARRANTY

CAT III 500V

T1151 / T1151OLED – Digital Insulation Tester 1000V

- Safety voltmeter protection before each test
- Live circuit indication
- Auto discharge
- AC and DC voltage measurements
- OLED Display (Organic light-emitting diode - T1151OLED)
- Polarisation Index*(PI)
- Dielectric absorption ratio* (DAR)
- Auto nulling of test leads and fuse
- Fuse protection

Technical Overview

Feature	Parameter	Accuracy
Test Voltages (DC) and Measuring Range	250V (2k-2GΩ), 500V (4k-4GΩ), 1000V (8k-8GΩ)	0.1MΩ to 4GΩ ± 3.0% 0.1MΩ to 8GΩ ± 5.0%
AC Voltage (V)	0 - 700V	±3%
DC Voltage (V)	0 - 950V	±3%
Continuity Range	0.01 to 1999Ω	
Continuity Short Circuit Current	>220mA	
Polarisation Index	Yes	R at 1min
Dielectric Absorption Ratio	Yes	R at 10min

Model Specification

Power Source	8 x 1.5V AA Alkaline Batteries
Standard Accessories	Test Leads TAL24 (P63), Pouch and Shoulder Strap
Certificates	Certificate of Conformance



* Polarisation Index (PI) and Dielectric Absorption Ratio (DAR) are useful to schedule maintenance. The user can keep record of the PI and DAR results and analyse these over time. Maintenance can be done according to analysis and down time can be scheduled thus same production time.

**T10020C – Low Voltage Insulation Tester 1000V**

- Self-powered – Hand crank
- 55mm logarithmic scale
- Self-lubricating moulded gears
- Robust moulded Poly Carbonate Case

Technical Overview

Feature	Parameter
Rated Voltage (V)	500/ 1000V
Continuity Measurement	0 -5k Ω
Insulation Resistance	100M Ω / 200M Ω
Accuracy	$\pm 5.0\%$ First effective range, ± 10.0 Second effective range
Dialectic test	Withstand 2KV AC (max)

Model Specification

Power Source	Self-powered – no battery required
Standard Accessories	Test Leads (1.5m)
Optional Accessories	Replacement Case (T5010CS)
Dimensions (mm)	200(L) x 125(W) x 135(H)
Weight (g)	1978
Certificates	OS:2992

**TIN4D - Insulation Tester 5KV**

- Displays insulation (500, 1000, 2500, 5000V)
- Displays warning
- Fully protected crow bar
- Insulation test time interval up to 99s
- Autoranging
- 4 Insulation test voltages
- Display time

Technical Overview

Insulation Test Voltage	500V	1000V	2500V	5000V
Insulation Resistance (Ω)	0-30G Ω	0-60G Ω	0-125G Ω	0-250G Ω
Accuracy	$\pm 3.0\%$ + 2 digit			
Output Current Limit (A)	50 μ A to 100 μ A			
Live Warning (V)	>500V			
Operating Temperature ($^{\circ}$ C)	0 to +40 $^{\circ}$ C			
Operating Humidity	85% Max Relative Humidity			

Model Specification

Power Source	8 x 1.5V C Alkaline Batteries
Standard Accessories	Carry Case, Test Leads TALTIN (P64)
Certificates	Certificate of Conformance

**TIN5D - Insulation Tester 10kV**

- 4 Insulation test voltages (1000, 2500, 5000, 10 000V)
- Autoranging on all ranges
- Displays insulation test time
- Displays warning
- Fully protected crow bar
- Insulation test time interval up to 99s

Technical Overview

Feature	Parameter
Insulation Test Voltage (V)	1000V 2500V 5000V 10000V
Insulation Resistance (Ω)	0-60G Ω 0-125G Ω 0-250G Ω 0-500G Ω
Accuracy	$\pm 3.0\%$ + 2 digit
Output Current Limit (A)	50 μ A to 100 μ A
Live Warning (V)	>500V
Operating Temperature ($^{\circ}$ C)	0 to 40 $^{\circ}$ C
Operating Humidity	85

Model Specification

Power Source	8 x 1.5V C Alkaline Batteries
Standard Accessories	Carry Case, Test Leads TALTIN (P64)
Certificates	EN61010-1. Certificate of Conformance



TIN6D - Insulation Tester 10kV

- 20 Insulation test voltages (500V - 10kV)
- Silicone test leads
- Anti-skid/vibration absorbing enclosure
- Live circuit warning
- Auto discharge
- Insulation test time up to 99s
- Autoranging
- Auto off

Technical Overview

Feature	Parameter	Accuracy
Insulation Test Voltage (V)	500V - 10kV	±3.0% + 1 Digit
Measuring Range (Autoranging)	500V - 10kV 25GΩ - 500GΩ	
Output Power Limit (W)	1W	
Short Circuit Current (Max)	1.25mA	

Model Specification

Power Source	8 x 1.5V C Alkaline Batteries
Standard Accessories	Heavy Duty Carry Case, Test Leads TALTIN (P64)
Certificates	EN61010-1, Certificate of Conformance



TIN7D

! Polarisation Index (PI) and Dielectric Absorption Ratio (DAR) are useful to schedule maintenance. The user can keep record of the PI and DAR results and analyse these over time. Maintenance can be done according to analysis and down time can be scheduled thus same production time.

TIN7D / TIN7DOLED - Insulation Tester 10kV

- Polarisation index*
- Dielectric absorption ratio*
- Live circuit warning
- Auto discharge
- Insulation test time interval up to 10mins
- 20 Insulation test voltages
- Autoranging
- OLED display (organic light-emitting diode - **TIN7DOLED**)

Technical Overview

Feature	Parameter	Accuracy
Insulation Test Voltage (V)	500V, 10kV (20 x 500V increments)	± 5.0% + 1 Digit
Measuring Range (Ω)	0-250GΩ, 800kΩ-500GΩ	
Output Power Limit (W)	1W	
Short Circuit Current (Max)	1.25mA	
Dielectric Absorption Ratio	Yes	R at 1min
Polarisation Index	Yes	R at 1min

Model Specification

Power Source	8 x 1.5V C Alkaline Batteries
Standard Accessories	Test Leads TALTIN (P64), Heavy Duty Carry Case
Certificates	EN61010-1, EN61326-1. Certificate of Conformance

TIN8D – High Voltage Insulation Tester 15kV

- Test insulation resistance up to 30TΩ (30000GΩ)
- Short-circuit current up to 5mA
- Optical USB to RS-232 data transmission
- 30 Insulation test voltages
- Autoranging on all insulation ranges
- Backlight function
- Bar graph indicates test voltage, rise and decay
- 200 Measurement results can be saved in the memory and recalled on the display

Technical Overview

Feature	Parameter	Accuracy
Insulation Test DC Voltage (V)	500 – 15kV (500V increments)	±5.0%+5 Digit
Current (A)	0.5nA – 0.55mA	Depend on insulation resistance
AC Voltage (V)	30~ - 600V (50/60Hz)	±2.0% + 3 Digit
DC Voltage (V)	30 - 600V	±2.0% + 3 Digit
Insulation Resistance (Ω)	1000GΩ/0.5kV 1000GΩ at 0.5kV - 30TΩ at 15kV	±0.4% + 1 Digit
Short Circuit Current	up to 5mA	±0.5% + 1 Digit
PI	✓	
DAR	✓	
Display	3½ Digits	3 000 Counts

Model Specification

Power Source	14.8V Lithium Ion Rechargeable Battery (TIN8DBATT) – requires monthly charging
Standard Accessories	Test Leads with Crocodile Clips (TIN8DTLKT) (P66), Test Probe (TAL58) (P65), Data Transmission Cable and Software on USB (TIN8DCHARGE), Instruction Manual, Test Report
Certificates	EN 61010-1, EN 61010-2-030, EN 61326-1





Feature	T1825	T1826	JUPITER	T1MP57
PAGE NO.	45	46	13	46
Loop Impedance (L-N) (mΩ)		1999	1-1999	0.1-1999
Loop Impedance (L-E) (mΩ)	1999	1999	0.1-1999	0.1-1999
PSC Current (L-N)	6kA	6kA		400kA
PSC Current (L-E)		6kA		400kA
Voltage Measurement (V AC) (L-N)	50-280	50-280	690	190-460V
Voltage Measurement (V AC) (L-E)		50-280	690	190-460V
Operating Voltage (V AC)	230 ±20	230 ±20		220-415
Neutral Wire Resistance (Ω)		0.01 - 2000	1999	0.1 - 2000
Live Wire Resistance (Ω)		0.01 - 2000	1999	0.1 - 2000
TEST CURRENT - Loop/PSC/Load	11A ± 1A	16A (11.76A per loop)	100mA	202A
Auto Off	•	•	•	•
Autoranging	•	•	•	•
Wiring Check	•	•	•	
Resolution (mΩ)	10 (Loop)	•	0.1	0.1 (Zloop)
Thermal Protection	Electronic	10 (Loop)	Electronic	Electronic
Operating Temperature (°C)	-10 to +40	Electronic	5 to +40	0 to +40
Operating Humidity	85%	-10 to 40	<80%	85%
Lifetime Warranty	LIFETIME WARRANTY	80%		
IP Rating		•	IP40	
Safety Category	CAT III 300V	CAT III 300V	CAT IV 600V CAT III 690V to earth between inputs	CAT III 240V to earth CAT III 415V between P1, C1, P2 and C2 inputs
Dimensions (mm) LxWxH	170 x 165 x 92	170x165x92	175 x 85 x 55	300 x 340 x 150
Weight (g)	970	970	420	4100



T1825 - PSC Loop Tester

- Load/No load tester
- Prospective short circuit current
- Volt drop test
- Microprocessor controlled
- Test up to 100A (6kA) circuit breakers
- Can test 3-Phase systems by testing each Line separately in relation to Neutral
- Scroll through results

Technical Overview

Feature	Parameter	Accuracy
Measuring :Loop :PSC	0 ~ 2000Ω 0 ~ 6kA at 230V (L-n)	±2% (0.05 ~ 50Ω), ±3% (500Ω), ±15% (above 500Ω) ±12% + 5 Digit
Operating Voltage (V AC)	50 ~ 275V AC	50Hz only
Test Current - Loop/PSC/ Load	11A (Load Voltage shown as at 16A)	±1A
Resolution (Ω)	0.01 (Loop)	
Thermal Protection	Electronic	
PSC Current	6kA at 230V AC	
(L-N) Max	±2% (0.05 ~ 50Ω), ±3% (500Ω), ±15% (above 500Ω)	
Operating Temperature (°C)	-10to +40°C	
Humidity	85% Max Relative Humidity	

Model Specification

Power Source	8 x 1.5V AA Alkaline Batteries
Standard Accessories	Carry Case, Strap, Leads TAL1825 (P64)
Certificates	UL, IEC61010-1, Certificate of Conformance

T1826 - PSC Loop Tester / Network Analyser

- Fault finding
- Electrical network analyser
- Earth resistance without peg
- Analyse to SANS 10142
- Loop test for L-E, L-N and PSC
- Prospective short circuit current



LIFETIME WARRANTY

CAT III 300V

Technical Overview

Feature	Parameter	Accuracy
Measuring :Loop :PSC	0 ~ 2000Ω	± 5% ± 2 Digit
	0 ~ 6kA at 230V AC	± 12% ± 5 Digit
Operating Voltage (VAC)	230V ± 20V 50Hz	± 2%
Test Current - Loop/PSC/Load	11.76A	
Neutral Wire Resistance	0.01 - 2000Ω	
Live Wire Resistance	0.01 - 2000Ω	
PSC Current (L-N)	Max 6kA at 230V AC	
PSC Current (L-E)	Max 6kA at 230V AC	
Operating Temperature	-10°C to 40°C	
Humidity	80% Max Relative humidity	

Model Specification

Power Source	8 x 1.5V AA Alkaline Batteries
Standard Accessories	Carry Case, Strap, Test leads TAL1825 (P64)
Certificates	UL, IEC61010-1. Certificate of Conformance IEC61326-1

TIMP57 – High Resolution Loop/Line Impedance

- Line Loop Adaptor
- Test up to 400kA
- 4 wire high resolution Line impedance measurement
- Phase to Phase, Phase to Neutral, Phase to Protection Conductor Impedance Measurement
- Phase to Phase, Phase to Neutral, Phase to Protection Conductor PSC current calculation



Instruments listed below are to be used in conjunction with the TIMP57 in order to do high line loop tests up to 400kA

MACROG3

T60



Technical Overview

Range	Resolution	Accuracy
Z _{LINE} Z _{LOOP} Measurement		
0 - 199.9mΩ	0.1mΩ	±5.0% + 1mΩ
200 - 1999mΩ	1mΩ	
RLINE RLOOP, XLINE XLOOP Measurement		
0 - 199.9mΩ	0.1mΩ	±10.0% + 1mΩ
200 - 1999mΩ	1mΩ	
PSC Current (A)		Related to Z accuracy
0 -1999A	1A	
2.0 - 9.9kA	0.1kA	
10 - 1999kA	1kA	
Voltage (V)		
190 - 460V	1V	±1.0% + 2 Digit
Frequency (Hz)		
47.5 - 52.5Hz	0.1Hz	±0.2Hz

Model Specification

Power Source	8 x 1.5V Alkaline Batteries
Standard Accessories	Test Cables (3m length, with Crocodile Clips), RS-232 Serial Cable, Carrying Bag
Certificates	EN60909-0, VDE 0413, EN61557-3

CAT III 240V (to Earth)

CAT III 415V (between P1, C1, P2, C2 inputs)



FEATURES	TEL28	TELE10L	TEL11/OLED	TEL2TLB
PAGE NO.	48	48	48	49
Rated Tripping Current (mA)	0-999	1-999	1-999	10, 15, 20, 25, 30, 35
Voltmeter (V AC) (L-E)	20 - 280	50-550	50-650	
Timer Resolution (mS)	1	10	1	5
Current Resolution (mA)	1	1	1	5
Data Hold	•	•	•	
Wiring check		•	•	•
Auto Off	•	•	•	
Thermal Protection	•	•	•	
Phase Angle or Phase-start-selection	0° and 180°	0° and 180°	0° and 180°	
Phase Polarity Trip Indicator	•		•	
Maximum Trip Time (s)	99.9	99.99	99.99	
Operating Voltage (V AC) (L-E)	100-550	230 /380 /550	60-317 (525V System)	230
Operating Temperature (°C)	-50 to +40	0 to +40	0 to +40	0 to +40
Relative Humidity	80%	80%	80%	80%
Fuse Protection	1A	1A	1A (Slow Blow)	
Lifetime Warranty	LIFETIME WARRANTY	LIFETIME WARRANTY	LIFETIME WARRANTY	
Safety Category	CAT III ⚡ 450V	CAT III ⚡ 550V	CAT III ⚡ 550V	CAT III ⚡ 230V
Dimensions (mm) LxHxW	170 x 165 x 92	330 x 260 x 150	330 x 260 x 160	80 x55 x 30
Weight (g)	1500	3700	3850	400



TEL28 - Industrial ELCB

- Microprocessor
- Direct read out of time/current
- Voltage measurement
- Suitable for industrial and mining
- Each phase tested separately on a 3-Phase system industrial, mining and domestic environments

Technical Overview

Feature	Parameter	Accuracy
Rated tripping current	1 to 999mA	± 1mA
Resolution	1mA	
Operating Voltage (AC)	100 - 550V	50 - 50V AC 2% ± 1V 350 - 550V AC
Maximum Trip Time	99.9 s (1mS resolution)	1mS ± 1mS 5% ± 1mS
Operating Temperature (°C)	-50 to +40°C	
Operating Humidity	80%	
Phase Angle Setting	0 and 180s selectable	

Model Specification

Power Source	8 x 1.5V AA Alkaline Batteries
Standard Accessories	Carry Case, Test Leads, Fuse
Certificates	Certificate of Conformance, EN 0081-1, EN 50082-1



TELE10L – Industrial ELCB Tester

- Microprocessor controlled
- Pure resistive load
- Fully programmable (direct readout - time or current)
- Voltage measured during test

Technical Overview

Feature	Parameter	Accuracy
Rated Tripping Current (A)	3-999mA at 317V	±1.0% reading ±2 digits
Lowest Resolution Time (s)	10ms	
Lowest Resolution Current (A)	1mA	
Operating Voltage (V)	230-550V (designed 317V)	1.0% reading ±1 digit
Maximum Trip Time (s)	99.99 secs	
Maximum Trip Current (A)	999mA	
Operating Temperature (°C)	0 to +40°C	
Operating Humidity	80%	

Model Specification

Power Source	8 x 1.5V C Alkaline Batteries
Standard Accessories	Test Leads, Fuse
Certificates	Certificate of Conformance



TEL11OLED



TEL11 / TEL11OLED – 3-Phase Industrial ELCB Tester

- Multi frequency
- Multi Voltage
- Industrial use
- 3-Phase presence
- 3-Phase rotation
- TEST for disconnection sensitivity
- TEST for disconnection time
- Select one of 3-Phase to earth to test ELCB
- Measure voltage phase to Earth
- Over temperature protection
- Phase polarity trip indicator
- Select start at 0°C and 180°C

Technical Overview

Feature	Parameter
Current Settings (A)	1 to 999mA AC
Phase-start-selection	0 and 180
AC Operating Voltage (L-E) (V)	110V AC to 550V AC
Timer Resolution	1mS (Max Time = 99.99s)
Current Resolution	1mA
Voltmeter Resolution	1V
Earth Leakage Constant Current IAC	5 to 999 (mA)
Ramping Current	5 to 999 (mA)
Sensitivity Disconnection Check	0 to 99s
Time Delay Disconnection Check(s)	0.001 - 99.999
Maximum Current Consumption	10mA (LCD) 100mA (OLED)
ELCB Voltage Measurement (L-E) (V AC)	10 to 550V
ELCB Tester Voltage Present (VELCB)	LED
ELCB Fuse (Slow Blow)	1.5A Slow Blow

Model Specification

Power Source	8 x 1.5V C Batteries Alkaline
Standard Accessories	Test Leads x 2 (terminate own plug)
Certificates	Certificate of Conformance



T4137 - Digital Milliohm Meter

- Four terminal measurement
- Large LCD display
- Robust lightweight case with O-ring seal
- Bonding tests
- Earth continuity testing

Technical Overview

Feature	Range	Accuracy
Resistance Ranges (Ω)	0 - 200m Ω in steps of 100 $\mu\Omega$	$\pm 0.5\%$ ± 2 digits
	0 - 2000m Ω in steps of 1m Ω	
	0 - 20 Ω in steps of 10m Ω	
	0 - 200 Ω in steps of 100m Ω	
Test Current (A)	1mA = 2000 Ω range 10mA = 200 Ω range 100mA = 2000m Ω range	$\pm 1.0\%$
Max Output Voltage (V)	20V	

Model Specification

Power Source	12V DC Battery, 8 x 1.5V C Alkaline Batteries
Standard Accessories	Test Leads, ■ ■ ■ (TAL34B)
Certificates	Certificate of Conformance

TEL2TLB - ELCB Socket and Polarity Tester

- SANS164-2 (Type N) plug socket compatible
- Ready-board compatible
- LED wiring integrity indication
- Faulty Earth Detector (LCD)/Live on earth
- ELCB Tester (10-35mA)
- Includes SANS 164-1: 16 A - 3 PIN (Type M) adapter plug



Technical Overview

Feature	Parameter	Accuracy
Operating Voltage (V)	230V	$\pm 10.0\%$
Rated Tripping Current	10mA-35mA	
Quiescent Current (A)	6mA	

Model Specification

Power Source	No battery required
Standard Accessories	Test Leads (length (m))1.5, TEL2TLBADAPT
Certificates	OS:2992

T890 - 3-Phase Detector (Non-contact)

- Clamps over wire insulation without contact on conductor
- Non-contact sensor clips
- Open phase and phase sequence
- Magnets on back of unit to mount on metal surfaces



Technical Overview

AC Operating Voltage (V)	150 to 1000V AC
Operating Frequency (Hz)	45 to 65Hz
Circuit Structure	Electronic
Operating Temperature ($^{\circ}\text{C}$)	-10 to +50 $^{\circ}\text{C}$
Humidity	80%
Current Consumption	15mA
Cable Length	Approx 800mm

Model Specification

Power Source	4 x 1.5 AA Batteries
Standard Accessories	Carry Pouch, Crocodile clips ■ ■ ■
Certificates	UL, IEC61010-1, Certificate of Conformance



T855 - 3-Phase Rotation Indicator

- Fused test leads
- Rotating disc
- Colour coded red/white/blue
- Large crocodile clips
- Real motor behaviour

Technical Overview

AC Operating Voltage (V)	200 - 600V
Operating Frequency (Hz)	50/60Hz
Operating Temperature (°C)	-10 to +40°C
Humidity	80% Max Relative Humidity
Cable Length	1.1m each ■ ■ ■

Model Specification

Standard Accessories	Carry Pouch, Large Crocodile clips ■ ■ ■
Certificates	Certificate of Conformance



T860LEAD

T860 - 3-Phase and Motor Rotation Indicator

- Test rotation of unconnected motors by turning shaft by hand
- Heavy duty crocodile clips
- Open phase identification
- Phase presence
- Colour coded: ■ ■ ■
- Clockwise or anti-clockwise indication

Technical Overview

AC Operating Voltage (V)	100 to 600V AC
Operating Frequency (Hz)	45 to 75Hz
Circuit Structure	Electronic
Operating Temperature (°C)	0°C to +50°C
Humidity	90% Max Relative Humidity
Power Consumption	±14mA for motor rotation field test
(Correct)	±7mA for Phase rotation field indication

Model Specification

Power Source	9V Battery
Standard Accessories	Carry Pouch, Crocodile clips ■ ■ ■ (T860LEAD)
Certificates	Certificate of Conformance



T860LEAD

T887 - 3-Phase Rotation LCD Indicator

- Phase rotation and phase presence
- Colour coded ■ ■ ■
- Large crocodile clips
- No battery required

Technical Overview

AC Operating Voltage (V)	40 - 700V AC
Operating Frequency (Hz)	45 to 75Hz
Operating Temperature (°C)	-1°C to +55°C
Humidity	90% Max Relative Humidity
Cable Length	60cm each of ■ ■ ■

Model Specification

Power Source	No batteries required
Standard Accessories	Carry Pouch, Large Crocodile clips ■ ■ ■ (T860LEAD)
Certificates	Certificate of Conformance



CAT IV 1000V

T70 - Phase Sequence Indicator and Voltage Detector

- Detection AC voltage
- Phase sequence and conformity test with 1-wire method
- With or without contact measurements
- LED Red and buzzer indication
- Practical pen clip
- Dimensions (mm): 160 (L) x 26 (W) x 20 (H)
- Weight (g): 48

Technical Overview

AC Operating Voltage (V)	100 to 1000V AC
Frequency	50 - 60Hz

Model Specification

Power Source	2x 1.5V AAA Alkaline Batteries
Certificate	IEC/EN61010-1



Incorrect phase sequence



Correct phase sequence

CE
IP40

CAT III 250V

Receiver: CAT III 600V

HT38 – Circuit Breaker Finder

- Max distance between transmitter and receiver 500m
- Indicates the reference switch with LED and sound
- Transmitter Dimensions (mm): 95 (L) x 60(W) x 30 (H)
- Transmitter Weight (g): 140
- Receiver Dimensions (mm): 195 (L) x 60(W) x 35 (H)
- Receiver Weight (g): 130

Technical Overview

Feature	Parameter
Signal Output Current (A)	<20mA
Voltage detection	<250VAC to ground

Model Specification

Power Source	230V AC (Transmitter), 1 x 9V Alkaline Battery (Receiver)
Certificates	IP40, EMC: IEC/EN61326, IEC/EN61010-1



T180 - Tone and Probe Kit

- With tone generator and amplifier probe
- Sensitivity control
- Crocodile clips and RJ11 connector
- Single or dual alternating tone
- Use on de-energised circuits

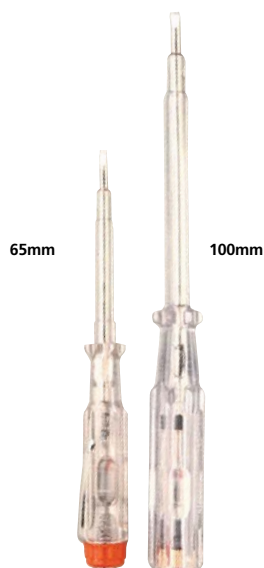
Technical Overview

	Waveform	Square Wave
Tone Generator	Frequency	±1.13kHz
	Amplitude	9V P-P
	Over voltage Protection	±100V
Amplifier Probe	Frequency Detection	1-12kHz
	Receiver distance	50-60cm
	Sensitivity Control	√

Model Specification

Power Source	Probe: 1 x 9V Battery, Tone: 1 x 9V Battery
Standard Accessories	Carry Pouch, Crocodile clips, RJ11 connector
Certificate	Certificate of Conformance

T45200/T45000 – Neon Screwdrivers



Code	Overall Length (mm)	Head (mm)	Width (mm)	Thickness (mm)
T45200	185	100	4	0.5
T45000	140	65	3	0.5

Technical Overview

Feature	Parameter
AC Operating Voltage (V)	120 - 250V

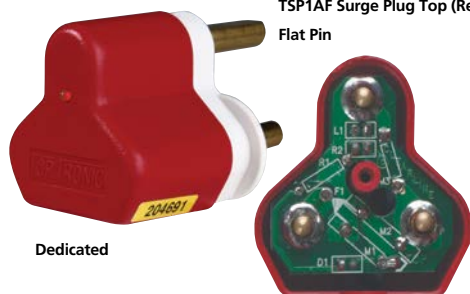
TSP1A Surge Plug Top (Green)



TSP1A/TSP1AF - Surge Plugs

- High surge handling capability
- Incorrect power socket wiring detection
- Economical secondary protection
- Thermal and over-current fusing
- Visual fault indication
- Differential and common mode protection
- 2 Year warranty

TSP1AF Surge Plug Top (Red)
Flat Pin



Technical Overview

Rated Voltage	230V/50Hz
Max Continuous Operating Voltage	275V AC
Max Continuous Current	16A
Max Surge Current (A)	8kA
Fusing (°C)	Integrated 104°C Thermal and 16A over current fuse
Temperature Range	-10°C to +70°C

Model Specification

Certificates	SANS 164-0 Approval
Standards Compliance	IEC 61643-1

TS500 - Non-Contact Voltage

- Non-contact EF detection (NCV)
- Audio/visual/vibration indication
- Polarity check
- Microwave leakage



Technical Overview

Voltage (V)	70 - 600V
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Model Specification

Power Source	4 x 1.5V LR44 Batteries
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CAT III 1000V

T475 - Volt/Current Tracer

- Detect current through concrete walls, shielded/armoured cable
- Adjustable sensitivity
- Non-contact EF detection (NCV)
- Non-contact current detection (NCC)
- Visual and audible

Technical Overview

Feature	Parameter
AC Voltage Detection (V)	5 ~1000V
Current Sensitivity (A)	>100mA
Frequency (Hz)	50 - 500Hz
Operating Temperature (°C)	+10 to +50°C
Operating Humidity	<80% RH

Model Specification

Power Source	4 x 1,5V LR44 Batteries
Certificates	IEC/EN61010-1
Dimensions (mm)	192(L) x 31(W) x 24(H)
Weight (g)	60



Receiver:

CAT IV 1000V

Transmitter:

CAT II 300V

T475S - Wire Tracer & Transmitter

- 3 in 1 Cable & wire tracer, Non-contact EF and current detection (NCV/NCC)
- Detect current through shielded/armoured cable (>1 – 5A)
- Audible and vibration indication
- Auto sensitivity with 6 LED sensitivity indication
- LED torch

Technical Overview

Feature	Parameter
AC Voltage Detection (V)	>25V single sheath wire
Current Sensitivity (A)	>0.5A single sheath wire
Frequency (Hz)	50 – 500Hz
Temperature (°C)	-10 to + 50°C
Operating Humidity	<80% RH

Model Specification

	Cable + Tracer	Transmitter
Power Source	2 x AAA Batteries	200-230V AC
Dimensions (mm)	178(L) x 28(W) x 22(H)	52(L) x 48(W) x 26(H)
Weight	40	55



CAT III 600V

TLVD15 - Non-Contact Voltage Detector

- Voltage Detection EF detection (NCV)
- LED and tone indication
- Flashlight

Technical Overview

Voltage (V)	50 - 1000V AC
Frequency (Hz)	50 - 500Hz

Model Specification

Power Source	2 x AAA 1.5V Batteries
Certificates	EN:61010-1, EN:61326-1



TLVD17 - Non-Contact Voltage

- Direct non-contact EF and current detection (NCV)
- Sensitivity adjustable
- LED and tone indication
- Identifies live and neutral

Technical Overview

AC Voltage (V)	5 - 1000V
Frequency (Hz)	50 - 500Hz

Model Specification

Power Source	1 x 1.5V AAA Battery
Certificates	CE EN:61010-1, EN:61326-1

CAT IV 1000V



TLVD18 - Non-Contact Voltage

- Both direct non-contact EF and voltage detection (NCV)
- LED and tone indication
- Detect Voltage in lighting fixtures and circuit breakers
- Detect a break in a wire
- Flashlight
- Continuity test and basic driver function

Technical Overview

Direct Contact Voltage (V)	50 - 600V AC
Non-contact Voltage (V)	50 - 600V AC
Frequency (Hz)	50 - 500Hz
Operating Temperature (°C)	0 to +40°C
Operating Humidity	< 80% Relative Humidity
Altitude	Max 2000m

Model Specifications

Power Source	2 x 1.5V AAA Batteries
Certificates	EN 61010-1, EN 61326-1

CAT III 600V



WIBRETEST – Vibrating Voltage and Line Tester 750V

- Single phase (240V) and 3-phase (415V) voltage tests
- AC/DC
- DC range indicates polarity
- Probe pins spring loaded for protection and easy measurement
- Neon indicator for 'live' ■ ■
- Slip proof and oil resistant rubber grip, ribbed and padded for extra protection
- Vibration indication

Technical Overview

Feature	Parameter
DC voltage (V) ■ Scale	110 - 750V
AC voltage (V) ■ Scale	125 - 750V

Model Specification

Power Source	No Batteries Required
Certificates	IEC 1010, AC IEEC61243-3 (CATIV 300V), EN55022
Weight (g)	55



WIBRE1000 - Voltage Tester 1000V

- Dust and waterproof
- AC/DC
- LED indicators
- Polarity
- Oil resistant

Technical Overview

Voltage Range (V)	110V/ 230V/ 380V/ 690V/ 1000V AC/DC
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Model Specification

Power Source	No Batteries Required
Certificates	IP65, IEC61243-3, DIN/VDE 0682-401



TBT69 - Voltage Tester 1000V

- Industrial
- Polarity LED indicators
- Electric field detection
- LCD display
- RCD (ELCB) tripping (30mA)
- Continuity
- Attached red probe with screw-on 4mm test tip
- Phase rotation

Technical Overview

Voltage Range (V)	6V/ 12V/ 24V/ 50V/ 120V/ 230V/ 400V/ 690V/ 1000V
Transient protection	8kV

Model Specification

Power Source	No Batteries Required
Certificates	IEC61010-1, IP65



TCVR2 - 2 Pole Voltage and Continuity Tester

- 2 Pole voltage tester with LED & LCD display
- Built in LED torch
- Self-proving
- Continuity Test
- Battery test
- Phase rotation test
- Weight: 216g
- Dimensions: 255 length 61mm width 33.5mm depth

IP64

CAT III 690V

CAT IV 600V

SA DESIGNED
SANS10142

Technical Overview

Feature	Parameter
AC Voltage Detection (V)	12 - 690V
Current Sensitivity (A)	>100mA
Frequency (Hz)	50 - 60Hz
Operating Temperature (°C)	+10 to +50°C
Operating Humidity	<80% RH

Model Specification

Power Source	2 x 1,5V AAA Batteries
Certificates	IEC/EN61010-1, EN61243-3:2014, EN 61010-2-33



DUSPOLA - Analogue Plus 1000V

- Vibration
- Phase sequence
- LED indicators
- Solenoid movement
- Polarity test

IP65

CAT III 1000V

Technical Overview

AC Voltage (V)	12 - 1000V
DC Voltage (V)	12 - 1000V

Model Specification

Power Source	No Batteries Required
Optional Accessories	DUSPOLABAG
Certificates	IP65, 61243-3:2011-02



DUSPOLE - Voltage Tester 1000V

- Expert
- Vibration
- Phase sequence
- Continuity with buzzer
- LED indicators
- Measuring point illumination
- Polarity test

IP65

CAT III 1000V

Technical Overview

Voltage (V)	12 - 1000V AC
Voltage (V)	12 - 1000V DC

Model Specification

Power Source	2 x 1.5V AAA Batteries
Certificates	IP65, 61243-3:2011-02



CE
IP65

Warning Sensitivity

Voltage (Phase to ground)	Detection Angle	Detection Distance
11kV	120°	120cm ± 20%
22kV	120°	140cm ± 20%
33kV	120°	160cm ± 20%
42kV	120°	170cm ± 20%

T325SVD - Personal Safety Voltage Detector

The T325SVD is designed as a personal safety device warning you of potential danger of high voltage presence in the surrounding area. The device sounds a loud audible beep and flashes when high voltage presence is detected

Please Note this device is not designed to verify isolation for safe working conditions, it is purely a pre-warning system.

- Wear it like a watch
- Compact, easy to wear and convenient in use
- Usable both indoor and outdoor
- Water-proof design. (IP65)
- Equipped with self-testing functions
- Able to sense all kinds of AC High Voltage System from 11Kv to 42Kv
- Low power consumption
- CE Certified

Technical Overview

Feature	Parameter
Applicable Frequency (Hz)	50/60Hz
Operating Temperature (°C)	0°C to +40°C
Volume (dB)	65dB or higher at 1 meter distance

Model Specification

Power Source	1 x CR2032 battery
Dimensions (mm)	79(L) x 42(W) x 33(H)
Weight (g)	42 (batteries included)



SA DESIGNED
SANS10142
LIFETIME WARRANTY

T175HP - Proximity Detector (Hi-Prox)

- Non-contact high voltage detector
- Ten switch-selectable voltage sensitivity ranges
- Lightweight
- Audible and visual indication of live voltage
- Rose adaptor
- Check high frequency radiation

Technical Overview

Voltage (V)	240V/ 3.3kV/ 6.6kV/ 11kV/ 22kV/ 33kV/ 66kV/ 132kV/ 275kV
Detection	Selection range is detected at approx. 25cm from the voltage 240V ±10cm, 33kV ±50cm
Self-Test	Selection
Indicators	Bright LED and buzzer

Model Specification

Power Source	3 x 1.5V C Batteries
Standard Accessories	Carry Pouch
Certificates	Certificate of Conformance
Dimensions (mm)	260(H) x 98(W)
Weight (g)	503



T99FD -
Fuse disconnect included

Telescopic Link Stick - Ritz

VTT25F

- 6 Sections
- 7.78m (25ft) Length when extended
- Voltage range 1 to 132kV
- Rubber hook latch
- Base cap for better stability

Model Specification

Length Extended (m)	7.78m (25ft)
Standard Accessories	Heavy Duty Carry Bag
Certificates	Certificate of Conformance, ASTM F 1826-00 specification

VTT30F

- 7 Sections
- Suitable for voltage ranging 1 to 132kV
- Rubber hook latch
- Base cap for better stability

Model Specification

Length Extended (m)	9.18m (30ft)
Standard Accessories	Heavy Duty Carry Bag
Certificates	Certificate of Conformance, ASTM F 1826-00 specification



T99FD -
Fuse disconnect included

Telescopic Link Stick - Hastings

- Long reach, speed, convenience and safety
- High dielectric properties
- Triangular shape prevents twisting
- Removable sections to shorten stick

Technical Overview

	C4031601 (SH250)	CSH230 (SH230)	HV240
Voltage range (V)	1 - 132kV	1 - 132kV	1 - 132kV
Length Extended (m)	7.62m (25ft)	9m (30ft)	12m (40ft)
Tip Diameter Retracted (m)	1.55m	1.60m	1.60m
Base Diameter (mm)	60mm	67mm	

Model Specification

Standard Accessories	Heavy Duty Carry Bag (LSBAG)	Fuse Hook, Bag	Heavy Duty Carry Bag
Certificates	Calibration Certificate	Calibration Certificate	12m (40ft)
Weight (kg)	18.3	22.6	



T99FD -
Hook included

Telescopic Link Sticks

- Triangular - shaped design keeps sections aligned during extension and retraction
- Withstands voltage rating of 100kV from 30cm for 5min
- Universal end fitting

THS25F

Model Specification

Length Extended (m)	7.78m
Standard Accessories	Disconnected hook and carry bag
Sections	6
Certificates	IEC 62193

*12m available on request

THS30F

Model Specification

Length Extended (m)	9.18m
Standard Accessories	Disconnected hook and carry bag
Sections	7
Certificates	IEC 62193

TPC7/11/22/33/44K – High Voltage Testers

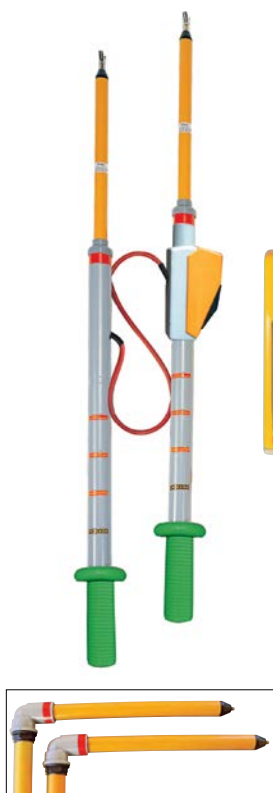
- High voltage phase comparators/live line tester/voltage detector
- Dual colour coded scale (% , V AC)
- Neon indicator lit when > 1200 AC
- Measure and test phase to earth and phase to phase
- High quality fibreglass wound rods
- Resistive measurement method
- Current is limited to Milliampere
- Grounded or ungrounded systems
- Lightweight, robust and compact
- High immunity to interference fields
- Silicone handles
- Specified by municipalities, mines and Eskom

Technical Overview

Model	TPC7K	TPC11K*	TPC22K	TPC33K*	TPC44K
System Voltage (kV)	6.6	11	22	33	44
Full Scale Voltage (kV)	8	12	24	36	48
Total Resistance (MΩ)	3.95	6.78	13.5	20.1	27
Response Time (s)	1 s				
Neon Threshold	1.2 kV				
Operating Temperature (°C)	-25 to +55°C				
Operating Humidity	20 to 96% RH				

Model Specifications

Power Source	No Batteries Required				
Total Length (m)	1.105	1.105	1.225	1.375	1.525
Total Weight (kg)	1.2	1.2	1.3	1.4	1.5
Standard Accessories	Carry Case				
Optional Accessories	90° Bend TPCAA90, Proving Unit T2713				
Certificates	IEC61481:200, IECSP8561481 (Excluding TPC44K)				



TPCAA90 - 90° Angle bends for the TPC Series (Optional Accessory)



T2713 - Proving unit for TPC series (Optional Accessory)



T1133HVD25E – High Voltage Contact Capacitor Detector (Designed for Eskom)

- Designed for multi-voltage sites
- Covers systems voltage from 11kV to 33kV
- Contact Capacitive High Voltage Detector
- Self-starting and automatically activated when the High Voltage is applied to the contact electrode
- Self-test built-in
- Use on sinusoidal (50 or 60Hz) High Voltage systems
- HV live or dead
- Bridging protection
- Spark protection
- Designed for Eskom

Technical Overview

System Voltage	11/33kV
Threshold Set within Range	2500V as per Eskom regulation
Response Time (s)	<1s
Auto-OFF	±3min
Battery Low	<7V
Threshold	2.5kV
Battery Current	<30mA
■ = Armed	Yes
■ = V Detected	Yes

Model Specification

Power Source	1 x 9V Alkaline Battery
Standard Accessories	Carry Case, Cleaning Kit, 1 x Rose Connector, 1 x Y Contact
Certificates	Certificate of Conformance IEC 61481, IEC 61243-1 above 1kV 50/60Hz, IP65
Dimensions (mm)	180(L) x 100(Dia.)
Weight (g)	600



HVD – High Voltage Detector

- HV live or dead

Technical Overview

ELECTRICAL	HVD13AC	HVD32A	HVD33AC
System Voltage (kV)	6.6 to 132	11 to 33	44 to 132
Threshold Range (kV)	2.5kV	2.5kV	10kV
Spark Protection	Detector will not be damaged as a result of spark discharge while making contact with the conductor under test		
Bridging Protection	Detector and its accessories will not cause flashover between live parts of the installation or between live parts of the installation and earth/ground		
Current Consumption	30mA		
Test Button	Tests and ready for use		
Visual Indicator (2Hz)	■ lamp (voltage present), ■ lamp (safe)		
Audible Indicator	Buzzer - 3.1kHz tone modulated at 2Hz - 70dB (1.5m)		

Model Specification for HVD

	Length (mm)	Diameter (mm)	Material
Y Electrode	35	40	Stainless steel
Power Source	1 x 9V Alkaline Battery		
Standard Accessories	Carry Case, Cleaning Kit, 1 x Rose Connector, 1 x Y Contact		
Certificates	Certificate of Conformance, IEC 61481, IEC 61243-1 above 1kV 50/60Hz, IP65		
Dimensions (mm)	180 (L) x 100 (Dia.)		
Weight (g)	600		



THVD – Automatic Contact Capacitive High Voltage Detector

- Self-starting and automatically activated when the High Voltage is applied to the contact electrode
- Use on sinusoidal (50 or 60Hz) high voltage systems
- Models are available to cover systems voltage from 6.6kV to 132kV
- HV live or dead
- Self-test built in
- Specified at Eskom, mines and municipalities



IP65

SANS10142

LIFETIME WARRANTY

Technical Overview

MODEL	T213HVD	T217HVD	T218HVD	T219HVD	T220HVD
System Voltage	11kV	11/33kV	44/ 132kV	56/132kV	6.6/132kV
Threshold Set within Range	1.65kV - 4.4kV	3.3kV - 4.95kV	1.8kV - 2.7kV	6.6kV - 19.8kV	1.65kV - 14.6kV
Response Time (s)	<1s	<1s	<1s	<1s	<1s
Auto-OFF	±3min	±3min	±3min	±3min	±3min
Bridging Protection	Yes	Yes	Yes	Yes	Yes
Spark Protection	Yes	Yes	Yes	Yes	Yes
Battery Low	<7V	<7V	<7V	<7V	<7V
Threshold	3.02kV	4.12kV	2.5kV	13.2kV	2.5kV
Battery Current	<30mA	<30mA	<30mA	<30mA	<30mA
■ = Ready	Yes	Yes	Yes	Yes	Yes
■ = V Present	Yes	Yes	Yes	Yes	Yes

Model Specification for THVD

	Length (mm)	Diameter (mm)	Material
Y Electrode	35	40	Stainless steel
Power Source	1 x 9V Alkaline Battery		
Standard Accessories	Carry Case, Cleaning Kit, 1 x Rose Connector, 1 x Y Contact		
Certificates	Certificate of Conformance, IEC 61481, IEC 61243-1 above 1kV 50/60Hz, IP65		
Dimensions (mm)	180(L) x 100(Dia.)		
Weight (g)	600		



IP54

Model Specification	C.A.T4™	Genny4
Power Source	2 x LR20 (D) 1.5 V Alkaline Batteries (Compatible with D type NiMH rechargeable batteries)	4 x LR20 (D) 1.5 V Alkaline Batteries

CAT4PLUS - Cable, Pipe Locator and Avoidance Kit

- C.A.T4™ Avoidance Mode™
- eCert™ – remote calibration validation
- Four functions, audio and visual indication and depth estimation in Genny mode
- Signal strength indicator
- Mode/clock face indicator
- USB data connection
- Genny4 transmits a specialised small diameter Locate frequency

Technical Overview

Locate Performance	Frequency	Sensitivity@ 1m	Conditions: Locating Depth Guide	
			Good	Poor
Power signals (P)	50 – 1.5 kHz	3mA	3	2
Radio signals (R)	15k – 30kHz	25µA	2	1
Genny4 signals (G)	32.768kHz ±20Hz 131.072kHz ±20Hz	5µA	4	2
Avoidance Mode (A)	P + R + G As above	As above	4	2

Feature	Parameter
Dynamic Range	120dB @ 10Hz
Dynamic Overload Protection	120dB @ 10Hz
Depth Accuracy	Line: 5% 0.1m to 3m Sonde: 5% 0.1m (On undistorted signal and with no adjacent signals)
Horizontal GPS Position Accuracy	3m CEP (Circular Error Probable) – Conditions and satellite dependent
Temperature (°C)	-20 to +50°C
Standard Accessories	Includes clamp, spike and bag

RD7200 – Cable Route Tracer

- Sun light readable display
- Low pitch and high pitch audio options with vibration alerts
- Sensitive and accurate signal processing for reliable results
- Compass Orientation
- Power filters
- Self-calibration check
- Haptic swing feedback
- Strike-Alert, warns of the presence of shallow cables
- True-Depth and current readout

Performance

Sensitivity	6E-15 Tesla 5µA at 1m (33kHz)
Dynamic range	140dB rms/√Hz
Selectivity	120dB/Hz
Depth Measurement Precision	± 3%
Locate Accuracy	± 5% of depth
Active Locate Filter Bandwidth	± 3Hz, 0 < 1kHz ± 10Hz, ≥ 1kHz
Maximum Depth Readout (max)	Cable /Pipe: 30m Sonde: 19.5m
Start-up time	Less than 1 second

Locate Functions

Active Locate Modes	Peak Peak+ (Choice of combined Peak & Guidance or Peak & Null) Guidance Null
Gain Control	Guidance Mode: Automatic Other modes: Manual gain using "+" or "-" with one touch to return to center (50% of Full Scale)
Active Locate Frequencies	8 Frequencies: 512Hz, 640Hz, 8kHz, 33kHz, 65kHz, 83kHz, 131kHz and 200kHz
Sonde Frequencies	4 Frequencies: 512Hz, 640Hz, 8kHz and 33kHz
Fault Find	8KFF Locate insulation sheath faults on pipes and cables to 10cm / 4' accuracy using the accessory A-Frame and a compatible transmitter
Passive Locate Modes	Power, Radio, and CPS (Cathodic Protection System)



IP65

Model Specification	
Power Source	2 x D-Cell Alkaline Batteries
Standard Accessories (RD7100PL Receiver)	Soft Carry Bag, 100mm Transmitter Clamp, Connection Leads, Tx-5 Transmitter
Certificates	EN 61010-1:2010, IP65



RD8200 – Cable Route Tracer

- Unique arrangement of 5 antennas to optimize different tasks
- Enhanced self-test
- StrikeAlert™ in active and passive locating modes - shallow cables visual and audio warnings
- eCert™ - verify and certify calibration of your locator via internet
- RD Map App on Android
- CALSafe™ - Countdown to calibration certificate expiry date
- TruDepth™ - only when correctly orientated
- High sensitivity
- GPS and Usage-Logging
- iLOC - Bluetooth enabled transmitter to control power and frequency up to 450m away

Technical Overview

Locator

Feature	Parameter
Locate Frequencies	22
Sonde Frequencies	4
Passive Modes	5
4 kHz	4k+CD

Transmitter

Output Power (Max)	10W
Active Frequencies	36
Induction frequencies	8
Current Direction Frequencies	14
Induction field strength	1

Model Specification	Locator	Transmitter
Power Source	Lithium-Ion Battery	Lithium-Ion Battery

Needs to be charged regularly

T2550T – Handheld Cable Fault Locator

- Transmit and reflect of pulse signal principle - open, short, splice, taps, water ingress and impedance mismatches
- Max range 3km
- Auto power off
- Backlight
- Autoranging
- Automatic Pulse width
- Connectors: 2 x 4mm safety terminals



CE
IP54

Technical Overview

Feature	Parameter	Accuracy
Measuring Range (m)	100/ 300/ 1000/ 3000m	0.9% of range
Variable Propagation Velocity Factor (PVF)	0.01-0.99	0.9%
Resolution	1% of range	
Output Impedance (Ω)	120 Ω	
Output Pulse	5V (nominal in open circuit)	
Operating Temperature ($^{\circ}\text{C}$)	-20 to +70 $^{\circ}\text{C}$	

Model Specification

Power Source	6 x AA Batteries
Standard Accessories	2m Test Leads, Carry Pouch
Certificates	IP54, IEC61010-1, EN60950
Dimensions (mm)	210(L) x 100(W) x 50(H)
Weight (g)	550

T02AS

- Universal
- 10A
- Suitable for all testers with 4mm terminals
- Budget test lead set with probe and crocodile clips
- Silicon based with thicker probes



CAT IV 600V

CAT III 1000V

T8040LEAD

- Universal
- 10A
- Handles 125mm
- Length of leads 1.2m
- Suitable for all DMMs (P7-15)

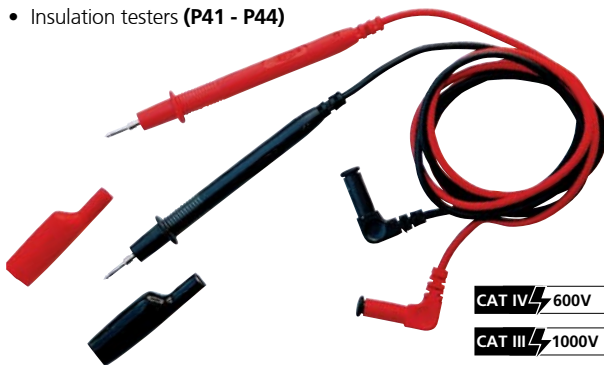


CAT IV 600V

CAT III 1000V

TAL24

- Universal
- 10A
- 2mm Probe tip
- PVC test leads
- C/W Screw on crocodile clips
- Length of leads 1.1m
- Suitable for all DMMs (P7-15)
- Insulation testers (P41 - P44)



CAT IV 600V

CAT III 1000V

TAL25

- Universal
- 4mm Probe tip
- PVC test leads
- C/W Slide on crocodile clips
- Suitable for all DMMs (P7-15)

**TALTBM**

- Silicone
- Ideal for TBM Series meters (P19-26)
- Certification: IEC61010-1



CAT IV 1000V

TAL35RBK

- Silicone
- Double insulated Silicone wire (1m)
- Spring-shrouded 4mm brass caged banana probe tips
- Shrouded right-angle connector
- Suitable for all DMMs (P7-15)
- Certification: IEC 1010



CAT III 1000V

TALTIN

- Double insulated silicone wire (1.2m)
- Used for TIN insulation testers
- TIN4D - P43**
- TIN5D - P43**
- TIN6D - P44**
- TIN7D - P44**



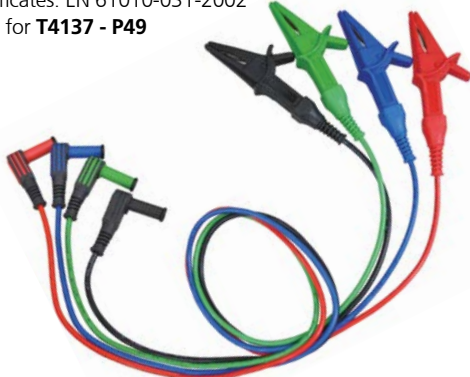
TAL1825

- Accessories
- Short length to reduce resistance with loop test
- Used for loop testers
- T1825 - P45**



TAL34B

- Wide grip crocodile clips with integral finger guards
- Right angle connectors
- 10A
- Length: 600mm
- Certificates: EN 61010-031:2002
- Used for **T4137 - P49**



T860LEAD ■ ■ ■ for T860 & T887

CAT III 600V

TEL4137

- PVC insulated wire (900mm) with connected straight input plugs (100mm silicon wire)
- Outside diameter: 4mm
- Certificates: EN61010-031:2002 + At:2008
- 3A



CAT III 150V

Colour	Length (m)
■ ■ ■ ■	1

TAL30AG

- Wide grip crocodile clips with integral finger guard
- Large high tension spring mount: 35mm
- Double insulated silicon wire
- Safety straight input plug
- 10A
- Certificates: EN 61010-031:2002 + At:2008



CAT III 1000V

Colour	Length (m)
■	1

TELEL

- ELCB test lead 3 Plug



T1805LEAD – 4-Wire Earth Resistance Test Leads

- Terminal: 4mm brass banana plug
- Wire: PVC
- Outside diameter: 3.5mm
- Braided copper wires: 0.127mm
- Auxiliary earth spikes: 450mm



Colour	Length (m)
■	1 and 5
■	10
■	5

TAL30CRBK

- Accessories
- Wide grip crocodile clip with integral finger guard
- Compatible with 4mm male leads
- Suitable for use with **TAL35RBK** (P63) test leads



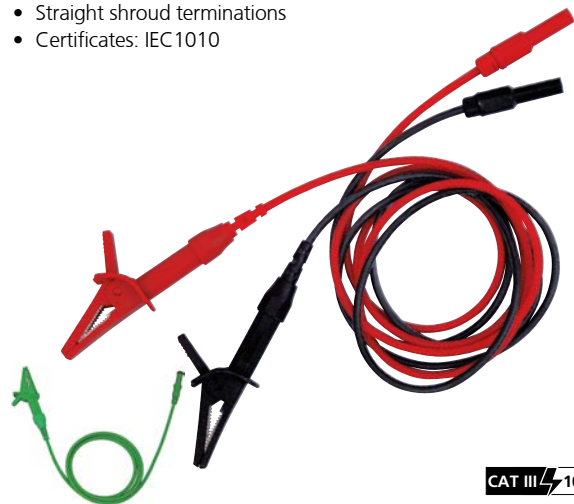
TAL38CRBK

- Accessories
- Wide grip crocodile clips with integral finger guard
- Suitable for all 4mm male leads
- Suitable for use with **TAL39RBK** (P63) test leads



TAL30ARBK

- Double insulated silicone wire (1m)
- Wide grip crocodile clips with integral finger guard
- Straight shroud terminations
- Certificates: IEC1010



TAL39RBK

- Double insulated silicone wire (1.2m)
- Straight shroud terminations both sides



TAL58 – Earth Resistance Test Leads

- Large test probe handles with shroud 4mm brass caged banana plug tip
- Insulated silicone wire 2.5m
- Safety straight input plug connect with extra green guard
- **TIN8D – P44**



CAT I 15kV

TAL30HB

- Spring-shrouded 4mm brass caged banana probe tip
- Double insulated silicon wire
- Safety straight input plug
- Certificates: EN61010-031:2002 + At:2008
- 10A



CAT III 1000V

Colour	Length (m)
■	1

TAL23CA

(TEL11)

- Crocodile clip for 4mm banana plug
- 10A
- Certificates: IEC/EN61010-031



CAT III 1000V

CAT IV 600V

TAL36

- Wide grip crocodile clips with 35mm spring mouth
- PVC insulated wire
- All 3-wire Earth Resistance Testers

T1805 - P36

T1820 - P37

T1120 - P37



Colour	Length (m)
■	15
■	10
■	10
■	5

TAL36L – 3-Wire Earth Resistance Test Leads

- Wide grip crocodile clips with 35mm spring mouth
- PVC insulated wire



Colour	Length (m)
■	30
■	20
■	5

TEARTHKIT – Earthing Tester Kit

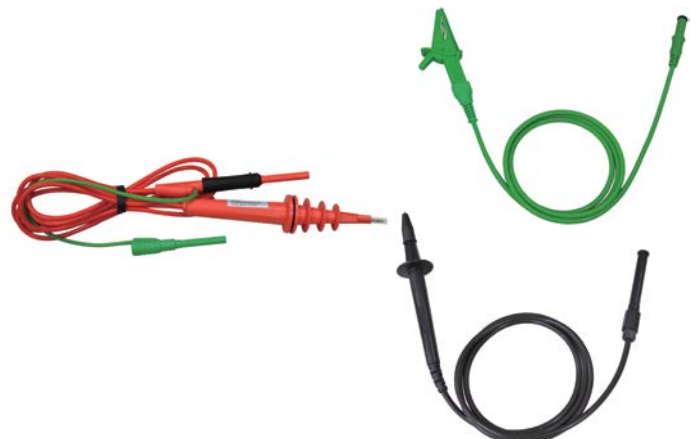
- Used for earthing testers
- T416 - P36
- MACROG3 - P29
- T60 - P31
- Length: Red - 250mm



Colour	Length (m)
■	20
■	4.5
■	25

TIN8DTLKT - TIN8D Cable Kit

- TAL58 - P65
- TAL30AG - P64
- TAL30HB - P66
- Pouch (47mm x 240mm x 138mm)



TKPS54BK /TKPS54RD

- Accessories
- Flexible shaft with twin pointed gripping jaws
- Colour:
 - (RD)
 - (BK)
- Compatible with 4mm male leads
- 4A Red Grabber Clip, 30V AC/ 60V DC Rating 4.1mm tip size, 4mm probe socket size
- Contact resistance 50m(Ω)
- Nickel grip jaws
- PF insulation material



Certificates	EN 1010 part 2-031, UL94 V-0
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TELEWR50F

- 4mm Brass banana plug
- Soft PVC insulated wire
- Braided copper wires: 0.254mm
- Outside diameter: 4mm



Colour	Length (m)
■	50
Accessories	Auxillary, Earth Bar, Crocodile Clip



MAIN MEASUREMENTS	TPQA820
PAGE NO.	69
AC/DC voltage in single-phase/three-phase systems	•
AC/DC current in single-phase/three-phase systems	•
Cosphi, Power Factor	•
Voltage unbalance (NEG%, ZERO%)	•
Active, reactive, apparent power/energy and DC power	•
Voltage and current harmonics up to the 49th with THD%	•
Voltage anomalies (dips, peaks) with 10ms resolution (at 50Hz)	•
Voltage fast transients (spikes) with 5µs resolution	
Electric motor starting current (INRUSH)	
Voltage flickers (Pst, Plt)	
Phase sequence	•
Neutral-Ground Voltage	
Neutral current	•
MEMORY AND RECORDING	
Max number of simultaneously selectable parameters	383
Recording with selectable integration period	5s-60min
Indicative memory duration (in days at Pl=10min at max number of parameters)	30 days
Indication of recording duration	• *
Internal memory capacity	8MB
External compact flash card	
Default and custom recording	
Saving instant sampled value	• *
REAL-TIME DISPLAY	
Summary table of main electric parameters	• *
Voltage/current waveforms	• *
Tables or histograms of Harmonics and THD%	• *
Voltage/current vector diagram	• *
ADDITIONAL CHARACTERISTICS	
Measurement with use of external CT and VT (with optional accessory HT903)	ACONBIN**
Touchscreen colour display	
Power supply: Rechargeable battery and charger	Auto power supplied
Auto Power Off (APO)	•
USB port for data download onto Pen Drive	Only PC
PC interface with software for Windows	WiFi/USB
Context help active on each screen	
Protection password on recording	
Safety category	CAT IV 300V
Reference standard for power quality	
Reference standard for safety	IEC/EN61010-1
Dimensions (mm) LxWxH	255 x 200 x 115
Weight (batteries included) Kg	0.7

*Through App HTANALYSIS

Adapter **ACONBIN necessary


CAT IV **300V**

 (AC to ground,
max 460V
between Inputs)


TPQA820 – 3-Phase without Neutral

- AC TRMS voltage in single-/3-phase systems
- AC TRMS current in single-/3-phase systems
- Active, reactive and apparent power/energy
- Cosphi and Power Factor
- Voltage dips and peaks on 10ms
- Voltage unbalance (NEG%, ZERO%) only
- Voltage/current waveforms
- Maximum number of simultaneously recorded quantities, 383
- Calculation and recording of voltage/current THD%

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (V)	10 – 265V	±0.7% + 0.4V
AC TRMS Voltage (V)	10 – 460V	±1.0% + 0.2V
DC TRMS(External STD Transducer Clamp)	5 – 999.9mV	±0.7% + 0.6mV
AC TRMS Current (STD External Transducer Clamp)	5 – 999.9mV	±0.5% + 0.6mV
Frequency (Hz)	42.5 – 65Hz	0.2% + 0.1Hz

Model Specification

Power Source	Rechargeable Li-ION Battery
Standard Accessories Selection Guide (P70)	KITMPPACW - 4 x Measuring Cables KITMPPACC - 4 x Crocodile Clips TFLEX33L - Flex 1000A AC Clamp, Diameter 174mm TOPVIEW2007 - Windows Software and USB Cable
Certificates	IP40 , IEC/EN61010-1, Calibration Certificate



Code	Image	Description	MACROG3	T60	TPQA820
PAGE NO.			29	31	69
TOPVIEW2007 TOPVIEW2006		Windows software, USB cable	TOPVIEW 2006		TOPVIEW 2007
BORSA2051		Soft carry bag	•		
TA0055		External power supply AC/DC			
KITMPPACC		AC - 4 Crocodile clips			•
KITMPPACW		AC - 4 Cables (2m)			•
TKIT800		5 Cables (black, red, green, blue, brown) with crocodile clips			
606-IECN		Connector with magnetic terminal			•
ACONBIN		Adapter for connection standard clamps			o
HTFLEX33E		Flex 3000A AC clamp, max diameter of cable 174mm			
HTFLEX33L		Flex 1000A AC clamp, diameter 174mm			•
HTFLEX35		Flex 3000A AC clamp, max diameter of cable 274mm			o Max 1000 AC
HT96U		Standard AC clamp 1-100-1000A/1V, diameter 54mm	o		o ACONBIN
HP30D1		Standard DC clamp 1000A/1V, diameter 83mm	o		o ACONBIN
HT4005K		Standard AC 200A/1V clamp, diameter 40mm	o		o ACONBIN
HT4005N		Transducer AC 5A-100A/1V			o ACONBIN
TIMP57		Loop/Line adaptor	o		
T2100		Earth clamp	o	o	
PR400		Remote lead for test activation	•		
HT52		Temperature/humidity probe	o	o	
HT53		Illuminance measurement probe	o	o	
RCDX10		Accessory for industrial RCDS	o	o	

o ACONBIN necessary

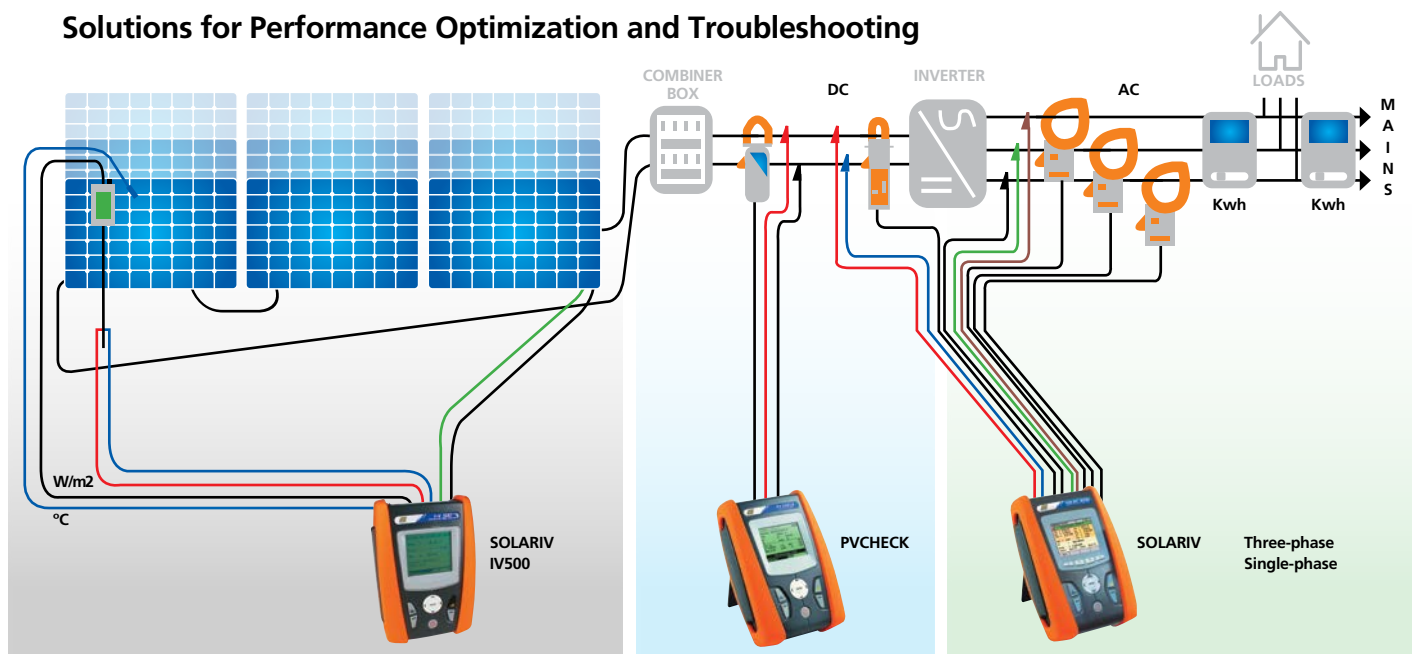


MAINTENANCE AND EFFICIENCY OF THE PHOTOVOLTAIC SYSTEM	SOLARIV	IV500	PVCHECK	PVISOTEST
PAGE NO.	74	75	77	76
Continuity of protective conductors with 200mA			•	•
Insulation measurement with test voltage 250, 500, 1000V DC with no service interruption			•	x +1500Vdc
I-V Curve measurement on single module or string	•			
VOC and ISC measurement on single module or string	•		•	
Single- and 3-Phase efficiency measurement	1MPPT			
DC side efficiency of the photovoltaic field			•	
Use of remote unit SOLAR02 with USB \ RF connection	RF	USB	RF	
Measurement of irradiation with reference cell	•	•	•	
Temperature of cell and environment	•	•	•	
POWER QUALITY ANALYSIS				
AC/DC voltage in single-/3-phase systems		•	DC	•
AC/DC current in single-/3-phase systems			DC	•
Cosphi, Power Factor				
Voltage unbalance (NEG%, ZERO%)				
Power/Energy: Active P, Reactive Q, Apparent S	Only active P		Only active P	
Voltage and current harmonics up to the 49 th with THD%				
Voltage anomalies (dips, peaks) with 10ms resolution (at 50Hz)				
Voltage fast transients (spikes) with 5µs resolution (200kHz)				
Electric motor starting current (INRUSH)				
Voltage flickers (Pst, Plt)				
Phase sequence				
Neutral-Ground Voltage				
Neutral current				
MEMORY AND RECORDING				
Internal memory capacity	249 curves I-V 8 days@ PI=10min	249 curves I-V	999 Locations	999 Locations
Recording with selectable integration period	5s-60min		5s-60min	
Indicative memory duration(in days at PI=10min at max number of parameters)	8			
Indication of recording duration for power quality analysis			•	
Internal memory extension with compact flash card			•	
Default and custom recordings				
REAL-TIME DISPLAY				
Summary table of main electric parameters	•	•	•	•
Voltage/current waveforms				
Tables or histograms of Harmonics and THD%				
Voltage/current vector diagram				
Polarization Index (P.I.)				•
Dielectric Absorption Ratio				•
Ground Fault Location				•



ADDITIONAL CHARACTERISTICS	SOLARIV	IV500	PVCHECK	PVISOTEST
Measuring range of I-V Curve / IVCK	1500V/10A 1000V/15A	1500V/10A 1000V/15A	1000V/15A only VOC and ISC	
Measuring range for efficiency measurement	1000V DC/ 265V AC			
Touchscreen colour display				
LCD display with backlight	•	•	•	•
USB port for data download onto Pen Drive				
PC interface with software for Windows	•	•	•	•
Integrated WiFi interface	•	•		
Custom management of internal PV module database	•	•	•	
Power supply: Rechargeable battery, charger				
Indication of recording duration for efficiency measurement	•			
On display help	•	•	•	•
Safety category	CAT III 300	CAT III 300	CAT III 300	CAT III 1500
Reference standard for safety	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1	IEC/EN61010-1
Reference standard for Power Quality Analysis				
Dimensions (mm) LxWxH	235 x 165 x 75	235 x 165 x 75	235 x 165 x 75	235 x 165 x 75
Weight (batteries included) kg	1.2	1.2	1.2	1.2

Solutions for Performance Optimization and Troubleshooting



Troubleshooting

Possibly during the operation of a system, some modules may jeopardise the performance of the whole system. When system efficiency is lower than expected, it is necessary to detect the defective modules so that they can be replaced.

Suggested solution: Measure the I-V curve with devices IV500 (P75) or SOLARIV (P74) (DC voltage up to 1500V)

Commissioning Tests

When operating a photovoltaic system, it is necessary to certify its safety according to IEC62446.

Suggested solution: PVCHECK (P77) is recommended to perform these verifications

Performance

For effective maintenance programmes, Performance Recording and monitoring is necessary to identify losses quickly and efficiently.

Suggested solution: SOLARIV (P74) are ideal for recording utilisation over time as well as performance checks of an inverter.



ACCESSORY		Description	SOLARIV	IV500	PVCHECK	PVISOTEST
PAGE NO.			74	75	77	76
TOPVIEW2006		PC Windows software + USB/ optical cable (C2006) for TOPVIEW2006 (C2007) for TOPVIEW2007	TOPVIEW2006	TOPVIEW2006	TOPVIEW2006	TOPVIEW2006
TOPVIEW2007						
PT300N		PT1000 probe for PV module temperature	•		O	
SOLAR02		Irradiation and temperature remote unit	•	O	O	
KITGSC4		4 Cables, 4 crocodile clips	•	•	•	•
TKIT800		5 Cables, 5 crocodile clips				
KITPVMC3 - KITPCMC3		2 Adapters with connectors MC3	KITPVMC3	KITPVMC3	KITPCMC3	O
KITPVMC4 - KITPCMC4		2 adapters with connectors MC4	KITPVMC4	KITPVMC4	KITPVMC4	•
TA0055		AC/DC battery charger 230V 50/60Hz				
PT400		Touch-screen pen				
HT304N		Irradiation measurement sensor	•	•	O	
M304		Mechanical inclinometer	•	•	O	
HT4004N		Standard 10-100A DC clamp, diameter 32mm	•			
HT4005K		Standard 200A AC clamp, diameter 40mm	•			
C2007		TYPE A/B 1.5m USB cable				
C2006		USB cable with optional adapter	•	•	•	
HT97U		Standard 10-100-1000A AC clamp, diameter 54mm	O			
HTFLEX33E		Flex 3000A AC clamp, diameter 174mm				
HP30D1		1000A DC clamp, diameter 83mm	O			
HP30C3		3000A AC clamp, diameter 70mm	O			
HP30C2		200-2000A AC clamp, diameter 70mm	O			
606IECN		Magnetic connectors for voltage measurement	O	O	O	O
BORSA2051		Soft carrying bag			•	
VA500		Rigid carrying case	•	•		•
KITKELVIN		Test lead kit	O	O		

O Optional



CAT II 1000V DC

CAT III 300V AC to ground (Max 1500V among inputs P1, P2, C1, c2)



SOLARIV – I-V Curve Tracer Up To 1500V DC

- Measurement of PV module/string output voltage, 1500V
- Measurement of PV module/string output current, 15A
- Resolution (spots) of I-V curve in Standard or Capacitive mode, 128
- Measurement of Voc-Isc-Pmax-Vmpp-Imp-FF-Fill Factor
- Measurement of cell temperature through external feeler
- Measurement of irradiation [W/m²] through reference cell
- Measurement of DC and rated power at module/string output
- Detection of I-V curve through remote unit SOLAR-02
- Measurement of resistance of series Rs of panels
- Direct comparison with reference conditions (STC - 1000W/m², 25°C)
- Internal database for managing up to 30 PV modules (30.000 modules by software)
- DC/AC TRMS single-phase voltage
- DC/AC TRMS single-phase current
- Single-phase DC power / AC active power
- Solar irradiation [W/m²] with reference cell HT304N
- Panel and environmental temperature through probes
- Remote unit SOLAR02 with RF connection
- Display of environmental data in real time
- Use of compensation relationships Cells/ Environment on Pdc
- Parameter recording of a PV system with 5s to 60min programmable IP
- Max/Min

Technical Overview

Certifier of Single Phase PV Installation

Feature	Parameter	Accuracy
DC Voltage (V)	15 – 1500V	±0.5% + 2 Digit
AC TRMS Voltage (V)	10 – 265V	±0.5% + 2 Digit
DC Current (External Transducer Clamp(mV))	-1100 - 1100mV	±0.5% + 0.6mV
AC TRMS Current (External Transducer Clamp (mv))	1 – 1200mV	±0.5% + 0.6mV
DC Power (1<FS≤1000)	0 – 9999kA	±0.7% + 3 Digit (I _{meas} < 10%FS)
AC Single Phase (1<FS≤100)	0 – 9999kA	±0.7% + 3 Digit (I _{meas} < 10%FS)
Frequency (Hz)	47.5 – 63Hz	0.2% + 1.0Hz
Irradiance (Reference Cell)	1 – 65mV	±1.0% + 5 Digit
Temperature (External Probe PT1000)	-20 to +100°C	±1.0% + 1°C

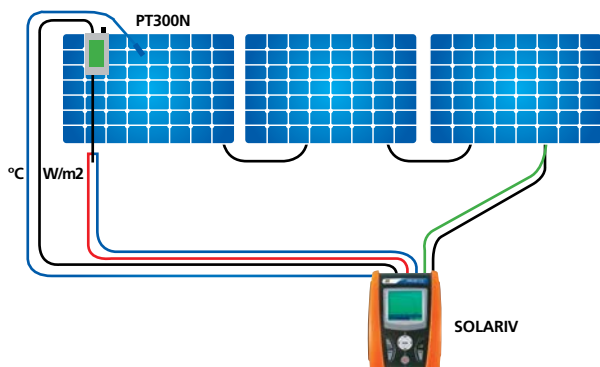


Model Specification

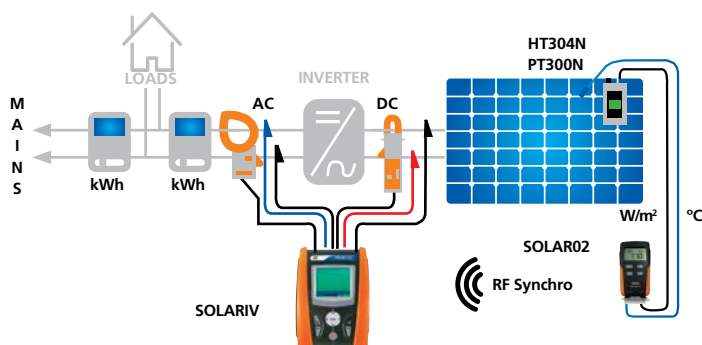
Power Source	6x1.5V AA Alkaline Batteries
Standard Accessories Selection Guide (P73)	SOLAR02 - Irradiation and Temperature Remote KITGSC4 - 4 x Cables & 4 x Crocodile Clips KITPVMC3 - 2 x Adapters with Connectors MC3 KITPVMC4 - 2 x Adapters with Connectors MC4 HT4005K - Standard 200A AC clamp, diameter 40mm HT4004N - Standard 10-100A DC Clamp, Diameter 32mm HT304N - Sensor for Irradiation Measurement PT300N - PT1000 Probe for PV Modules M304 - Mechanical inclinometer TOPVIEW2006 - Windows Software & Optical/USB C2006 Cable VA500 - Rigid Case
Certificates	IEC/EN61010-1, Calibration Certificate

I-V Curve and IVCK Measurements

Feature	Parameter	Accuracy
I-V, IVCK: VDC Voltage @ OPC	15 – 1499.9V	±0.5% + 2 Digit
I-V, IVCK: IDC Current @ OPC	10 – 15A	±1.0% + 2 Digit
I-V: DC Power @ OPC (Vmpp >30V, Impp >2A)	50 – 99 999W	±1.0% + 6 Digit
I-V, IVCK: VDC Voltage (@ STC)	5 – 999.9V	±4.0% + 2 Digit
I-V: IDC Current (@ STC)	10 – 99A	±4.0% + 2 Digit
I-V: DC Power @ STC (Vmpp >30V, Impp >2A)	50 – 99 999W	±5.0% + 1 Digit



Measuring of curve IV with environmental sensors



Measuring single-phase efficiency with remote environmental sensors



CAT II ⚡ 1000V DC

CAT III ⚡ 300V AC to ground (Max 1500V among inputs P1, P2, C1, c2)



IV500 - I-V Curve Tracer Up To 1500V DC

- Measurement of PV module/string output voltage, 1500V
- Measurement of PV module/string output current, 15A
- Resolution (spots) of I-V curve in Standard or Capacitive mode, 128
- Measurement of Voc-Isc-Pmax-Vmpp-Impp-Fill Factor
- Measurement of cell temperature through external feeler
- Measurement of irradiation [W/m²] through reference cell
- Measurement of DC and rated power at module/string output
- Detection of I-V curve through remote unit SOLAR02
- Measurement of resistance of series Rs of panels
- Max/Min
- Direct comparison with reference conditions (STC - 1000W/m², 25°C)
- Internal database for managing up to 30 PV modules (30.000 modules by software)
- DC/AC TRMS single-phase voltage
- DC/AC TRMS single-phase current
- Single-phase DC power / AC active power
- Solar irradiation [W/m²] with reference cell HT304N
- Panel and environmental temperature through probes
- Remote unit SOLAR02 with RF connection
- Display of environmental data in real time
- Use of compensation relationships Cells/ Environment on Pdc

Technical Overview

Feature	Parameter	Accuracy
I-V, IVCK: VDC Voltage @ OPC	15 – 1499.9V	±0.5% + 2 Digit
I-V, IVCK: IDC Current @ OPC	10 – 15A	±1.0% + 2 Digit
I-V: DC Power @ OPC (Vmpp >30V, Impp >2A)	50 – 99 999W	±1.0% + 6 Digit
I-V, IVCK: VDC Voltage (@ STC)	5 – 999.9V	±4.0% + 2 Digit
I-V: IDC Current (@ STC)	0.1 – 99A	±4.0% + 2 Digit
I-V: DC Power @ STC (Vmpp >30V, Impp >2A)	50 – 99 999W	±5.0% + 1 Digit
Irradiance (Reference Cell)	1 – 100mV	±1.0% + 5 Digit
Temperature (Auxiliary PT1000 probe)	-20 to +100°C	±1.0% + 1°C

Model Specification

Power Source	6x1.5V AA Alkaline Batteries
Standard Accessories Selection Guide (P73)	KITGSC4 - :4 x Cables and 4 x Crocodile Clips KITPVMC3 - :2 x Adapters with Connectors MC3 KITPVMC4 - :2 x Adapters with Connectors MC4 HT304N - Sensor for Irradiation Measurement M304 - Mechanical inclinometer TOPVIEW2006 - Windows Software & Optical/USB C2006 Cable VA500 - Rigid Case
Certificates	IP40 , IEC/EN61010-1, Calibration Certificate



TOPVIEW2006



KITGSC4



KITPVMC3



KITPVMC4



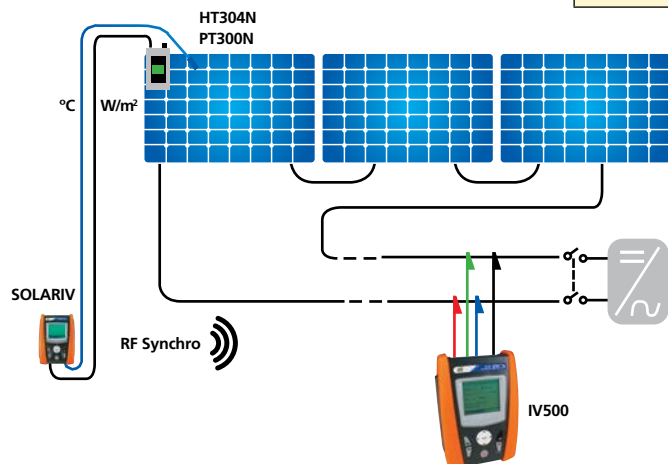
M304



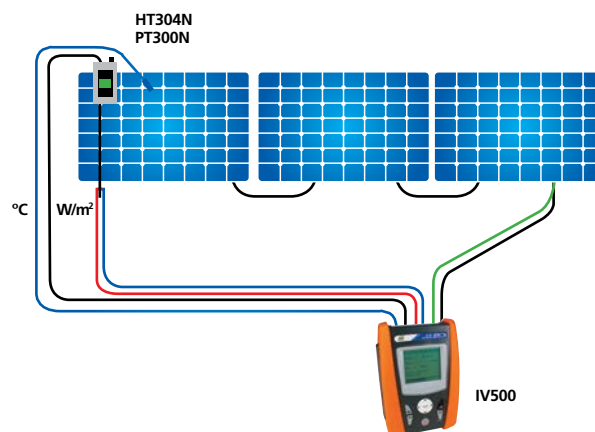
HT304N



VA500



* Measuring a IV curve via remote synchronisation of irradiation and temperature



Measuring of curve IV with environmental sensors



IP40

CAT III 1000V (AC)

CAT III 1500V (DC)



KITGSC4



KITPCMC4



VA507



SP-5100



TOPVIEW2006

PVISOTEST - PV Insulation Tester

Multifunction device for checking electric safety and performance of a photovoltaic system

Features

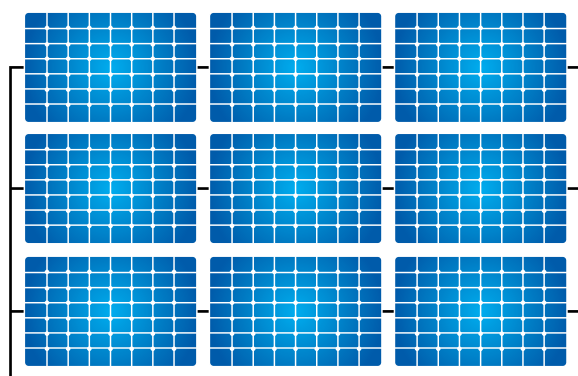
- Insulation measurement up to 1 500V DC even on live systems
- Ground Fault Locator function for localization of the faulty module
- Continuity of the protective conductor with 200mA
- Dielectric absorption ratio D.A.R
- Measurement of polarization index P.I.
- Backlit Display 128 x 128 pixels
- Optical/USB interface

Technical Overview

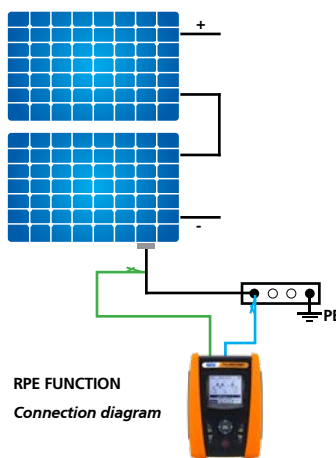
Feature	Parameter	Resolution	Accuracy
DC Voltage (V)	3 - 1500V	1	±1.0% +2 Digit
AC Voltage (V)	3 - 1000V	1	±1.0% +3 Digit
Insulation Test Voltage (V)	250V/ 500V/ 1000V/ 1500V		
Insulation Resistance (MΩ)	0.01 - 9.99MΩ	0.01	±5.0% +5 Digit
	10 - 99.9MΩ	0.1	
	100 - 1999Ω	1	
Continuity of protection conductors (RPE)	0.00 - 9.99Ω	0.01	±2.0% +2 Digit
	10 - 99.9Ω	0.1	
	100 - 1999Ω	1	
Ground Fault Locator (GFL) function	0.1 - 0.99MΩ	0.01	±5.0% +5 Digit (±1 module)
	1.0 - 19.9MΩ	0.1	
	20 - 100MΩ	1	
Working Humidity	<80%RH		
Working Temperature	0°C to 40°C		
Memory	999 tests MAX		
Display	128 x 128 pixel with backlight		

Model Specification

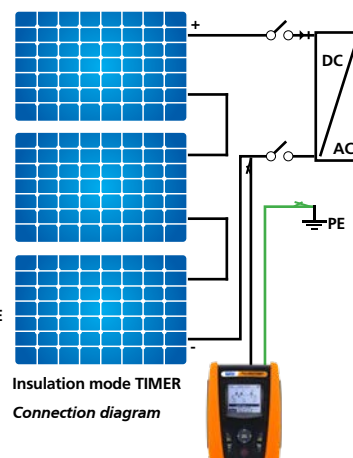
Power Source	6 x 1.5V AA Batteries
Dimensions (mm)	235(L) x 165(W) x 75(H)
Weight (g)	1200 (including batteries)
Standard Accessories Selection Guide	KITGSC4 - 4 x Cables & 4 x Crocodile Clips KITPCMC4 - 2 x MC4 banana adapters VA507 - Hard carrying case SP-5100 - Carrying straps TOPVIEW2006 - Windows Software & Optical/USB C2006 Cable, user manual on CD-ROM
Certificates	IEC/EN61010-1, IEC/EN61010-2-030, IEC/EN61010-2-033, IEC/EN61010-2-034



Insulation mode DUAL
Unearthed PV field



RPE FUNCTION
Connection diagram



Insulation mode TIMER
Connection diagram



PVCHECK PRO

CAT III 300V to ground (Max 1000V DC among inputs P, N, E, C)



TOPVIEW2006



BORSA2051



KITGSC4



KITPVMC3



KITPVMC4



HT4004

PVCHECKPRO



PT300N



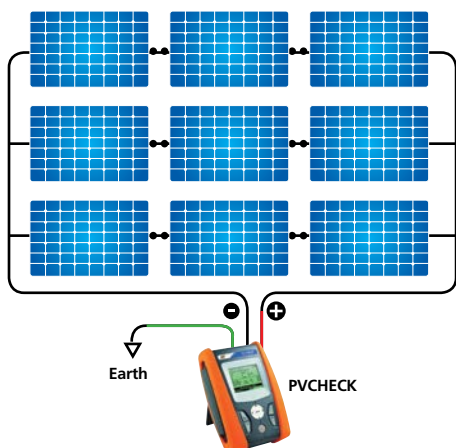
SOLAR02



HT304N



VA500



"Whole photovoltaic field" insulation measurement method

PVCHECK/ PVCHECKPRO

- Continuity of protective conductors with test current 200mA
- Insulation measurement with test voltage 250,500 and 1000VDC
- Open-circuit voltage (VOC) measurement up to 1000V DC
- Short-circuit current (ISC) measurement up to 15A DC
- DC voltage - DC current - DC power measurement
- Use of compensation relationships Cells/Environment on Pdc
- Internal database for managing up to 30 PV modules (30.000 modules by software)
- Test measurement of string operation
- Result for every measurement OK/NO
- Internal memory and optical USB output for PC connection (256kBytes)
- LCD display, 128x128pxl, with backlight

Technical Overview

Performance Test

Feature	Parameter	Accuracy
DC Voltage (V)	5 – 999.9V	±1.0% + 2 Digit
DC Current (Mean External Clamp (mV))	0 – 1000V	±0.5% + 0.6mV Digit
DC Current (FS DC clamp [A])	1<FS≤1000	0.05 – 5A
DC Power (Vmeas > 150V)	1<FS≤1000	±1.5% +3 Digit (Imeas < 10%FS)

Functionality Test

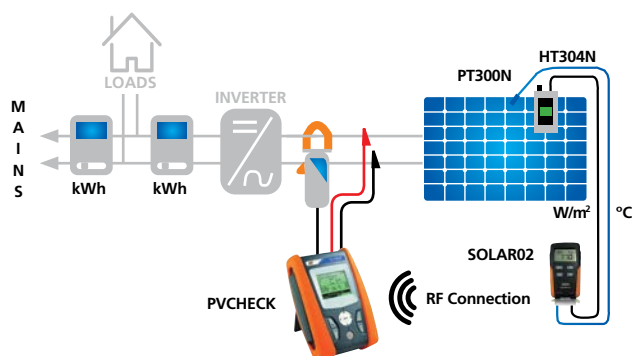
Feature	Parameter	Accuracy
DC Voltage @ OPC (V)	5 – 999V	±1.0% + 2 Digit
DC Current @ OPC (A)	0.1 – 15A	±1.0% + 2 Digit
DC Voltage @ STC (V)	5 – 999	±4.0% + 2 Digit
DC Current @ STC (A)	0.1 – 15A	±4.0% + 2 Digit
Irradiance (Mean HT304N) (mV)	1 – 40mV	±1.0% + 0.1mV
Temperature (Mean PT300N) (°C)	-20 to +100°C	±1.0% + 1°C

Safety Test

Feature	Parameter	Accuracy
Continuity Test (LOWΩ)	0 – 199Ω	±2.0% + 2 Digit
Insulation Test (MΩ) – Mode TIMER	25/ 500/ 1000V 0.01 – 199MΩ	±5.0% + 5 Digit

Model Specification

Power Source	6x1.5V AA Alkaline Batteries
Standard Accessories Selection Guide (P73)	KITGSC4 - 4 x Cables and 4 Crocodile Clips KITPCMC3 - 2 x Adapters with MC3 Connectors KITPCMC4 - 2 x Adapters with MC4 Connectors HT4004 - Standard 10-100A DC clamp, diameter 30mm TOPVIEW2006 - Windows Software and USB C2007 Cable BORSA2051 - Soft Carrying Bag VA500 - Hard carrying case
Optional Accessories Selection Guide (P73)	PT300N - PT1000 Probe for PV Modules Temperature SOLAR02 - Irradiation and Temperature Remote HT304N - Sensor for Irradiation Measurement M304 - Mechanical inclinometer
Certificates	IEC/EN61010-1, Calibration Certificate



Measuring efficiency of photovoltaic field

**T8051 – Process Calibrator 4-20mA / 0-10V**

- Generation of output voltage signal with amplitude up to 10V DC
- Generation of output current signal with amplitude up to 24mA DC
- Current measurement under percentage format (4-20mA)
- Adjustment selector with high sensitivity
- Up to 3 available automatic ramp selection
- Backlight
- Simulation of external transducer

Technical Overview

Feature	Parameter	Accuracy
DC Voltage (Generated and Measured)		
Range	0.01mV - 10V	±0.02% + 4 Digit
Resolution	0.01mV - 0.001V	
Protection	30V DC	
Slower linear ramp	from 0% 100% 0% in 40s	
Faster Linear ramp	from 0% 100% 0% in 15s	
Step ramp	from 0% 100% 0% in steps of 25% with ramps of 5s each	
DC Current (Generated and Measured)		
Range	0.001mA - 24mA	±0.02% + 4 Digit
Percentage	-25% - 125%	
Resolution	0.001mA	
Protection	30mA DC	

**Model Specification**

Power Source	Lithium-Ion Rechargeable Battery, External Adapter
Standard Accessories	Test Leads, Crocodile Clips, Protection Rubber Holster, Carrying Case
Certificates	CE, IEC61010-1

**CBTL - Circuit Buddy 6 to 50V**

- Volt Test Light
- Automotive industry
- Test for current on wiring, fuses etc.
- Safe and easy to use, especially when piercing wire
- Use of LED's instead of globes reduces the risk of damage to electronics



VOLTAGE RANGE 6-50V

**WARNING**

Not for use on circuits exceeding 50 Volts

**CBSPK - Circuit Buddy Safety Probe Kit**

(To be used with a digital multimeter)

- Automotive industry
- Used with a standard multimeter e.g: TBM805
- Easy and safe to pierce wires



VOLTAGE RANGE 0-50V

**WARNING**

Not for use on circuits exceeding 50 Volts.
When using a multimeter, voltages from 0-50V can be measured. 5A MAX Rating.

**T185 - LAN Tester**

- LED Display
- Network cable testing (RJ45)
- Test any un-energised wire or cable
- Auto and manual scan function
- Lock status function
- Verify cable continuity, open, short circuit and miss-wired
- Buzzer sound warning for wire status

Model Specification

Power Source	1 x 9V Battery
Standard Accessories	RJ45 Cable, Case
Certificates	Certificate of Conformance
Dimensions (mm) LxWxH	132x55x39
Weight (g)	148

**Not suitable for PoE CAT cables carrying voltage****T5012 - Carcheck**

- DC only
- Polarity (LED display)
- 3 - 48V

Technical Overview

Feature	Parameter
DC Voltage (V)	3-48V

Model Specification

Power Source	No Battery Required
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T2268 – Digital Tachometer

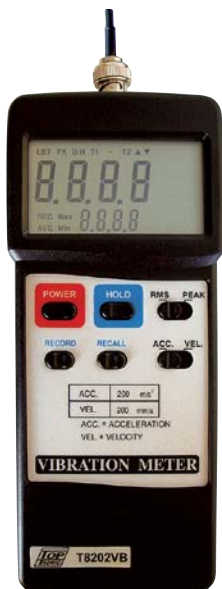
- Photo/contact
- Microprocessor based
- High accuracy
- Variable LCD contrast
- Holds last reading/recalls max and min

Technical Overview

Feature	Parameter	Accuracy
Measurement and Range	Photo: 5 - 99,999 RPM Contact: 0.5 to 19,999 RPM Surface Speed (m/min): m/min: 0.05 - 1999.9 m/min	± 0.05% + 1 Digit
Resolution RPM M/Min	0.1 (0.5 - 999.9 RPM) 1 RPM (≥1000 m/min), 0.01 m/min (< 100 m/min.)	
Display	5 Digits, 18mm LCD	

Model Specification

Power Source	4 x 1.5V AA Batteries
Standard Accessories	Carry Case, Reflecting Tape Marks (600mm), RPM Adaptor (cone) RPM Adaptor (Funnel), Surface Speed Test Wheel
Dimensions (mm)	195(H) x 61(W) x 39(H)
Weight (g)	280



T8202 – Vibration Meter

- Magnetic probe
- Sensing probe
- MIN/MAX memory

Technical Overview

Feature	Parameter	Accuracy
Velocity	0.5 ~199.9mm/s	±5%+2 Digit at 23 ±5°C
Acceleration	0.5 ~199.9m/s²	
Frequency (Hz)	10Hz ~1kHz	
Sampling Time	Approx.1s	
Temperature (°C)	0 to +50°C	
Operation Humidity	< 80% Relative Humidity	

Model Specification

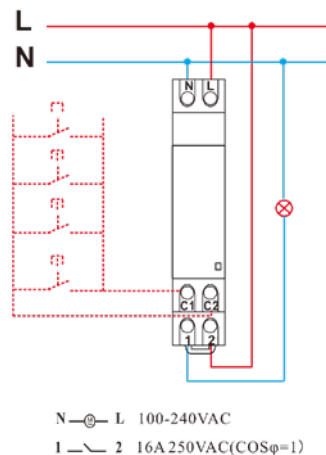
Power Source	4 x 1.5V AA Batteries
Standard Accessories	Cables with plugs, Sensing Probe, Magnetic Base, Carrying Case, Vibration Probe
Certificate	Certificate of Conformance
Dimensions (mm)	180(L) x 72(W) x 32(H)
Weight (g)	Meter: 230, Probe: 165





TMDT2 - 24 Hour Mechanical Din Rail Timer

- 15 Day battery back-up
- Ideal for household use in DBs
- 15 Minute increment adjustment
- 3500 Watt / 16 Amps



TWST2 – WIFI Smart Timer

- Contact configuration: 1NO (SPST-NO)
- DIN Rail mounting 35mm (EN 60715)
- Schedule 100 On/Off programs per week or one day
- Count down time, 1min to 23 hours 59mins
- Disconnected from network, timer retains all programs via Mobile App
- Memory function - contact is in close state, after power failure, contacts still keep close state
- Can be controlled by external buttons

Technical Overview

Feature	Parameter
Rated AC Voltage (V)	100-240V/ 50-60Hz
Rated AC Current: (A)	20A 250V (COS Ø =1)
Wi-Fi Frequency	2.4GHz
Operating Temperature (°C)	-10 to +60°C

Model Specification

Power Source	Mains, Lithium Back-up Battery Reserve (3 Years)
Dimensions (mm)	86(L) x 17.5(W) x 64(H)



TWSTM2 – WIFI Smart Timer

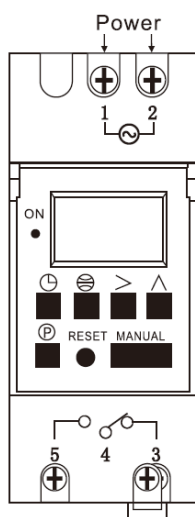
- Contact configuration: 1NO (SPST-NO)
- DIN Rail mounting 35mm (EN 60715)
- Schedule 100 On/Off programs per week or one day
- Count down time, 1min to 23 hours 59mins
- Disconnected from network, timer retains all programs via Mobile App
- Memory function – contact is in close state, after power failure, contacts still keep close state
- Can be controlled by external buttons

Technical Overview

Feature	Parameter
Rated AC Voltage (V)	100-240V/ 50/60Hz
Rated AC Current: (A)	20A 250V (COS Ø =1)
Wi-Fi Frequency	2.4GHz
Operating Temperature (°C)	-10 to +60°C

Model Specification

Power Source	Mains, Lithium Back-up Battery Reserve (3 years)
Dimensions (mm)	86(L) x 17.5(W) x 64(H)



TDTASTRO – Astronomical Timer Relay

Automatically adjust the set time along with seasonal variation and when sun sets or rises

- Contact configuration: 1NO (SPST-NO)
- DIN Rail mounting 35mm (EN 60715)
- 8 sets of On/Off programs
- Set program to revise functions according to latitude variation.
- Minimum interval 1min
- Count down time, 1min to 23 hours 59mins
- Auto time error correction +30sec, weekly.
- Memory function – contact is in close state, after power failure, contacts still keep close state

Technical Overview

Feature	Parameter
Rated AC Voltage (V)	180-250V/ 50/60Hz
Rated AC Current (A)	16A 250V (COS Ø =1) / 2000W
Hysteresis	< 2sec/day
Operating Temperature (°C)	-10 to +60°C

Model Specification

Power Source	Mains, Lithium Back-up Battery Reserve (3 Years)
Dimensions (mm)	86(L) x 17.5(W) x 64(H)

TEMS100 – Energy Meter Single Phase

- Designed to measure single phase two wire AC active energy
- High stability and overload capability
- Low power loss
- Bi-directional total active energy, reverse active energy measure in the total active energy
- Energy data can store in memory chip more than 15 years after power off
- 35mm DIN rail installation
- LCD Display
- Warm-up time 10s
- Connection mode - direct

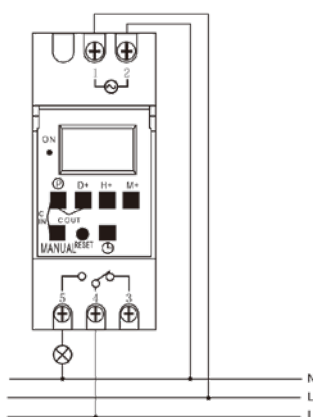
Technical Overview

Feature	Parameter	Accuracy
Rated Voltage (V)	220V-230V	0.5%
Working Voltage range	0.80-1.2Un	
Impulse Voltage	6kV 1.2μs waveform	
AC voltage withstand	4000V/25mA for 60 sec	
Start current	0.004Ib	
Over current withstand	30Imax for 0.01s	
Rated Current (A)	10(100)A	0.5%
Temperature (°C)	-25 to +55°C	
Relative Humidity	0 to 95%, non-condensing	
Frequency	50Hz or 60Hz±10%	0.5%
Power consumption	<1W/10VA	1.0%
Constant	1000 2000 imp/kWh	
Pulse output	Passive pulse, pulse width is 80 ±5ms 5-27VDC, Max current input 27mA DC	

Model Specification

Certification	DIN 43880, IEC62053-21, IEC62052-11
Dimensions (mm)	100(L) x 36(M) x 65(H)
Weight (g)	±130





TDDT7M – 7 Day Digital Timer Transferable Memory

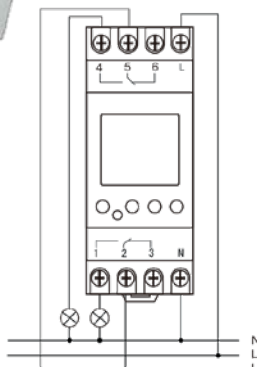
- DIN Rail installation
- LCD display, Day/week programme
- 21 ON/OFF programmes
- Memory card (sold separately)
- Backlight (when connected to power)

Technical Overview

Feature	Parameter
AC Voltage Rating (V)	220V
AC Voltage Limit (V)	180 - 250V
Frequency (Hz)	50 - 60Hz
Switching Contact	1 change-over switch
Switching Capacity at 250V AC, $\cos \phi = 1$	16A
Switching Capacity at 250V AC, $\cos \phi = 0.6$	10A
Incandescent / Halogen Lamp Load	2300W
Energy Saving Lamps Guide	22 x 7W, 15 x 11W, 16 x 15W, 16 x 20W, 14 x 23W
Shortest Switching Times	1 minute (pulse/cycle 1s)
Power Consumption	5VA (max)
Temperature (°C)	-10 to +45°C

Model Specification

Power Reserve	Lithium Battery - 3 Years
Optional Accessories	Memory Card TDDT7MCARD
Dimensions (mm)	36(W) - 2 modules
Weight (g)	±150



TDDT72L – 7-Day Digital Timer Dual Relay Contact

- 2 Channels
- 44 Memory locations (22) ON/OFF programmes
- Pulse programme: 44 memory locations
- Large LCD display

Technical Overview

Feature	Parameter
Operating Voltage (V)	12 – 240V AC/DC
Voltage Rating (V)	24 – 240V AC/DC
Voltage Limit (V)	11 – 240V AC/DC
Frequency (Hz)	50 – 60Hz
Switching Contact	2 Change over switch
Switching Capacity at 250V AC, $\cos \phi = 1$	16A
Switching Capacity at 250V AC, $\cos \phi = 0.6$	10A
Incandescent/Halogen Lamp Load	2300W
Energy Saving Lamps	22 x 7W / 18x11W/ 16x15W/ 16x20W/ 14x23W
Shortest Switching Times	1min (pulse/ cycle 1s)
Time Accuracy	≤2s/day @ 25°C
Power Consumption (Max)	5VA
Temperature (°C)	-10 to +45°C

Model Specification

Power Reserve	3 Years (Lithium Battery)
Dimensions (mm)	93 x 36
Weight (g)	±170



FEATURE	T3004	T8000	T502KJ	TIR9PEN	T111	HT3305
PAGE NO.	87	88	88	89	89	91
Temperature Range (°C)	-27 to 60°C	-100 to 1300°C	-200 to 1370°C	-33 to 500°C	-30 to +550°C	-50 to 1000°C
Probe/Sensor Type	Semi-conductor	K	K, J	IR	IR	IR
Single/Dual Input		Single	Dual			
Data Hold	•	•	•	•	•	
MIN/MAX Display	•	•	•	•	•	•
Resolution	0.1°C	0.1°C	0.1°C	0.1°C	0.5 / 1°C (Auto)	0.1°C
Backlight			•	•	•	•
High/Low Setting			•		•	
Auto Power Off (APO)	•	•	•	•	•	•
Temperature Accuracy (°C)	±0.8°C	0.1°C	±0.05% to ±0.7°C	±2°C or ±2%		±3.5°C
Dimensions (mm) LxWxH	240 x 34 x 34	156 x 60 x 33	160 x 83 x 38	150 x 25 x 27	148 x 105 x 42	180 x 105 x 155
Weight (g)	180	160	240	74	157	330



T630 – Digital Luxmeter

- 0-200 000 Lux
- Data hold
- MAX Hold
- Backlight

Technical Overview

Feature	Parameter	Accuracy
LCD Display	3 1/2 Digit LCD	
Range	20, 200, 2000, 20000, 200000 Lux	±3% + 10 Digit
Resolution	0.01 Lux	
Over-range	OL display	
Sampling Time	2.5 times/s	
Sensor Material	Silicon Photodiode	
Operating Temperature (°C)	0 to +50°C	
Operating Humidity	< 70% Relative Humidity	

Model Specification

Power Source	4 x 1.5 AAA Batteries
Standard Accessories	Carry Pouch
Certificates	Certificate of Conformance
Dimensions (mm)	170(H) x 44(W) x 40(H)
Weight (g)	220



T531 – LED Light Meter

- Removable probe for easy access
- Cosine and colour corrected measurements
- 2s Response time
- "-OL-" display
- MIN/MAX/AVG
- Auto power off

Technical Overview

Feature	Parameter	Accuracy
Measuring Range (lx)	0 – 199.9, 1999, 19990, 199900lx	±3.0% + 5 Digits (standard A light source)
Angle of deviation : Cosine	10° 30° 60° 80°	±1% ±2% ±5% ±20%
Temperature (°C)	0 to +40°C	±0.1% (above 25°C)

Model Specification

Power Source	2 x AA Batteries
Standard Accessories	Carry Case
Dimensions (mm)	169(L) x 63(W) x 37(H)
Weight (g)	210



T325 – Sound Level Tester

- Type 2 sound level meter
- Wide range
- Sampling rate 2s
- Bar graph
- MIN/MAX Hold
- Frequency weighting A/C
- Over range indications

Technical Overview

Feature	Parameter	Accuracy
Display	3.5 Digit with bar graph	
Function	Fast (125ms) Slow (1000ms)	
Measurement Range	30dB to 130dB	±1.5dB at 94dB of 1kHz
Level Ranges	Low 30dB to 80dB, Med 50dB to 100dB, Hi 80dB to 130dB	
Display Update	2.5s	
Microphone	1/4inch (ECM)	
Output Impedance	Approx 100Ω	
Operation Humidity	90% Relative Humidity	
Operation Temperature (°C)	0 to +40°C	

Model Specification

Power Source	1 x 9V Battery
Standard Accessories	Screw Driver, Instruction Manual, Carry Case, Wind Shield
Certificates	Certificate of Conformance
Dimensions (mm)	240(L) x 62(W) x 39(H)
Weight (g)	224

LIFETIME WARRANTY



T3004 – Humidity/Temperature Meter

- Data hold
- MIN/MAX Hold
- REL function
- Auto power off

Technical Overview

Feature	Parameter	Accuracy
Altitude	Up to 2000	
Temperature (°C)	-20 to +60°C	±0.8°C
Humidity	0% ~ 100% Relative Humidity	±3% Relative Humidity
Resolution Temperature	0.1°C	
Resolution Humidity	0.1% Relative Humidity	
Response Time Humidity	180s	
Response Time Temperature	10s	
Operation Temperature	0°C to 40°C	
Operation Humidity	<80% Relative Humidity	
Sampling Rate	2.5 times per second	
Calibration	Internal calibration	



%Rh

Model Specification

Power Source	1 x 9V Battery
--------------	----------------



T522 – Hygro Thermometer Wireless Data Logger

- Measures K-, J-, T-, N-, R-, S- Type Thermocouples
- Interchangeable digital probe
- DEW Point and wet bulb measurement
- Recall function up to 100 sets of manually saved data
- MIN/MAX/AVG

Technical Overview

Feature	Parameter	Accuracy
Temperature (°C): Probe	-20 to +50°C (0-100%RH)	±2.5%RH; ±0.8°C
Temperature (°C): Thermocouple	-200 to +1370°C	±1.0% + 0.7°C
Temperature (°C)	0 to +50°C	



Model Specification

Power Source	4 x 1.5V AAA Batteries
Standard Accessories	Carry Case, Micro USB Cable, K-Type Bead Probe, BT-01 Bluetooth Adapter
Dimensions (mm)	187(L) x 75(W) x 29(H)
Weight (g)	210



T411 – Combustible Gas Leak Detector

The T411 is designed as a high performance combustible gas detector with high sensitivity to a variety of commonly used combustible gases. The unit uses a heated semi-conductor gas sensor and microprocessor control to provide reliable digital signal processing. Adjustable leak sensitivity level and 7 LED visual indicators offer ease and convenient operation.

Features

- Detection of Methane/Hydrocarbon/Combustible Gases.
- Sensitivity as small as 5 ppm.
- Sensor Life: 1 year
- Ambient Concentration Reset.

Application

- Detect leaks in automobile exhaust and fuel system.
- Detect leaks in liquid or gas fired heating system.
- Safety checks at propane filling stations.
- Search for arson residue.
- Detect fuel in marine bilges.
- Check manholes/sewers for safety.
- Check for cracked heat exchangers.
- Detect solvent residue



T4201 – Anemometer

- Low friction
- Ball bearing design
- Data hold
- 4 Different speed units

Technical Overview

Measurement	Range	Resolution
Meters per Second (m/s)	0.4 – 30.0	0.1
Kilometers per Hour (km/h)	1.4 – 108.0	0.1
Knots	0.8 – 58.3	0.1
Display	18mm LCD, 31/2 Digits	
Accuracy	±(2% + 1 Digit) ≤ 25 m/s	
Temperature (°C)	0 to +50°C	
Dimensions	Sensor Head: Round 72mm Dia.	
Operating Humidity	Max 90% Relative Humidity, (0 to +35°C)	

Model Specification

Power Source	1 x 9V Battery
--------------	----------------



T8000 – Anemometer/Hygro/Lux/Temp

- Display LCD
- Auto power off

Technical Overview

Feature	Parameter	Accuracy
AIR VELOCITY		
Metres Per Second (m/s)	0.4 to 30.0 m/s	
Kilometers Per Hour (Km/h)	1.4 to 108.0 km/h	
Knots	0.8 to 58.3 Knots	
Temperature	-100 to 1300°C	0.1°C
Light Intensity	0.2, 200, 1800, 20000 Lux	
Humidity	10 to 95%Rh	0.1%Relative Humidity
Resolution Metres Per Second (m/s)	0.1 m/s	
Resolution Kilometers Per Hour (Km/h)	0.1 km/h	
Resolution Knots	0.1 Knots	
Operating Temperature	0 to 50°C	
Operation Humidity	80% Relative Humidity Max	
LIGHT INTENSITY		
0, 2, 200 Lux	1 Lux	
1800 to 20.000 Lux	10 Lux	



%Rh

Model Specification

Power Source	1 x 9V Battery
--------------	----------------



T502KJ – Thermometer K- and J-Type

- Data hold
- Programmable
- Temp1/Temp2 dual display
- High/low limit mode
- Relative mode
- Backlight

Technical Overview

Feature	Parameter	Accuracy
Temperature (°C)	Type K: -200 to +1370°C Type J: -200 to +1050°C	-50 to +1370°C, ± 0.05%, + 0.7°C -200 to -50°C, 0.05% + 0.3°C Accuracy specification does not include probe accuracy
Resolution	0.1°C	

Model Specification

Power Source	4 x 1.5V AAA Batteries
Standard Accessories	2 x Bead Probe





TIR9PEN – 9:1 Infrared Thermometer

- Hold, Max/Min display
- Circular laser
- Compact size
- LCD backlight

RoHS



Technical Overview

Feature	Parameter	Accuracy
Temperature Range (°C)	-33 to +500°C	±2% or 2°C
Resolution	-9.99 to +199.9°C	0.1°C
Response Time	1.0s	
Wavelength	8 - 14µm	

Model Specification

Power Source	1 x 1.5 AA Battery
Certification	CE, RoHS



T111 – Non-Contact Thermometer

- Auto power off
- Laser pointer
- MIN/MAX Record
- Settable Hi/Lo limits with beep
- Backlight
- Data hold
- Emissivity Adjustable
- Distance and spot D:S (Field of view) 10:1

Technical Overview

Feature	Parameter	Accuracy
Temperature (°C)	-3 to +550°C	± 2°C for -30°C - 100°C, ± 2% for 101°C - 550°C
Resolution	0.5 / 1°C (Auto)	
Response Time	0.25s	
Emissivity Adj.	0,1 to 1	
Co-efficient	±0,2°C	
Operating Temperature (°C)	0 to 50°C	



Model Specifications

Power Source	1 x 9V Battery
Dimensions (mm)	148(L) x 105(W) x 42(H)
Weight (g)	157



HT3305 - Infrared Thermometer + Temperature Meter with K Type Probe

- Display LCD 4 digit with back light
- Auto power off
- Operating temperature/humidity: 0°C / 50°C / 10% / 90%RH
- EMC: IEC/EN61326-1:2006, IEC/EN61326-2:2006
- Laser source: IEC/EN60825-1, Class 2
- Max operating altitude: 2000m
- Mechanical protection: IP54
- Fall test: 2m

Technical Overview

Feature	Parameter	Accuracy	Response time
Temperature (°C)	-50°C to +20°C	±3.5°C	<150ms
	20°C to 300°C		
	300°C to 1000°C		
Spectrum response:	8 - 14µm		
D/S ratio:	20:1		

Model Specifications

Power Source	3x Type AAA LR106 Alkaline batteries
Dimensions (mm)	180(L) x 105(W) x 155(H)





FEATURE	THT80	THT100	THT600	THT500H	TPK80	MERCURY	THTA1	THT33	HOTFIND	TD300
PAGE		93	94		94	14	96	95	95	96
CHARACTERISTICS OF IR IMAGE										
IR Sensor Resolution (Pixels)	120 x 90	80 x 80	384 x 288	160 x 120	80 x 80	80 x 80	220 x 160	80 x 80	384 x 288	384 x 288
Temperature Range	-20 to +550°C	-20 to +650°C	-20 to +650°C	-20 to +650°C	-20 to +160°C	-20 to +260°C	-20 to +300°C	-20 to +380°C	-20 to +600°C	-20 to +600°C
Thermal Image Sensitivity	< 0.05°C at 30°C	< 0.05°C at 30°C	< 0.05°C at 30°C	< 0.05°C at 30°C	≤0.1°C at 30°C	≤0.1°C at 30°C	0.08°C	<0.1°C at 30°C	≤0.05°C at 30°C	±0.05°C at 30°C
Frequency	50Hz	50Hz	50Hz	50Hz		50Hz	9Hz	50Hz	50Hz	50Hz
CHARACTERISTICS OF IR AND INTEGRATED OPTICS										
Field of view	50° x 37°	21° x 21°	17° x 12.7°	17.3° x 13°	20° x 20°	21° x 21°	35° x 26°	21° x 21°	24° x 18°	24° x 18°
Focal length of standard lens		9mm	7.5mm		Fixed	7.5mm	FIXED	7.5mm	MANUAL	MOTORISED
FUNCTIONS										
Communication	USB type C, Wi-fi, SD Card	USB type C, Wi-fi, SD Card	Micro USB Wi-fi, Micro SC, Micro HDMI	Micro USB Wi-fi, Micro SC, Micro HDMI		•		•		•
Laser			•	•		•			•	•
Colour Palettes		4 Standard	8 Standard, 10 Custom Colours			4 Standard	5	6	6	6
Touch Screen	•	•	•	•	•			•	•	
IP Rating		IP50	IP65		IP54	IP65	IP50	IP54	IP54	IP54
Hot/Cold Spot	Auto	Auto			Auto	3 Cursors	3 Markers	3 Cursors	8 Movable spots	Auto
Dimensions (mm) LxWxH	133 x 87 x 24	224 x 77 x 96	270 x 100 x 120	270 x 100 x 120	175 x 102 x 36	190 x 75 x 55	125 x 80 x 24	180 x 60 x 75	215 x 80 x 219	
Weight (g)		500	920		415	555	130	260	600	900



THT80 - Thermal IR Camera

- IR resolution 120 x 90 pxl
- Temperature range -20° to 550°C
- Touch Screen
- Picture in Picture Function
- AutoFusion image enhancement
- Built in LED light

Technical Overview

Feature	Parameter
Temperature Range	-20° to 550°C
Thermal Sensitivity	<0.05°C @ 30°C
Image Frequency	50Hz
Digital Zoom	1x to 32x continuous
IR Resolution	120 x 90 pixels
Colour Palette	4 Standard
Field Of View	50° x 37°
Measurement tools (in live mode)	3 spots, center spot, hot/cold spots,
Communication modes	USB type C , Wi-fi. SD card
Display	touch screen
Dimensions (L x W x H)	133 x 87 x 24mm



Model Specification

Power Source	Lithium-Ion Rechargeable Battery, Battery Charger
Standard Accessories	Focal Lens 9mm, Universal Plugs, Micro SD Card 8GB, USB Cable, Video Cable, Earphone set, Carry Bag, Wrist Strap, THTLink Windows Software, Quick Reference Guide
Certificates	ISO9000

THT100 - Thermal IR Camera

- IR resolution 80 x 80 pxl
- Temp. range -20° to 650°C
- Touch Screen
- Picture in Picture Function
- AutoFusion image enhancement



Technical Overview

Feature	Parameter
Temperature Range	-20° to 650°C
Thermal Sensitivity	<0.05°C @ 30°C
Image Frequency	50Hz
Digital Zoom	1x to 32x continuous
IR Resolution	80 x 80 pixels
Colour Palette	4 Standard
Field Of View	21° x 21°
Communication modes	USB type C, Wi-fi. SD card
Display	touch screen
Dimensions (L x W x H)	140 x 100 x 110

Model Specification

Power Source	Lithium-Ion Rechargeable Battery, Battery Charger
Standard Accessories	Focal Lens 9mm, Universal Plugs, Micro SD Card 8GB, USB Cable, Video Cable, Earphone set, Carry Bag, Wrist Strap, THTLink Windows Software, Quick Reference Guide
Certificates	ISO9000



THT600 - Thermal IR Camera

- IR resolution 384 x 288 pxl
- Field of view 17° x 12.7°
- Temp. range -20° to 650°C
- Laser distance meter
- Picture in Picture Function
- AutoFusion image enhancement
- Built in LED Light

Technical Overview

Feature	Parameter
Temperature Range	-20° to 650°C
Thermal Sensitivity	<0.05°C @ 30°C
Image Frequency	50Hz
Digital Zoom	1x to 32x continuous
IR Resolution	120 x 90 pixels
Colour Palette	4 Standard
Field Of View	17° x 12.7°
Measurement tools (in live mode)	3 spots, center spot, hot/cold spots,
Communication modes	Micro USB, Wi-fi, micro SD, micro HDMI
Display	Touch screen
Dimensions (L x W x H)	270 x 100 x 120

Model Specification

Power Source	2 x 7.4V Lithium-Ion Rechargeable Batteries, AC/DC Adapter and Universal Plugs, Charger
Standard Accessories	7.5mm Lens and Protection Cover, 4GB Micro SD Card, Card Reader, USB Cable, RCA Video Output Cable, Rubber Support for LCD Hood, and Tripod, Earphone Set, THTLink Software, Hard Carry Case
Optional Lenses	RL1160-11mm, RL2260-22mm and RL3360-33mm
Certificates	ISO9000



TPK80 - Thermal Imager

- 80 x 80 Pixels
- Integrates tablet and thermal camera technology
- Communicate in real time, live image and video transmission
- Android, Open Source and expandable
- Built in memory
- IP54



Technical Overview

Feature	Parameter
Temperature (°C)	-20 to +160°C
Measurement Accuracy	±2°C or ±2%
Thermal Sensitivity	≤0.1°C at 30°C
Display	5.5" Capacitive touch screen
Field of View	20° x 20° / 0.5m
Visible Pixels	High Definition CCD, 8 Mega Pixel
Detector Resolution	80 x 80pxl
Focus	Fixed
Image Mode	IR, CCD
Measurement Functions	1 Moveable spots, auto hot/cold spot capture, isothermal analysis, circle analysis, rectangular analysis



**HOTFIND – Infrared Camera**

- 384 x 288 Resolution High Performance IR Camera
- Duo Vision display mode IR/CCD
- 50Hz dynamic real-time graphical output
- 9 movable spots, auto hot/cold spot, 1 line profile, 2 areas boxes, isotherm
- 5M Pixel High definition CCD
- Dual Control—Keypad & Touch

Technical Overview

Feature	Parameter	Accuracy
Temperature (°C)	-20 to +600°C (Up to 1500°C, Optional)	+2.0% ±2.0 °C
Thermal Sensitivity	0.05°C@30°C	
Field of View (FOV)	24° x18°/0.15m	
Spectral Range	8-14µm	
IR Resolution	384 x 288pxl	
Display	3.5" Capacitive Touch screen	
Operating Temperature	-20°C to +50°C	
Correction	Emissivity, ambient temperature, distance, relative humidity	
Image Frequency (Hz)	9Hz	
Focus	Manual	
Palette	6 (Iron, iron inverted, rainbow, feather, grey, grey inverted)	
Image Storage	16GB removable TF card	
Video Output	NTSC (60Hz)/PAL (50Hz)	

Model Specification

Power Source	1 x 3.7V Rechargeable Li-ion Battery
Standard Accessories	USB
Certificates	IP54

THT33 – Infrared Camera

- Built-in illuminator – white light LED
- 80 80pxl

**Technical Overview**

Feature	Parameter	Accuracy
Temperature (°C)	-20 to +380°C	±2.0% or ±2.0°C
Thermal Sensitivity	<0.1°C @ 30°C	±1.0% + 0.7°C
Field of View (FOV)	21° x 21° (7.5mm lens)	
D:S Ratio	74:1	
Spectral Range	8 - 14µm	
IR Resolution	80 x 80pxl	
Display	2.8" TFT Colour	
Humidity	<80%RH	
Image Frequency (Hz)	50Hz	
Emissivity	0.1 – 1.0	
Focus	Automatic	
Colour Palette	5 (Iron, rainbow, grey, grey inverted, feather)	
Image Storage	Internal memory – max 20 locations	

Model Specification

Power Source	1 x 3.7 Rechargeable Li-ion Battery
Standard Accessories	Carry Case, Micro USB Cable
Certificates	IP54

RoHS

TD300 – Thermal Imager

- Duo Vision Plus overlays CCD and IR images giving a detailed and clear image
- 5MP High Definition Camera
- ISO density alarm (visual feedback)
- 3 Imaging modes Infrared (IR), Digital (CCD) and Duo Vision Plus
- Laser Range Finder
- Motorised lens auto focus
- Thermal Video Recording
- Analogue Video output
- JPG file format (Thermal/Visual)
- USB real time transmission
- Dimensions (mm): 25(H)
- Weight (g): 850



IP54

Technical Overview

Feature	Parameter	Accuracy
Temperature (°C)	-20 to +600°C	±2.0% or ±2.0°C
Thermal Sensitivity	≤0.05°C@30°C	
Field of View (FOV)	24° x 18°	
Spectral Range	7.5 to 14μm	
IR Resolution	384x288pxl	
Display	3.5" capacitive Touch	
Operating Temperature	-20°C to +50°C	
Measurement range (m)	0.05 to 30	
Measurement mode	8 movable spots, auto hot/cold spot, profile, 2 area boxes, isotherm, line	
Correction	Emissivity, ambient temperature, distance, relative humidity, reflected temperature	
Focus	Motorised/Manual/Auto	
Palette	Iron, Iron inverted, Rainbow, Feather, Grey and Grey inverted.	
Image Storage	Built in – 16GB	

Model Specification

Power Source	1 x 3.7 Rechargeable Li-ion Battery
Standard Accessories	Carry Case, USB Cable Type-C
Certificates	Calibration Certificate, IP54

THTA1 – Thermal Imaging Camera

- USB Micro-B transfer to and from PC (Android and IOS)
- Visual and thermal picture overlay



Technical Overview

Feature	Parameter	Accuracy
Temperature (°C)	-200 to +1 370°C	±2.0% Digit ±2.0°C
Thermal Sensitivity	0.08°C	±1.0% + 0.7°C
Field of View (FOV)	35° x 26°	
IR Resolution	220 x 160pxl (total 3520pxl)	
Display	3.5" Colour	
Humidity	<90%RH	
Image Frequency (Hz)	9Hz	
Emissivity	0.1 – 1.0	
Focus	Fixed	
Palette	4 (Iron, rainbow, black, white)	
Image Storage	8Gb	

Model Specification

Power Source	1 x 3.7 Rechargeable Li-ion Battery
Dimensions (mm)	125(L) x 80(W) x 24(H)
Weight (g)	130



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PVBP - Solar Tool Backpack

- Suitable for harsh and demanding environments including solar
- Conforms to safety standards
- Backpack is water resistant
- Quality tools with lifetime warranty
- Weight: 8kg (Max weight capacity 12kg)
- 1000V insulated tools included



Code	Description
AW150	Wrench Adjustable 150mm
CC22	Cable Cutter Copper and Aluminium 25mm
H015	Junior Hacksaw (Blade length 150mm)
HAMBP300	Ball Pein Hammer 300g
HT100205	1000V Insulated Combination Plier 205mm
HT104200	1000V Insulated Long Nose Plier 200mm
HT112180	1000V Insulated Diagonal Cutter 180mm
HT20013	1000V Insulated Open-Ended Spanner 13mm
HT21014	1000V Insulated Ring Spanner 14mm
INSSET	8 Piece 1000V Insulated Screwdriver Set including Neon Voltage Tester
O1604LM	7 Piece Allen Key Set 2.5-10mm
PVCT46	Crimper 2.5 - 6mm ₂ solar cable
PVST46	Solar Cable Stripper 2.5 - 6mm ₂
HYAC5	Crimp Tool Bootlace 0.5 - 6mm ₂
HD16L	Crimper 1.5 - 16mm ₂
HUK1	Universal Panel Key
SW10	Socket Driver 10mm
TOOLBAGBP	Bag dimensions (mm): 460(H) x 380(W) x 210(D)

ELECBP - Electrician's Tool Backpack: 32 Piece

- Suitable for harsh and demanding environments
- Conforms to safety standards
- Backpack is water resistant
- Quality tools with lifetime warranty
- Weight: 8kg (Max weight capacity 12kg)



Code	Description
AW200	Adjustable Spanner 200mm
CC38	Cable Cutter 38mm ²
ECOSSET	7 Piece 1000V Insulated Screwdriver Set with Neon Voltage Tester
H015	Junior Hacksaw Blade length 150mm
HAMBP300	Ball Pein Hammer 300g
HT16UT	Crimper 1.5-16mm ₂
HEADLIGHT	LED Headlight
HUK1	Universal Panel Key
LGJ250	Groove Joint Plier 250mm
LGJ300	Groove Joint Plier 300mm
MHT5	5m Magnetic Tip Tape Measure
O1604LM	7 Piece Allen Key Set 2.5-10mm ₂
SDC200	Diagonal Cutter 200mm
SEP200	Combination Plier 200mm
SLN160	Long Nose Plier 160mm
SVN160	Wire Stripper 160mm
SW10	Socket Driver 10mm
SW8	Socket Driver 8mm
VG250	Vice Grip 250mm
WAK2	Manual Retractable Utility Knife (Blade length 60mm)
TOOLBAGBP	Bag dimensions (mm): 460(H) x 380(W) x 210(D)



LIFETIME WARRANTY

ELBKBKBP - Electrician's Tool Backpack: 20 Piece

- Conforms to safety standards
- Quality tools with lifetime warranty
- Weight: 8kg (Max weight capacity 12kg)

Code	Description
AW200	Adjustable Spanner 200mm
CC38	Cable Cutter 38mm ²
ECOSSET	7 Piece 1000V Insulated Screwdriver Set with Neon Voltage Tester
H015	Junior Hacksaw Blade length 150mm
HAMBP300	Ball Pein Hammer 300g
HEADLIGHT	LED Headlight
HUK1	Universal Panel Key
MHT5	5m Magnetic Tip Tape Measure
SDC200	Diagonal Cutter 200mm
SEP200	Combination Plier 200mm
SLN160	Long Nose Plier 160mm
SVN160	Wire Stripper 160mm
VG250	Vice Grip 250mm
WAK2	Manual Retractable Utility Knife (Blade length 60mm)
TOOLBAGBP	Bag dimensions (mm): 460(H) x 380(W) x 210(D)

ELECKT - Electrical Tool Kit: 16 Piece

- Quality tools with lifetime warranty
- Digital multimeter
- General purpose



LIFETIME WARRANTY*

*Tools only

Codes	Description
AW200	Adjustable Spanner 200mm
CCMP	Indent Crimper 0.5 - 10mm
ECOSSET	7 Piece 1000V Insulated Screwdriver Set including Neon Voltage Tester
HEADLIGHT	LED Headlight
O9FA	Allen Key 1.5 - 2 - 2.5 - 3 - 4 - 5 - 5.5 - 6 - 8
SDC180	Diagonal Cutter 180mm
SEP180	Combination Plier 180mm
SLN160	Long Nose Plier 160mm
T235H	TRMS Digital Multimeter - 1999 Counts
WAK2	Manual Retractable Utility Knife (Blade length 60mm)
TOOLBAGELEC	Bag dimensions (mm): 380(H) x 240(W)

PROKT - Electrician's Tool Kit: 17 Piece

- Quality tools with lifetime warranty
- VDE 1000V tools
- Digital clamp meter



LIFETIME WARRANTY*

*Tools only

Code	Description
AW200	Adjustable Spanner 200mm
CC22	Cable Cutter 22mm ²
CCMP	Indent Crimper 0.5 - 10mm
HEADLIGHT	LED Headlight
HUK1	Universal Panel Key
INSSET	8 Piece 1000V Insulated Screwdriver Set including Neon Voltage Tester
SEP180	Combination Pliers 180mm
SLN160	Long Nose Plier 160mm
TBM031	600A AC Clamp Meter
WAK2	Manual Retractable Utility Knife (Blade length 60mm)
TOOLBAGP	Bag dimensions (mm): 380(H) x 240(W)



LIFETIME WARRANTY *
*Tools only

PK1000V - Electrical Tool Kit 1000V: 18 Piece

- Quality tools with lifetime warranty
- All tools and multimeter can be purchased individually

Code	Description
45092	Stripmaster 0.75-6mm,
AW200	Adjustable Spanner 200mm
CC38	Cable Cutter 38mm ²
HCP200H	1000V Plier 200mm
HDC205H	1000V Diagonal Cutter 200mm
HLN200	1000V Long Nose Plier 200mm
HUK1	Universal Panel Key
INSSET	8 Piece 1000V Insulated Screwdriver Set with Neon Voltage Tester
LEDTORCH	LED Weatherproof Torch
T235H	TRMS Digital Multimeter – 1999 Counts
WAK2	Manual Retractable Utility Knife (Blade length 60mm)
PCS	Bag dimensions (mm): 390(L) x 240(W)

ECONOKIT - Electrician's Tool Kit: 22 Piece

- Quality tools with lifetime warranty
- All tools and multimeter can be purchased individually



LIFETIME WARRANTY *
*Tools only

Code	Description
8325	Joint Pliers 250mm
AW200	Adjustable Spanner 200mm
CC22	Cable Cutter 22mm ²
CCMP	Indent Crimper 0.5 - 10mm,
ECOSSET	7 Piece 1000V Insulated Screwdriver Set with Neon Voltage Tester
H015	Junior Hacksaw (Blade length 150mm)
HUK1	Universal Panel Key
LEDTORCH	LED Weatherproof Torch
MHT5	5m Magnetic Tip Tape Measure
H100A	Hacksaw (Blade length 300mm)
SDC200	Diagonal Cutter 200mm
SEP200	Combination Plier 200mm
SLN200	Long Nose Plier 200mm
SVN160	Wire Stripper 160mm
T235H	TRMS Digital Multimeter – 1999 Counts
WAK2	Manual Retractable Utility Knife (Blade length 60mm)
TOOLBAGM	Bag dimensions (mm): 430(L) x 340(W)

TECHKT - Technical Tool Kit: 19 Piece

- Quality tools with lifetime warranty
- Digital multimeter
- General purpose



LIFETIME WARRANTY*

*Tools only

Code	Description
AW200	Wrench Adjustable 100mm
CC22	Cable Cutter 25mm
CCMP	Indent Crimper 0.5 - 10mm
ECOSSET	7 Piece 1000V Insulated Screwdriver Set with Neon Voltage Tester
HUK1	Universal Panel Key
MHT5	5m Magnetic Tip Tape Measure
O9FA	Allan Key (1.5 - 2 - 2.5 - 3 - 4 - 5 - 5.5 - 6 - 8mm)
SEP180	Combination Plier 180mm
SLN160	Long Nose Plier 160mm
SVN160	Wire Stripper 160mm
TSPAN810	Tube Spanner 8, 10mm
T235H	Digital Multimeter - 1999 Counts
WAK2	Manual Retractable Utility Knife (Blade length 60mm)
TOOLBAGTECH	Bag dimensions (mm): 380(L) x 240(W)

ELECMINI – Mini Tool Kit: 14 Piece

- Quality tools with lifetime warranty
- All tools can be purchased individually



Code	Description
AW150	Adjustable Spanner 150mm
ECOSSET	7 Piece 1000V Insulated Screwdriver Set with Neon Voltage Tester
HEADLIGHT	LED Headlight
HUK1	Universal Panel Key
SDC160	Diagonal Cutter 160mm
SEP160	Combination Pliers 160mm
SLN160	Long Nose Plier 160mm
WAK2	Manual Retractable Utility Knife (Blade length 60mm)
	Bag dimensions (mm): 300(L) x 180(W) with external zip up pouch

LIFETIME WARRANTY*

*Tools only

TOOLBAGBP

- Bag dimensions (mm): 460 (H) x 380 (W) x 210 (D)
- Weight: 8kg (Max weight capacity 12kg)
- **PVBP** (p97), **ELECBP** (p97), **ELBKB** (p98)

**TOOLBAGL**

- Bag dimensions (mm): 460(H) x 360(W)
- Inside: 2 internal compartments - 15 pouches
- Outside: 3 pouches
- Hacksaw compartment
- Multimeter pouch
- Strap with steel buckle
- Tool configurations can be made up according to customer specifications

**TOOLBAGM**

- Bag dimensions (mm): 480(H) x 340(W)
- Inside: 11 pouches
- Outside: 3 pouches and Multimeter pouch
- Hacksaw compartment
- Strap with steel buckle
- Tool configurations can be made up according to customer specifications
- **ECONOKIT** (p99)

**TOOLBAGP**

- Bag dimensions (mm): 380(H) x 240(W)
- Inside: 14 elastic straps
- 2 pouches
- **PROKT** (p98)

**TOOLBAGELEC**

- **ELECT** (p98)

**TOOLBAGTECH**

- **TECHKT** (p100)



TMULTCSE - Multimeter Carry Pouch

- General purpose
- Dimensions (mm): 250(L) x 150(W) x 60(H)

**DUSPOLABAG**

- DUSPOLA (p56)
- DUSPOLE (p56)
- Dimensions (mm): 300(L) x 120(W) x 50(H)

**VA500/VA502 - Hard Carry Case**

- Protects devices from water, dust and hostile environments
- Space for accessories



Does not include instrument

LY2001 - Crimper: Pre-Insulated Terminals (DIY)

- Cutting, crimping and stripping
- Light duty

Crimping Range (mm²)

0.75 - 1	■
1.1 - 2.5	■
4 - 6	■

**HYTT1 - Crimper: Pre-Insulated Terminals (DIY)**

- Ratchet release
- Dimensions (mm): 254(L) x 66(W)

Crimping Range (mm²)

0.5 - 1	■
1.1 - 2.5	■
4 - 6	■

**HYTT7 - Crimper: Pre-Insulated Terminals**

- Double crimp grip
- Adjustable crimping pressure
- Ratchet release
- Tension adjustable
- Dimensions (mm): 229(L) x 70(W)

Crimping Range (mm²)

0.5 - 1	■
1.1 - 2.5	■
4 - 6	■

**KST2000A/KST2000B - Crimper: Insulated Terminals**

- Ratchet release (KST2000B)
- Ring, Space, Pin and Twingrip (KST2000B)
- Dimensions (mm): 267(L)

Crimping Range (mm²)

0.5 - 1.25	■
1.1 - 2	■
4 - 5.5	■

**HS2004 - Crimper: Insulated Terminals (DIY)**

- Cutting, crimping and stripping
- Insulated crimping: Red, Blue, Yellow
- Dimensions (mm): 255(L)

Crimping Range (mm²)

0.5
1.25 - 2
2.5
3
5
5.5

**HYAC5 - Crimper: Bootlace Ferrules (DIY)**

- Insulated, single and twin entry ferrules
- Uninsulated ferrules
- Adjustable crimping pressure
- Ratchet release
- Dimensions (mm): 203(L) x 78(W)

Crimping Range (mm²)

0.5 - 0.75	■
1 - 1.5	■
2.5	■
4	■
6	■



HYTBT4 - Compact Crimper: Bootlace Ferrules



- Insulated, single and twin entry ferrules
- Uninsulated ferrules
- Adjustable crimping pressure
- Ratchet release
- Dimensions (mm): 190(L) x 70(W)

Crimping Range (mm²)	
0.25	■
0.5	□
0.75	■
1.5	■
2.5	■
4	■
6	■

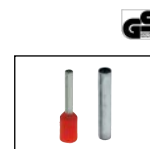


HYAC6 - Crimper: Bootlace Ferrules



- Insulated, single and twin entry ferrules
- Uninsulated ferrules
- Adjustable crimping pressure
- Ratchet release
- Dimensions (mm): 203(L) x 76(W)

Crimping Range (mm²)	
6	■
10	■
16	■



HYAC8 - Crimper: Bootlace Ferrules (DIY)



- Insulated, single and twin entry ferrules
- Uninsulated ferrules
- Push to release lever
- 4 Point pressure adjustment screw
- Strong, lightweight glass fibre reinforced nylon handles
- Square (quad) profile
- Dimensions (mm): 175(L) x 80(W)

Crimping Range (mm²)	
0.08 - 6	



HYAC9 - Crimper: Bootlace Ferrules



- Insulated, single and twin entry ferrules
- Uninsulated ferrules
- Push to release lever
- 6 Point pressure adjustment screw
- Strong, lightweight glass fibre reinforced nylon handles
- Hexagonal profile
- Dimensions (mm): 170(L) x 80(W)

Crimping Range (mm²)	
0.08 - 6	



HYAC17 - Crimper: Bootlace Ferrules



- Insulated, single and twin entry ferrules
- Uninsulated ferrules
- Adjustable crimping pressure
- Ratchet release
- Dimensions (mm): 229(L) x 60(W)

Crimping Range (mm²)	
25	■
35	■



HYTBT6 - Compact Crimper: Bootlace Ferrules



- Insulated, single and twin entry ferrules
- Uninsulated ferrules
- Adjustable crimping pressure
- Ratchet release
- Dimensions (mm): 190(L) x 70(W)

Crimping Range (mm²)	
6	■
10	■
16	■



HYAC3 - Crimper: Coax

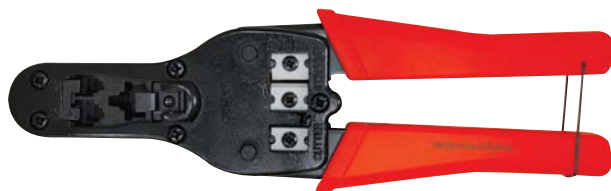
- Adjustable crimping pressure
- Ratchet release
- Dimensions (mm): 241(L) x 70(W)

Crimping Range (mm ²)
1.72
2.5
5.4
6.48
8.2

**HYT11 - Crimper: Tab Terminals**

- Griptite
- Roll over crimp
- Adjustable crimping pressure
- Ratchet release
- Dimensions (mm): 229(L) x 70(W)

Crimping Range (mm ²)
0.5 - 1
1.1 - 2.5
4 - 6

**ASA486 - Crimper: Modular Connectors**

- Cutting and stripping for 4, 6 and 8 conductors
- Dimensions (mm): 228(L)
- Weight: 360g

For crimping handset all in one
4P4C
4P4C plugs
6P6C (RJ-12)
6P4C (RJ-11)
8P8C (RJ-45)

**RJ86 - Crimper: Modular Connectors**

- Cutting and stripping for modular plugs
- Dimensions (mm): 220(L)
- Weight: 320g

Connectors
RJ11
RJ12
RJ45

**HYTB2 - Compact Crimper: Uninsulated Terminals**

- Ratchet release
- Adjustable crimping pressure
- Dimensions (mm): 190(L) x 70(W)

Crimping Range (mm ²)
YTTB2
0.25
1.5
2.5

**HYT8/ HYT9 - Crimper: Uninsulated Terminals**

HYT9

- Ratchet release
- Dimensions (mm): 266(L) x 66(W)

Crimping Range (mm ²)	
HYT8	HYT8
1.5	10
2.5 - 4	16
6 - 8	
10	



CCMP - Multi-Crimp (DIY)

- Long handles - solid leverage
- Cutting and indent crimping
- Dimensions (mm): 250(L)

Crimping Range (mm²)	
0.5	- 10

**T16 - Crimper: Uninsulated Terminals**

- Ratchet release
- Dimensions (mm): 325(L)

Crimping Range (mm²)	
1.5	
2.5	
4 - 6	
10	
16	

**PVCT46 - Crimper: PV (Solar)**

- Standard die for 2.5/4/6mm² (AWG14/12/10) solar PV cable
- Adjustable crimping pressure
- MC4 Solar connectors
- Right angle head design- Prevents wrist bending
- Pull force on crimping pins - 45kg

Crimping Range (mm²)	
Metric	AWG
2.5	10
4	12
6	14

Spare Accessory

Code	Description
PVCT46DIE	Replacement die

**PVCT46B - Crimper: PV (Solar)**

- Standard die for 2.5/4/6mm² (AWG14/12/10) solar PV cable
- Suitable for Bizlink connectors

Crimping Range (mm²)	
Metric	AWG
2.5	10
4	12
6	14



HT16UT - Indent Crimper (DIY)

- Uninsulated terminals and cable lugs
- Ratchet release
- Dimensions (mm): 270(L)
- Weight: 470g

Crimping Range (mm ²)	
Uninsulated Terminals	Cable Lugs
1.25	1.5
1.5	2
2	6
6	10
10	16

**HD16L - Indent Crimper**

- Uninsulated terminals and cable lugs
- Ratchet release
- Dimensions (mm): 270(L)
- Weight: 520g

Crimping Range (mm ²)	
Uninsulated Terminals	Cable Lugs
1.25	1.5
1.5	2
2	6
6	10
10	16

**HD22L - Indent Crimper**

- Uninsulated terminals and cable lugs
- Ratchet release
- Dimensions (mm): 360(L)
- Weight: 780g

Crimping Range (mm ²)	
Uninsulated Terminals	Cable Lugs
5.5	6
6	10
10	16
16	22
22	25

**HT25UT - Indent Crimper (DIY)**

- Uninsulated terminals and cable lugs
- Ratchet release
- Dimensions (mm): 350(L)
- Weight: 700g

Crimping Range (mm ²)	
Uninsulated Terminals	Cable Lugs
5.5	6
6	10
10	16
16	22
22	25

**HD25X - Hex Crimper**

- Cable lugs
- Ratchet release
- Dimensions (mm): 354(L)
- Weight: 780g

Crimping Range (mm ²)	
6	
10	
16	
25	



AK15 - Indent Crimper (Lobster)



- Ratchet release
- Control cycle mechanism
- Dimensions (mm): 270(L)

Crimping Range (mm ²)
1.25
2
5.5
8



AK19 - Indent Crimper (Lobster)



- Ratchet release
- Control cycle mechanism
- Dimensions (mm): 290(L)

Crimping Range (mm ²)
2
5.5
8
16



HT0650 - Hex Crimper (DIY)



- Hexagonal crimper with replaceable rotating dies
- Tubular cable lugs and connectors
- Dies included
- Dimensions (mm): 380(L)
- Weight: 1.5kg

Crimping Range (mm ²)
6, 10, 16, 25, 35, 50

Replacement Die Code
HD650HTDIE



HT06120 - Hex Crimper (DIY)



- Hexagonal crimper with replaceable rotating dies
- Tubular cable lugs and connectors
- Dies included
- Dimensions (mm): 650(L)
- Weight: 3.8kg

Crimping Range (mm ²)
6, 10, 16, 25, 35, 50, 70, 95, 120

Replacement Die Code
HD6120HTDIE



HD0650AU - Hex Crimper



- Hexagonal crimper with replaceable rotating dies
- Tubular cable lugs and connectors
- Dies included
- Dimensions (mm): 390(L)
- Weight: 1.1kg

Crimping Range (mm ²)
6, 10, 16, 25, 35, 50

Replacement Die Code
HD650HTDIE



HD06120AU - Hex Crimper



- Hexagonal crimper with replaceable rotating dies
- Tubular cable lugs and connectors
- Dies included
- Dimensions (mm): 650(L)
- Weight: 4kg

Crimping Range (mm ²)
6, 10, 16, 25, 35, 50, 70, 95, 120

Replacement Die Code
HD6120HTDIE



HD25150AU - Hex Crimper

- Hexagonal crimper with replaceable rotating dies
- Tubular cable lugs and connectors
- Dies included
- Dimensions (mm): 650(L)
- Weight: 4kg

Crimping Range (mm²)

25, 35, 50, 70, 95, 120, 150

Replacement Die Code

HD25150DIE

**K05L (K05B) - Hex Crimper (Klauke)**

- Hexagonal crimper with replaceable rotating dies
- Tubular cable lugs and connectors
- Dies included
- Dimensions (mm): 390(L)

Crimping Range (mm²)

6, 10, 16, 25, 35, 50

**K06L (K06B) - Hex Crimper (Klauke)**

- Hexagonal crimper with replaceable rotating dies
- Tubular cable lugs and connectors
- Dies included
- Dimensions (mm): 390(L)

Crimping Range (mm²)

6, 10, 16, 25, 35, 50, 70, 95, 120

**BOWCRIMPT - Indent Crimper**

- Screw adjustable crimp range
- Forged steel
- Up to 95mm (Aluminium) lugs
- Dimensions (mm): 570(L)
- Weight: 3.1kg

Crimping Range (mm²)

6, 10, 16, 25, 35, 50, 70, 95, 120

**The Importance of a High-Quality Crimp**

When a crimping tool is used on a terminal, two crimps need to take place. One is the electrical connection between the conductor and terminal. The other is the insulation crimp which provides strain relief against vibration and tension.

It is important that the electrical connection is gas-tight without any voids between the wire strands and the terminal. If there are any voids present, then corrosion can occur causing resistance and excessive heat which damages the electrical connection.

Selecting the correct crimping tool ensure a tight crimp preventing future deterioration of the electrical connection and insulation breakage.

Assembly Instructions for Cable Lugs and Ferrules

- Strip conductor according to insertion depth of lug barrel
- Conductor ends must be cleaned before termination
- Insert conductor fully into cable lug or ferrule
- Observing the crimping sequence (see pic right), crimp the cable lug or ferrule using the appropriate crimping tool

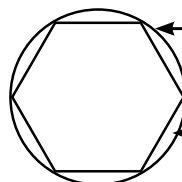
How to maintain the Crimping Tools

- Lubricate axles and other movable parts regularly
- Lubrication* is recommended at least every 10,000 cycles or when tool is exposed to dirt or other contaminants

*Use a light mineral-free oil

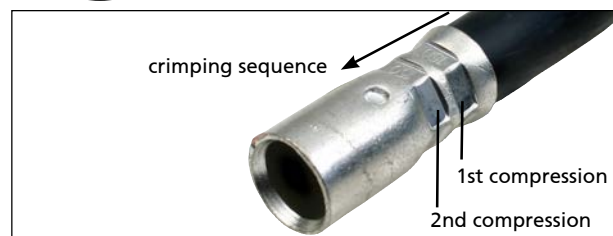


Using a crimper die designed for a terminal with a larger barrel, results in a lower crimp reduction which could cause overheating due to poor electrical contact.



Area of conductor before compression

Area of conductor after compression



HYCP185 - Hand Hydraulic Crimper

- Dies excluded

HYCP185KT - Hand Hydraulic Crimper Kit

- Dies included



- Built-in bypass relief valve for constant compression
- Head rotates 180°
- Force at die face: 5.2 metric ton
- Accepts BEKU type dies
- Dies sold separately
- Dimensions (mm): 373(L) x 140(W)
- Weight: 2.14kg

Die Code	Crimp Sizes (mm ²)
H1851016D	10 and 16 (dual die)
H1852535D	25 and 35 (dual die)
H1855070D	50 and 70 (dual die)
H1859512D	95 and 120 (dual die)
H185150D	150 (single die)
H185185D	185 (single die)



Crimping Range (mm ²)
10, 16, 25, 35, 50, 70, 95, 120, 150, 185

HYCP240 - Hand Hydraulic Crimper

- Dies excluded

HYCP240KT - Hand Hydraulic Crimper Kit

- Dies included



- Built-in bypass relief valve for constant compression
- Head rotates 180°
- Force at die face: 5.2 metric ton
- Accepts BEKU type dies
- Dies sold separately
- Dimensions (mm): 377(L) x 142(W)
- Weight: 2.4kg

Die Code	Crimp Sizes (mm ²)
H1851016D	10 and 16 (dual die)
H1852535D	25 and 35 (dual die)
H1855070D	50 and 70 (dual die)
H1859512D	95 and 120 (dual die)
H185150D	150 (single die)
H185185D	185 (single die)
H240240D	240 (single die)



Crimping Range (mm ²)
10, 16, 25, 35, 50, 70, 95, 120, 150, 185, 240

HYCP400 - Hand Hydraulic Crimper

- Excludes dies

HYCP400KT - Hand Hydraulic Crimper Kit

- Includes dies



- Automatic low/high - pressure conversion with rapid/slow operating motion
- Pressure relief valve for overload protection
- Head rotates 180°
- Force at die face: 12 ton (700 bar)
- C-head opening: 32mm
- Dies sold separately
- Dimensions (mm): 612(L) x 174(W)
- Weight: 6.5kg

Die Code	Die No.	A	B	C
CP40016D	Cu-16	7.20	3.12	14
CP40025D	Cu-25	8.43	3.67	14
CP40035D	Cu-35	10	4.33	16
CP40050D	Cu-50	11.60	5.02	16
CP40070D	Cu-70	13.70	5.95	15.60
CP40095D	Cu-95	15.90	6.85	15.70
CP400120D	Cu-120	17.98	7.79	16
CP400150D	Cu-150	20.10	8.70	15
CP400185D	Cu-185	22.33	9.67	14
CP400240D	Cu-240	25.43	11.01	13
CP400300D	Cu-300	28.44	12.32	11.20
CP400400D	Cu-400	30	14.55	11.50



Crimping Range (mm ²)
10, 16, 25, 35, 50, 70, 95, 120, 150, 185, 240, 300, 400



Use one die size larger for crimping Aluminium lugs



K240KT - Battery Powered Hydraulic Crimper Kit

- Approximately 200 crimps per charge at 50mm²
- 18 Volt Lithium-Ion battery powered (2 included)
- 5.3 Ton die force
- Head rotates 180°
- *Dies included
- Dimensions (mm): 354(L) x 91(W) x 73(H)
- Weight: 2.67kg

Die Code*	Crimp Sizes (mm ²)
H1851016D	10 and 16 (dual die)
H1852535D	25 and 35 (dual die)
H1855070D	50 and 70 (dual die)
H1859512D	95 and 120 (dual die)
H185150D	150 (single die)
H185185D	185 (single die)
H240240D	240 (single die)

Spare Accessories

Code	Description
HYLECBATT	Battery 18V 5Ah



HYLEC32 - Battery Powered Crimper

- Approximately 60 crimps per charge at 50mm²
- 12.7 ton die force
- Head rotates 180°
- 18 Volt Lithium-Ion battery powered
- C-head opening: 32mm
- Dies sold separately
(Refer to **HYCP400KT** See p117)
- Dimensions (mm): 300(L) x 89(W) x 353(H)
- Weight: 6kg (without battery)

Crimping Range (mm ²)
10, 16, 25, 35, 50, 70, 95, 120, 150, 185, 240, 300, 400

Spare Accessories

Code	Description
HYLECBATT	Battery 18V 5Ah (14V battery available on request)





HYUC6 - Hand Hydraulic Indent Crimper

- Only for round aluminium lugs and ferrules for overhead lines
- 7 Ton die force
- Head rotates 360°
- Permanent internal dies
- C-head opening: 36mm
- Two-stage hydraulic system
- Dimensions (mm): 563(L) x 180(W)
- Weight: 6kg

Crimping Range (mm²)
25, 35, 50, 70, 95, 120



HYPNST - Hydraulic Punch Drive Kit with Pump

- Punch electrical panels and switchboards
- Punch driver max output: 12.7 tons
- 2 Draw studs with draw stud adaptor
- Hand pump output: 590 bar
- Weight: 7.6kg

Punch Capacity
3.2mm mild steel
1.6mm stainless steel

Code	Punch Sizes (mm)	Draw Stud
HYPH5216D	16	R1STUD
HYPH5220D	20	
HYPH5225D	25	
HYPH5232D	32	RSSTUD
HYPH5240D	40	
HYPH5250D	50	
R1STUD	3/8" (16.20, 25 Dies)	3/8-24unf thread pitch
RSSTUD	3/4" (32.40, 50 Dies)	3/4-16unf thread pitch



HYTP - Rotary Punch Kit

- Used to punch electrical panels and switchboards
- Punch force: 60kN
- 2 Draw studs
- Weight: 6.5kg

Punch Capacity
3mm mild steel
1.6mm stainless steel (HYLARGESTUD only)

Code	Punch Sizes (mm)	Draw Stud
HY20DIE	20	 HYSMALLSTUD
HY22DIE	22	
HY25DIE	25	
HY32DIE	32	 HYLARGESTUD
HY40DIE	40	
HY50DIE	50	
HYSMALLSTUD	7/16" (20,22,25 Dies)	3/8-24unf thread pitch
HYLARGESTUD	3/16" (32,40,50 Dies)	3/4-16unf thread pitch



HY360RP - 360° Rotational Punch Kit

- Used to punch electrical panels and switchboards
- Head can be rotated 360° through rotating axis
- 2 Draw studs
- Weight: 6.5kg

Punch Capacity
3.5mm mild steel
1.6mm stainless steel (HYLARGESTUD only)

Code	Punch Sizes (mm)	Draw Stud
HY20DIE	20	 HYSMALLSTUD
HY22DIE	22	
HY25DIE	25	
HY32DIE	32	 HYLARGESTUD
HY40DIE	40	
HY50DIE	50	
HYSMALLSTUD	7/16" (20,22,25 Dies)	3/8-24unf thread pitch
HYLARGESTUD	3/4" (32,40,50 Dies)	3/4-16unf thread pitch

FH700FP - Hydraulic Foot Pump



- Two-stage pumping action (700 bar)
- Includes 2 metre hose
- Pioneer 3000 standard coupling
- Dimensions (mm): 720(L)
- Weight: 12kg



HH700HP - Hydraulic Hand Pump



- Two-stage pumping action (700 bar)
- Includes 2 metre hose
- Automatic pressure release
- Pioneer 3000 standard coupling
- Dimensions (mm): 590(L)
- Weight: 10kg



EP30MS - Electric Hydraulic Pump

- Two stage high performance
- Max pressure: 700 bar
- 2 way, 2 position manual valve
- Drive unit: 220V/AC or 110V/AC 50/60Hz
- Includes 5 meter remote control cable
- Dimensions (mm): 454(H)
- Weight: 15kg (without oil)

HYCP400HE - Hydraulic Crimp Head*



- Max output: 14.01 tons
- Dies sold separately
(Refer to **HYCP400KT** table on p110 for die part numbers)
- Pioneer 3000 standard coupling
- Jaw opening: 32mm
- Oil required: 55cc
- Length: 261mm
- Weight: 4.2kg

Crimping Range (mm ²)
16 - 400



HYCP630HE - Hydraulic Crimp Head*



700 bar



Single action cylinder with spring return

- Max output: 24.9 tons
- Pioneer 3000 standard coupling
- Includes hard carry case
- Oil required: 89cc
- Length: 320mm
- Weight: 5.6kg



Crimping Range (mm²) includes dies

400, 500, 630

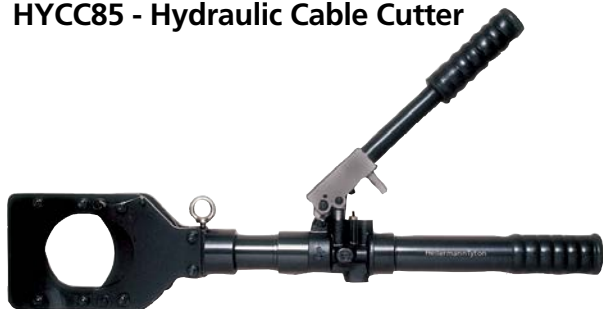
ADP630HE Die Adaptor



Adapter designed for HYCP630HE to interchange with die sets from other 12-ton tools (up to 400mm²) see dies on p110

Die Code	Crimp Sizes (mm ²)
CP630400D	400
CP630500D	500
CP630630D	630

*All heads require a hydraulic pump

HYCC85 - Hydraulic Cable Cutter

- Two stage pumping action for rapid blade advance
- Lock pin type cutting head
- Head rotates 180°
- Output: 4.9 tons
- Cuts: Copper strands - 28mm
Aluminium strands - 38mm
Telephone cable CCP - 85mm
Underground cable - 50mm[#]
- Dimensions (mm): 715(L)
- Weight: 10kg



Copper Cable

HYCC85HE - Hydraulic Cutting Head*

- Operates off any pump (Max pressure 700 bar)
- Lock pin type cutting head
- Blade easily replaceable
- Output: 4.9 tons
- Cuts: Copper strands - 28mm
Aluminium strands - 38mm
Telephone cable CCP - 85mm
- Pioneer 3000 standard coupling
- Dimensions (mm): 460(L)
- Weight: 7.2kg



Copper Cable

HYCC075S - Hydraulic Cutting Head*

- Cuts: 4-Core Underground cable - approx 65mm
*Copper strands - 75mm
*Aluminium strands - 75mm
* XLPE up to 60mm
- Fast cutting with remote operation
- Operated any hydraulic pump with pressure of 700 bar
- Output: 20 tons
- Dimensions (mm): 373(L)
- Weight: 8.7kg



Armoured Cable



Aluminium Cable

HYCC096 - Hydraulic Armoured Cable Cutter Head*

- Two stage pumping action for rapid blade advance
- Output: 13.5 tons
- Max pressure: 700 bar
- Cuts: Copper strands - up to 95mm diameter
Aluminium strands - up to 95mm diameter
Armoured cable - up to 70mm diameter
- Not for XLPE cable
- Spare blades available on request (**HY096BLD**)
- Pioneer 3000 standard coupling
- Dimensions (mm): 412(L) x 247(W) x 105(H)
- Weight: 8.1kg



Armoured Cable

HYCC065HE- Hydraulic Cutting Head*

- Fast cutting with remote operation
- Max pressure: 700 bar
- Max output: 7.5 tons / 73.5kN
- Cutting capacity: Copper cable - 60mm
- Aluminium cable - 60mm
- CCP cable - 65mm
- Underground cable - 65mm (except armoured cable)
- Not for piano wire
- Dimensions (mm): 419(L)
- Weight: 4.9kg

CC22 / CC38 - Cable Cutter**CC22**

	CC22	CC38
Cuts copper and aluminium cable (mm ²)	Up to 25	Up to 38
Cable diameter (mm)	Up to 9.2	Up to 11.4
Overall length (mm)	165	

**Copper Cable****Aluminium Cable****CC60 - Cable Cutter**

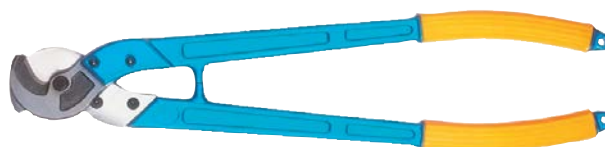
	CC60
Cuts copper and aluminium cable (mm ²)	Up to 60
Cable diameter (mm)	Up to 13.6
Overall length (mm)	235

**Copper Cable****Aluminium Cable****CC100 - Cable Cutter**

- Not for cutting steel wire or steel



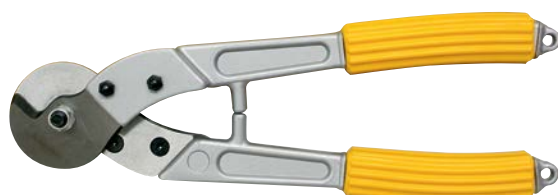
	CC100
Cuts copper and aluminium cable (mm ²)	120
Overall length (mm)	320
Weight (g)	700

**Copper Cable****Aluminium Cable****CC250 / CC500 - Cable Cutter****CC250**

	CC250	CC500
Cuts copper and aluminium cable (mm ²)	250	500
Overall length (mm)	730	800
Weight (kg)	1.54	2.93

Spare Accessories

Code	Description
CC500BLD	Spare Blades

**Copper Cable****Aluminium Cable****SCC60 - Steel Cable Cutter**

	SCC60
Cuts copper cable (mm ²)	60
Cuts wire rope (mm)	7 Max
Cuts steel rod (mm)	5 Max
AWG (1/0) Max	0
Overall length (mm)	310
Weight (g)	730

**Copper Cable****Wire Rope****SCC200 - Steel Cable Cutter**

	SCC60
Cuts copper cable (mm ²)	150
Cuts wire rope (mm)	12 Max
Cuts steel rod (mm)	9 Max
AWG MCM Max	300
Overall length (mm)	600
Weight (kg)	1.8

Spare Accessories

Code	Description
CC200BLD	Spare Blade

**Copper Cable****Wire Rope**

HTJ40 - Ratchet Cable Cutter

- ACSR and armoured Cu / Al cable, steel chain, stainless steel pipe & tube, and tree branches
- Max diameter 38mm



Copper Cable



Aluminium Cable



Armoured Cable

RCC500 - Core Cutter

- Capacity: 50mm diameter
- Not for steel or hard copper
- Spare blades available
- Copper (30mm²), aluminium (600mm²) and multi conductor cable cutter
- One hand single speed ratchet mechanism
- Lockable in closed position



Copper Cable



Aluminium Cable

HTJ55 - Ratchet Cable Cutter

- Cutting, XLPE, armoured Cu / Al cable
- Max 55mm



Copper Cable



Aluminium Cable



Armoured Cable

HTJ76 - Ratchet Cable Cutter

- Capacity: 70mm diameter
- Short and extendable telescopic handles
- 53-55 HRC blade hardness
- SWA cable with multi cores, total cross section size not exceed 4x 120mm² (4x40 AWG)
- Copper and armoured cable cutter
- Dimensions (mm): 420(L) x 205(W)
- Weight: 3.7kg



Copper Cable



Armoured Cable



Marine Cable

RCC325PH - Ratchet Cable Cutter

- Capacity: 380mm²
- Not for use on ACSR cable or steel wire
- Diameter: 32.5mm
- Single speed ratchet mechanism
- Copper and aluminium cable cutter
- Dimensions (mm): 290(L)
- Weight: 990g



Copper Cable



Aluminium Cable

HTJ35 - Ratchet Cable Cutter

- Capacity: 32mm diameter
- Not for steel or hard copper
- Dimensions (mm): 252(L) x 84(W)
- Weight: 690g



Copper Cable

Electrician's Pliers (DIY)



- High grade carbon steel
- Cutting edge for soft wire

Code	Length (mm)	
	Overall	Head
LCP150	160	38
LCP180	180	45
LCP200	200	45

Long Nose Pliers (DIY)



- High grade carbon steel
- Cutting edge for soft wire

Code	Length (mm)	
	Overall	Head
LLN200	200	45

Diagonal Cutters (DIY)



- High grade carbon steel
- Cutting edge for soft wire

Code	Length (mm)	
	Overall	Head
LDC125	110	25
LDC150	160	30
LDC180	180	35
LDC200	200	30

Groove Joint Pliers (DIY)



- High grade carbon steel

Code	Length (mm)	
	Overall	
LGJ250	250	
LGJ300	300	

SP115N - Cable Cutter (DIY)



- Stainless steel
- Cuts up to 1.2mm copper



Copper Cable

8325 - Groove Joint Pliers



- 5 Positions
- Individual high frequency induction hardened
- Length: 250mm

Electrician's Pliers



SEP180

- Chrome plated satin finish
- High grade carbon steel
- Cutting Edge for soft wire
- PVC insulated handles



Code	Length (mm)	
	Overall	Head
SEP160	160	60
SEP180	180	65
SEP200	200	70

Long Nose Pliers



SLN200

- Chrome plated satin finish
- High grade carbon steel
- Cutting edge for soft wire
- PVC insulated handles



Code	Length (mm)	
	Overall	Head
SLN160	160	75
SLN200	200	100

Diagonal Cutters



SDC180

- Chrome plated satin finish
- High grade carbon steel
- Cutting edge for soft wire
- PVC insulated handles



Code	Length (mm)	
	Overall	Head
SDC160	160	40
SDC180	180	50
SDC200	200	60

Electrician's Wire Stripper



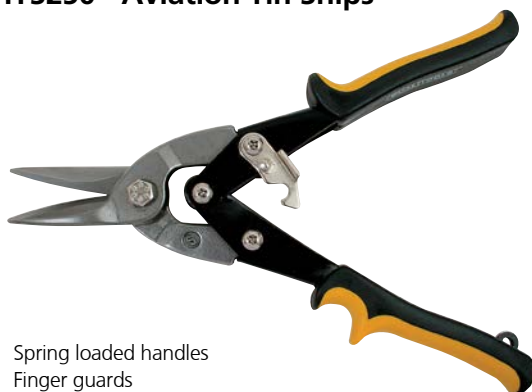
SVN160

- Chrome plated satin finish
- High grade carbon steel
- Adjustable stripping size
- PVC insulated handles



Code	Length (mm)	
	Overall	Head
SVN160	160	60

HTS250 - Aviation Tin Snips



- Spring loaded handles
- Finger guards
- Drop forged chrome vanadium steel blades
- 250mm straight



Electrician's Pliers 1000V



HCP200H

- 1000V – IEC60900 SABS approved
- Chrome molybdenum steel/hardness 38 - 44 HRC
- Cutting edges – induction hardness 58-62 HRC
- General uses – mild steel wire
- **HCP200H** (Piano wire) tempered high-carbon steel



Code	Cutting Capacity (mm)			Length(mm)	
				Overall	Head
HCP180	☐ 2.8	☒ 2.5		180	62
HCP200	☐ 3.0	☒ 2.5		200	67
HCP200H	☐ 3.8	☒ 2.7	☒ 2.2	200	65

Long Nose Pliers 1000V



HLN200

- 1000V – IEC60900 SABS approved
- Chrome molybdenum steel/hardness 38 - 44 HRC
- Cutting edges – induction hardness 58-62 HRC
- General uses – mild steel wire



Code	Cutting Capacity (mm)		Length(mm)	
			Overall	Head
HLN160	☐ 2.5	☒ 1.6	160	68
HLN200	☐ 2.5	☒ 1.8	200	93

Diagonal Cutters 1000V Heavy Duty



HDC205H

- 1000V – IEC60900 SABS approved
- Chrome molybdenum steel/hardness 38 - 44 HRC
- Cutting edges – induction hardness 58-62 HRC
- General uses – mild steel wire
- **HDC205H** Piano wire



Code	Cutting Capacity (mm)			Length(mm)	
				Overall	Head
HDC160	☐ 2.8	☒ 2.0		160	48
HDC180	☐ 3.0	☒ 2.5		180	44
HDC205H	☐ 3.2	☒ 3.2	☒ 2.5	205	54

Combination Plier and Crimper 1000V



PC230W

- High grade carbon steel
- Indent crimper
- Cutting edge for soft and hard wire



Code	Cutting Capacity (mm)		Length(mm)	
			Overall	Head
PC230W	☐ 3.0		225	80

VDE 1000V Range Test

High-voltage Test 	Cold-Shock Test 	Electrical Test
Adhesion Test 	Pressure Test 	Fire Test

Cutting Capacity

☐ Medium hard wire, wire nails

☒ Hard wire, steel wire

☒ Piano wire, heat treated steel wire

45092 - Stripmaster

- Strips wire clean and eliminates all nicking, cutting or fraying
- Light gauge wire and cable: automotive, aviation, telephone, fixture, radio and instrument

Code	Wire (mm²)	No. of Holes	Replacement Blades (Pair) Code
45092	0.75 - 6	6	L4421M

PVST46 - PV Stripping Tool

- Standard die for 2.5, 4, 6mm² (AWG14, 12, 10) solar PVC cable
- Insulation stripping distance guide
- Automatic spring release action
- Non-slip grip



Parameter	Metric	AWG
Die range	25, 4, 6	14, 12, 10

Wire Stripper

YC1607A

- General purpose wire stripper

Code	Wire Sizes (mm²)
YC1607A	0.5 - 2
YC1607B	1 - 3.2

T-Type® - Wire Stripper and Cutter

45120

- Quick, easy, clean stripping and cutting of small solid and flexible wires in electronic instruments and appliances

Code	AWG Solid	AWG Stranded
45120	10-18	12-20
45121	14-24	16 - 26

PTS4 - Wire Stripper and Cutter

- Automatic adjustment
- Self-adjusting cutting-stripping tool with pressure adjustment of blade incision
- Strip multiple electric cables



Code	Wire Sizes (mm²)
PTS4	0.2 - 6

RCS0425 - Rotary Stripper

- Blade angle adjustable
- Lateral or vertical stripping
- PVC, Teflon and THHN insulations

Code	Wire Φ (mm²)	Length (mm)	Weight (g)
RCS0425	4 - 25	186	150

MTOOL - 15-in-1 Multi Tool

- Stainless steel
- Includes belt pouch
- Needle nose pliers
- Screwdriver (small, medium, large)
- Regular pliers
- Scissors
- Saw
- Can, bottle opener
- Sharp knife
- Fish scaler/hook remover
- Phillips screwdriver
- Single file
- Double file (other side)



PTOOL9 - 9-in-1 Pocket Tool



- 420 Stainless steel
- Weight: 49g

WAK1 - Retractable Utility Knife and Stripper



- Cutter length: 150mm
- Die-cast zinc body
- Retractable spring loaded
- Heavy duty 60mm blade included
- Easy slide carriage to retract blade
- Fold over safety feature
- Secure rubber grip

Spare Accessories

Code	Description
BHD5	5 Piece Heavy Duty Blades

WAK2 - Manual Retractable Utility Knife



- Cutter length: 150mm
- Die-cast zinc body
- Retractable spring loaded
- Heavy duty 60mm blade included
- Easy slide carriage to retract blade
- Ergodynamic
- Secure rubber grip

Spare Accessories

Code	Description
BHD5	5 Piece Heavy Duty Blades

WAKTOOL - 6-in-1 Utility Knife



- Blade: SK5 (BHD5)
- Handle: Aluminium
 - TORX T6 and T8
 - TORX T10 and 15
 - Flat screwdriver
 - Phillips screwdriver
- Weight: 66g

S25 - PVC Pipe Cutter



- Pipe diameter 34mm
- Metal handle

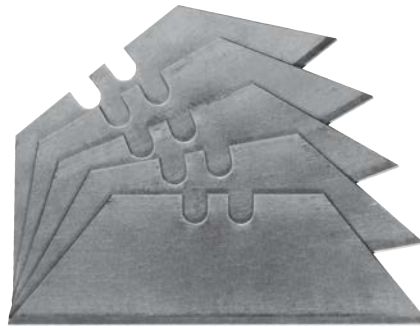


PVC Pipe

WAK3 - Snap-off Knife Blades

- Supplied in plastic holder
- 10 Piece

Code	Sizes	Length
WAK3BLD	18mm	100mm

BHD5 - 5 Piece Heavy Duty Blades

- Blade length: 60mm
- **WAK1, WAK2** and **WAKTOOL** (p122)

319 - Bahco Hacksaw

- Blade length: 300mm
- Die-cast aluminium frame
- 55° blade mounting
- Soft grip handle
- Lightweight



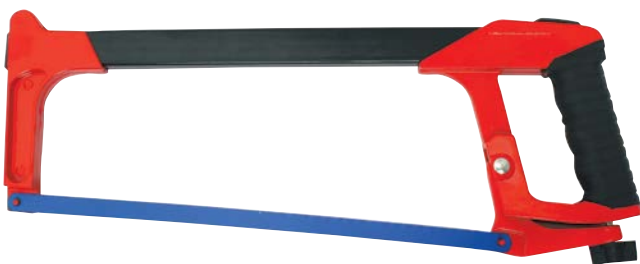
Blade Tension
Adjuster

H015 - Junior Hacksaw (DIY)

- Blade length: 150mm
- Heavy duty

Spare Accessories

Code	Description
JUNHSBLD	Junior Hacksaw Blade

H100A - Heavy Duty Deluxe Hacksaw

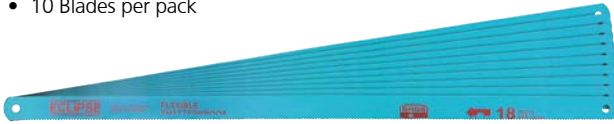
- Blade length: 300mm
- Heavy duty
- Spare blade storage in top handle

P100A - Heavy Duty Deluxe Hacksaw

- Blade length: 300mm
- Heavy duty
- Overmould frame

Hacksaw Blades

- 10 Blades per pack



HSBLD18HS - Eclipse

- Low alloy



HSBLD18U - Bahco



JUNHSBLD - Junior

Code	Description	Cut Type	Hacksaw Blades	
			Length (mm)	TPI
HSBLD18HS	High Speed Eclipse	Rough	300	18
HSBLD24HS		General		24
HSBLD32HS		Precision		32
HSBLD18U	Bahco	Rough	300	18
HSBLD24U		General		24
HSBLD32U		Precision		32
JUNHSBLD	Junior	Precision	150	32

Chassis Punches

- Heavy duty
- Black anti-corrosive finish
- Can be used with various materials
- Accurate and burr free holes
- Capacity: Mild steel up to 3.5mm (10 gauge)



Application: fibreglass, aluminium, mild steel, plastic

Code	Diameter (mm)
CP20	20
CP22	22
CP25	25
CP32	32
CP40	40
CP50	50

Holesaws

- Heavy duty
- Complete with arbor
- Cutting depth: 12mm



Code	Diameter (mm)
HS18	18
HS20	20
HS21	21
HS25	25
HS32	32
HS40	40
HS50	50
HS63	63
HS75	75

TCT8KT - Tungsten Holesaw Kit: 8 Piece

- Ideal for mild steel, stainless steel, cast iron, fibre cement ceiling board, aluminium, wood and plastic



Code	Diameter (mm)
TCT16	16
TCT20	20
TCT22	22
TCT25	25
TCT32	32
TCTBITS	

Tungsten Holesaws

- Designed for drilling through aluminium, stainless steel, mild steel and fibre cement ceiling board
- Lasts up to 80% longer than standard holesaws
- Deep cutting depth
- Two cutting edges



Code	Diameter (mm)
TCT16	16
TCT20	20
TCT22	22
TCT25	25
TCT32	32
TCT40	40
TCT51	51
TCT64	64
TCT73	73
TCT76	76
TCT83	83

Bi-Metal Holesaws

- High speed bi-metal edge welded to an alloy steel back for heavy duty cutting
- Variable tooth pattern for "chatter-free" cutting - 4/6 TPI
- Maximum cutting depth 38mm
- Recommended for general timber and wood



Code	Diameter (mm)	Cutting Depth (mm)	Arbor Required
WHS16	16	30	WARB1
WHS20	20	30	
WHS22	22	30	
WHS25	25	30	
WHS32	32	38	WARB2
WHS38	38	38	
WHS40	40	38	
WHS51	51	38	
WHS60	60	38	
WHS64	64	38	
WHS70	70	38	
WHS73	73	38	
WHS76	76	38	
WHS83	83	38	
WHS95	95	38	
WHS105	105	38	
WHS111	111	38	

NB: Holesaws do not include arbors shown above.



WHS9KT - Bi-Metal Holesaw Kit: 9 Piece

- High speed bi-metal for heavy duty cutting
- Variable tooth pattern for "chatter-free" cutting - 4/6 TPI
- Holesaws sold individually
- Recommended for general timber and wood

Code	Diameter (mm)	Cutting Depth (mm)	Arbor Required
WHS20	20	30	
WHS22	22	30	
WHS25	25	30	
WHS32	32	38	
WHS38	38	38	
WHS40	40	38	



WHS13KT - Bi-Metal Holesaw Kit: 13 Piece

- High speed bi-metal edge for heavy duty cutting
- Variable tooth pattern for "chatter-free" cutting - 4/6 TPI
- Spare drill bit included
- Holesaws sold individually
- Recommended for general timber and wood

Code	Diameter (mm)	Cutting Depth (mm)	Arbor Required
WHS20	20	30	
WHS22	22	30	
WHS25	25	30	
WHS32	32	38	
WHS38	38	38	
WHS40	40	38	
WHS51	51	38	
WHS60	60	38	
WHS64	64	38	



WHS15KT - Bi-Metal Holesaw Kit: 15 Piece

- High speed bi-metal for heavy duty cutting
- Extension handle
- Variable tooth pattern for "chatter-free" cutting - 4/6 TPI
- Holesaws sold individually
- Recommended for general timber and wood

Code	Diameter (mm)	Cutting Depth (mm)	Arbor Required
WHS16	16	30	
WHS19	19	30	
WHS20	20	30	
WHS22	22	30	
WHS25	25	30	
WHS32	32	38	
WHS40	40	38	
WHS51	51	38	
WHS60	60	38	
WHS64	64	38	
WHS76	76	38	

**ENGSET - Un-insulated Screwdriver Set**

- 6 Piece screwdriver set
- Flat blade and Phillips set
- Chrome vanadium
- TUV and GS spec

Length (mm)		Tip (mm)		Style
Overall	Head	Width	Thick	
150	75	3	0.5	—
180	100	4	0.8	
210	125	5	0.8	
250	150	7	1	
185	100	5	PH 1	+
222	125	6	PH 2	

**95720 - Electronic Screwdriver Set**

- 6 Piece screwdriver set
- Flat blade and Phillips set
- Chrome vanadium
- Screwdrivers are not sold separately
- Swivel top



Blade (mm)	Tip (mm)	Style
60	1.5	
75	2.5	—
100	3	
125	2.5	
40	PH 00	+
60	PH 0	

HEXSET - Uninsulated Screwdriver Set

- 7 Piece including neon tester
- Flat blade and Phillips set
- Hexagon spanner grip for increased leverage
- Can be purchased individually



Code	Length (mm)		Tip (mm)		Style
	Overall	Head	Width	Thick	
HEX0945	175	90	4.5	0.6	—
HEX1060	195	100	5.5	0.8	
HEX1270	230	125	7	1	
HEX1580	255	150	8	1.2	
T45000 (Neon)	140	65	3	0.5	+
HEXP1	165	80	5	PH1	
HEXP2	195	100	6	PH2	

Can only be purchased individually (Not included in set)

HEX1790	295	175	10	1	—
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INSSET - Insulated Screwdriver Set 1000V AC / 1500V DC



- 8 Piece including neon tester
- Flat blade and Phillips set
- Can be purchased individually
- Voltage tester range 100 - 250V
- Chrome vanadium steel
- Hard storage case

Code	Length (mm)		Tip (mm)		Style
	Overall	Head	Width	Thick	
INS7525	166	75	3.5	0.4	-
INS1040	200	100	4	0.8	
INS1255	233	125	5.5	1	
INS1565	258	150	6.5	1.2	
T45000 (Neon)	140	60	3	0.5	+
INSP0	150	75	3	PH0	
INSP1	200	100	4.5	PH1	
INSP2	208	100	6	PH2	

Can only be purchased individually (Not included in set)

INS1780	290	175	8	1.2	-
INSPV1	170	85	2.5	PH1	+



ECOSSET - Insulated Screwdriver Set 1000V (DIY)



- 7 Piece including neon tester
- Flat blade and Phillips set
- Insulated - 1000V
- Can be purchased individually
- Voltage tester range 100 - 250V

Code	Length (mm)		Tip (mm)		Style
	Overall	Head	Width	Thick	
ECO4100	210	100	4	0.8	-
ECO5125E	235	125	5.5	1	
ECO6150E	260	150	6.5	1.2	
T45000 (Neon)	140	60	3	0.5	+
ECOPV0	165	75	3	PH0	
ECOPV1	210	100	4	PH1	
ECOPV2	210	100	6	PH2	

Can only be purchased individually (Not included in set)

ECO375	150	75	3	0.5	-
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SWSET - Socket Wrench Set



- 7 Piece socket wrench set
- Chrome vanadium

Socket (mm)	Length (mm)		Style
	Overall	Head	
5	210	125	-
5.5	210	125	
6	210	125	
7	225	125	
8	225	125	
10	225	125	
13	240	125	

Can only be purchased individually

Code	Sizes (mm)	Head (mm)	Overall Length (mm)
SW8	8	225	330
SW10	10	225	330



VG250 - Vice Grips

- Chrome vanadium steel
- Cutting jaw
- Nickel plated

Code	Length (mm)	Weight (g)
VG250	250	600

Adjustable Spanner

- Chrome vanadium steel
- Corrosion resistant
- Graduated jaw

Code	Sizes (inches)	Length (mm)
AW150	6"	150
AW200	8"	200
AW300	12"	300

Combi Wrenches – BAHCO

- Reversible jaw for pipe use
- Jaw holds at maximum wrench opening
- Comfortable non-slip thermoplastic grip handles
- Complies to scientific ERGO™ process
- Standards: ISO 6787, DIN 3117, ASME B107.8M – 1996 and BS 6333

Code	Overall Length (mm)	Jaw Size (mm)	Jaw Thickness (mm)	Head Thickness (mm)	Weight (g)
9072P	257	33	8.7	15.2	430
9073P	308	35	11.9	17.6	745

O1003 - 10 Piece Allen Key Set

- Short arm
- Keyring
- Metric

Code	Sizes (mm)
O1003	1.5 - 2 - 2.5 - 3 - 4 - 5 - 5.5 - 6 - 8 - 10

O1604LM - 7 Piece Allen Key Set

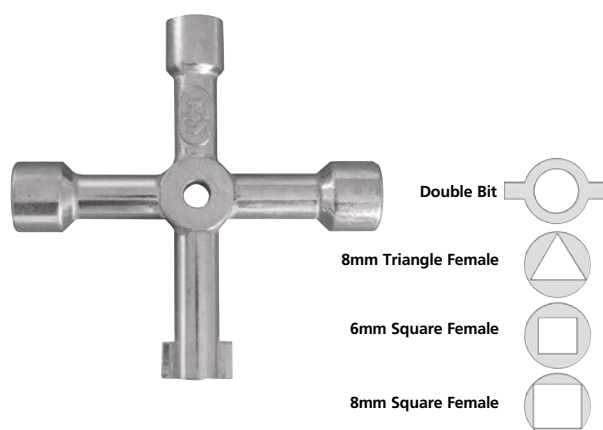
- Long arm ball point
- Metric
- With plastic holder

Code	Sizes (mm)
O1604LM	2.5 - 3 - 4 - 5 - 6 - 8 - 10

O9FA - 9 Piece Allen Key Set

- Metric
- Foldable allen keys
- With plastic holder

Code	Sizes (mm)
O9FA	1.5 - 2 - 2.5 - 3 - 4 - 5 - 5.5 - 6 - 8

HUK1 - Universal Panel Key

- Multi-purpose - electrical panels, gas, etc.
- Made from die cast zinc
- Ideal for maintenance work

Fish Tapes

FT60

H2230

Code	Length (m)
FT60	50 Steel Cable
H2230	30 Nylon

H5M - Tape Measures

- Tough ABS housing
- High quality scale
- Positive lock
- Integral clip

MHT5 - 5m Magnetic Tip Tape Measure

Magnetic Tip

- Tough ABS housing
- Positive lock
- Integral clip
- Magnetic tip
- Self-locking

HAMBP300 – Fibreglass Ball Pein Hammers 300g**TOOLBOX**

- 5 Tier toolbox
- Box dimensions (mm): 525(L) x 200(W) x 205(H)

HT762250 - Insulated Adjustable Spanner 1000V



HT762250

- Din 3117 B
- Burnished
- Opening width: 30mm
- EN/IEC 60900:2012

Code	Size (mm)	Weight (g)
HT762250	250	515

Insulated Extension Bars 1000V



HT285125



HT285250

- Chrome vanadium steel
- Locked system
- EN/IEC 60900:2012

Code	Sizes (inches)	Sizes (mm)	Weight (g)
HT285125	1/2"	125	190
HT285250	1/2"	250	400

Insulated Ring Spanners 1000V



HT21022

- DIN 7447
- Forged from chrome vanadium steel (DIN 838)
- Deep cranked
- EN/IEC 60900:2012



Code	Sizes (mm)	Weight (g)
HT21010	10	
HT21013	13	110
HT21014	14	160
HT21017	17	260
HT21019	19	290
HT21022	22	390

Insulated Open-Ended Spanners 1000V



HT20019

- DIN 7447
- Forged from chrome vanadium steel (DIN 838)
- Deep cranked



Code	Sizes (mm)	Weight (g)
HT20010	10	40
HT20013	13	65
HT20016	16	115
HT20017	17	115
HT20019	19	150

Insulated Screwdrivers 1000V



HT40055

- DIN 7437
- For slotted screws
- High quality PVC according to REACH-Regulation and PAK-Inspection



	Overall Length (mm)	Tip Thickness (mm)	Tip Width (mm)	Weight (g)
HT40055	125	1	5.5	10
HT40065	150	1.2	6.5	125
HT40016	200	1.6	10	

Insulated Cross Screwdrivers 1000V



HT4101

- DIN 7438
- For extremely high torque loads
- High quality PVC according to REACH-Regulation and PAK-Inspection



Code	Style	Weight (g)
HT4101	No 1	60
HT4102	No 2	95
HT4103	No 3	150

HT100205 - Insulated Pliers 1000V

HT100205

- Size: 205mm
- DIN ISO 5746
- Induction-hardened cutting edges
- Suitable for hard wire



Code	Size (mm)	Weight (g)
HT100205	205	390

HT104200 - Insulated Long Nose Pliers 1000V

HT104200

- Size: 200mm
- DIN ISO 5745
- Induction-hardened cutting edges
- Suitable for hard and soft wire



Code	Size (mm)	Weight (g)
HT104200	200	230

HT112180 - Insulated Diagonal Cutters 1000V

HT112180

- Size: 180mm
- DIN ISO 5749
- Swedish pattern
- Precision cutting edges relief-milled and induction-hardened



Code	Size (mm)	Weight (g)
HT112180	180	330

HT116240 - Insulated Water Pump Pliers 1000V

HT116240

- Size: 240mm
- Box joint
- Made from chrome vanadium 31 CrV3

Code	Size (mm)	Weight (g)
HT116240	240	350

HT280260 - Insulated Reversible Ratchet 1000V

- Chrome vanadium steel
- Locked system
- EN/IEC 60900:2012

Code	Length (mm)	Length (inches)	Weight (g)
HT280260	260	1/2"	700

Insulated 6-Point Sockets 1000V

- DIN 7448 with 1/2" square drive
- Made from chrome vanadium steel



Code	Sizes (mm)	Weight (g)
HT31613	13	75
HT31617	17	90

HT53040 - Insulated Hooked Cable Knife 1000V



- Strong blade for slitting and dismantling armoured cable



Code	Length (mm)	Weight (g)
HT53040	40	100

HT52545 - Insulated Cable Stripping Knife 1000V



- Blade with short, offset cutting edge



Code	Length (mm)	Weight (g)
HT52545	45	75

HT765250 - Insulated Mini Hacksaw 1000V



- Fully insulated

Code	Length (mm)	Weight (g)
HT765250	150	215

HT767450 - Insulated Hacksaw 1000V



- Fully insulated
- With plastic screw for tensioning the blade

Code	Length (mm)	Weight (g)
HT767450	450	300

HT125240 - Insulated Cable Cutter 1000V



- High-quality 2-colour multi-layered insulation
- For Aluminium and Copper wires
- Multi-wire up to 50mm²
- Dropped forged and oil hardened
- High quality PVC (REACH-Regulation and withstand the newest PAK-Inspection)
- EN 60900:2012 / IEC 60900:2012



Code	Length (mm)
HT125240	240



HT90026 - Insulated Tool Kit 1000V

- 26 Piece
- Dimensions (mm): 100(H) x 450(L) x 390(W)
- Weight: 4.4kg

Description	Sizes
Engineers Pliers	200mm
Side Cutters	160mm
Telephone Pliers	200mm
Reversible Ratchet	1/2"
Extension	250mm 1/2"
Stripper Knife	35mm blade
Cable Knife	40mm blade
Sockets	10, 11, 12, 13, 14, 17, 19mm
Open-Ended Spanner	10, 11, 12, 13, 14, 17, 19mm
Voltmeter	-
Screwdrivers	3.5 x 100, 5.5x125, 6.5x150, 8x175



HT91615 - Insulated Tool Kit 1000V

- 15 Piece
- Dimensions (mm): 100(H) x 450(L) x 390(W)
- Weight: 5kg

Description	Sizes
Reversible Ratchet	1/2"
Extension Bars	125 and 250mm 1/2"
T-Lever (HT290200)	1/2"
Ratchet Sockets	10, 12, 13, 14, 17, 19, 22mm
Allen Screw Sockets	5, 6, 8mm
Screwdriver	3.5 x 100mm



HT90029 - Insulated Tool Kit 1000V

- 29 Piece 1/2"
- Tool case: ABS shockproof
- Dimensions (mm): 80(H) x 415(L) x 320(W)

Description	Sizes (mm)
Reversible Ratchet Wrench	200
Extension Bar	125, 250
Hexagon Socket	4 x 120, 5 x 120, 6 x 120, 8 x 120
Socket	10, 11, 12, 13, 14, 16, 17, 18, 19, 22, 24, 27, 30, 32
Pliers	180
Nose Pliers	160
Diagonal Pliers	160
Adjustable Wrench	200
Slotted Screwdriver	4 x 100
Slotted Screwdriver	5.5 x 125
Phillips Screwdriver	PH1 x 80
Phillips Screwdriver	PH2 x 100



HTJT100 - Jet Torch

- Powerful butane gas lighter with an adjustable jet flame
- Adjustable flame
- Auto flame safety cut-off technology
- Child lock
- Used to easily heat Simple Solder connectors & terminals as well as heat shrink tubing.
- Dimensions (mm): 120(H) x 19(W)



TP100K - Soldering Kit (DIY)

- Adjustable gas flow
- Flint
- Self-ignitor
- Handy carry case
- Uses butane gas (SOLDERGAS)
- Refer to **TP100** for technical overview

Model Specification

Standard Accessories	Solder, Deflector, Hot knife, Chisel Tip, Angle Tip, Stand, Sponge, Handy Carry Case
-----------------------------	--

TP200 - Cordless Soldering Iron: 3 in 1



Soldering Iron



Heat Gun



Torch



- 3-Functions:
 - Soldering iron – Temperature: 200-400°C
 - Heat gun – Temperature: up to 400°C
 - Torch – Temperature: up to 1 300°C
- Soldering iron conical tip 1.6mm (W)

Technical Overview

Fuel	Butane (SOLERGAS P150)
Operating time	60-60mins (80 w/fuel)
Gas container capacity (ml)	15
Dimensions (mm)	250(H0 x 30(T) x 25 (W)
Weight (g)	162 (no gas)

TP200K - Cordless Soldering Iron Kit: 3 in 1



Soldering Iron



Heat Gun



Torch



- 3-Functions:
 - Soldering iron – Temperature: 200-400°C
 - Heat blower – Temperature: up to 400°C
 - Torch – Temperature: up to 1 300°C
- Soldering iron conical tip 1.6mm (W)
- Soldering iron chisel tip 2.4mm (W)
- Refer to TP200 for Technical overview

Model Specification

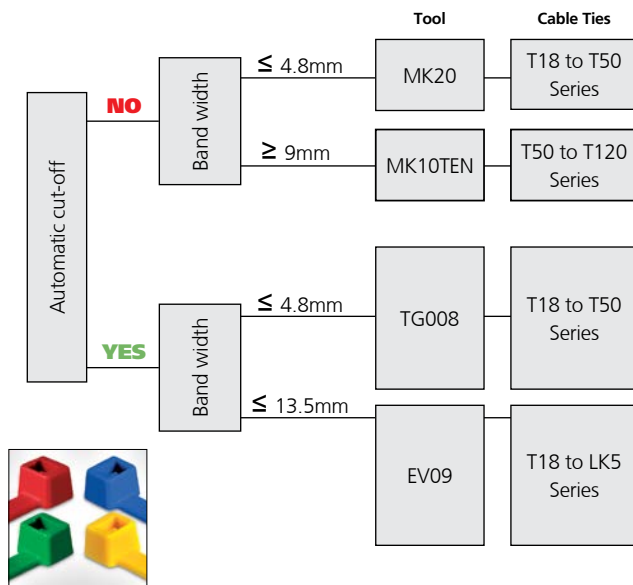
Standard Accessories	TP200 Cordless Soldering Iron, Soldering iron conical tip 2.4mm, Soldering iron chisel tip 2.4mm, Hot knife, Deflector tip, Mini wrench, Sponge, Soldering wire (mm): 0.1, 15g
-----------------------------	--

SOLDERGAS - Clipper Butane Gas



- Butane
- Size: 250ml
- Ultra refined for maximum care and performance

Standard Nylon Cable Ties Selection Guide



MK20 - Plastic Frame (Nylon)



- Nylon cable ties only
- Lightweight, ergonomic tool
- Suitable for **T18**, **T30** and **T50** series cable ties
- Mounted and pre-tensioned ties are cut off by twisting the tool
- Maximum width of tie: 4.8mm



Nylon cable tie tensioned and cut i.e. no sharp edges

TG008 - Steel Frame (Nylon)

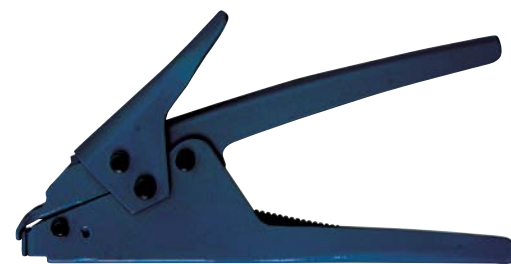


- Adjusting tensioning force
- Lightweight tool ideal for continuous use in high volume production
- **T18**, **T30** and **T50** series cable ties
- Maximum width of tie: 4.8mm
- Dimensions (mm): 160(L) x 135(H) x 25(W)
- Weight: 300g



Nylon cable tie tensioned and cut i.e. no sharp edges

MK10TEN - Steel Frame (Nylon)



- Adjusting tensioning force
- Lightweight tool ideal for continuous use in high volume production
- **T18**, **T50** and **T120** series cable ties
- Maximum width of tie: 9.5mm
- Dimensions (mm): 190(L) x 95(H) x 30(W)
- Weight: 500g



Nylon cable tie tensioned and cut i.e. no sharp edges

EVO7i - Plastic Frame (Nylon)



- Adjustable preset tensioning tool
- Tensions and automatically cuts cable ties up to 4.8mm wide
- Extremely low maintenance
- Housing made of resilient and lightweight glass fibre-reinforced polyester MIL approved
- Dimensions: (mm): 191(L) x 33(W)
- Weight: 781g

RoHS ✓



Nylon cable tie tensioned and cut i.e. no sharp edges

EVO9 - Plastic Frame (Nylon)



- Ergonomic, slip proof handle for a comfortable and secure grip
- Quick tension adjustment with 3 integrated settings
- Fast and precise application with minimum effort
- Extremely low maintenance
- Maximum width 13mm
- Spare blade: **EVO9BLD**
- Dimensions (mm): 191(L) x 135(H) x 33(W)

RoHS ✓



Nylon cable tie tensioned and cut i.e. no sharp edges

EVOcut - Cutting Tool (Nylon)



- Cutting tool for nylon cable ties and fixing ties
- Prevents cable insulation from being damaged
- Cable tie can be cut off at any part of strap
- Single-handed operation
- Light-weighting plastic housing, ergonomic designed



Standard Metal Cable Ties Selection Guide

Automatic cut-off	Band width	Tool		Cable Ties	
	≤ 7.9mm	HT338		MBT8, MBT14, MBT20, MBT27	
	≤ 16.0mm	MK9SST		MBTB, MBT14, MBT20, MBT27	

HT338 - Steel Frame (Stainless Steel)



- Fastens and automatically cut ties with adjustable bundling pressure
- Tension adjusting indicator
- Cable tie thickness up to 0.3mm, width up to 7.9mm
- **MBT8, MBT14, MBT20 and MBT27** cable ties



Stainless steel cable tie tensioned and cut i.e. no sharp edges

MK9SST - Plastic Frame (Stainless Steel)



- Lightweight tool ideal for continuous use in high volume production
- MBT series cable ties designed for SS316 only
- Maximum width of tie: 4.6 - 16mm
- Dimensions (mm): 190(L) x 150(H) x 40(W)
- Weight: 600g
- Spare blades: **HT338BLD, HT385RAT, SPMK9SST**



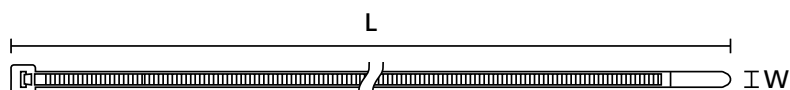
Stainless steel cable tie tensioned and cut i.e. no sharp edges

Type		Description	Material	#Outdoor Application	Indoor Application	#UV Resistant	Weather Resistant	Flame Retardant
T Series		General purpose, inside serrated #Black only	PA66	*	*	*		
T Series Outdoor		UV & weather resistant, inside serrated	PA66W	*		*	*	
Q-Ties		Integrated pre-locking function, open head, inside serration	PA66		*	*		
OS Series		UV stabilised, outside serrated	PA66W	*		*		
OS Series		Heat stabilised, outside serrated	PA66HS		*		*	*
OS Series		Fire protection, outside serrated	PA66VD		*			
OS Series		Curved head, high temperature, outside serrated	PA46		*			
RPE Series (E.R. D.F. approved)		Low profile, releasable, reusable, outside serrated	PA66HSW		*	*		
PE Series		Low profile, outside serrated	PA66HSW*, PA66*		*	*		
LPH Series		Low profile, outside serrated	PA66, PA66W		*	*		
RT Series		Releasable, reusable, inside serrated	PA66		*	*		
RELK Series		Releasable, reusable, inside serrated	PA66		*	*		
RLT Series		Releasable, reusable, inside serrated	PA66*, PA66W*, PA66HS*	*	*	*	*	
REL Series		Releasable, reusable, inside serrated	PA66, PA66W	*		*		
SRT Series		Releasable, reusable, without serration	TPU		*			
PEEK Ties		High temperature, outside serrated	PEEK		*			*
SpeedyTie®		Quick release	PA66		*	*		
KR Series, 1 Piece		Glass Fibre Pin, without serration	PA66, PA66W, PA66HS	*		*		
KR Series, Endless		Glass Fibre Pin, without serration	PA66HS, PA66W		*			
MCT (FDA, HACCP approved)		Detectable, Metal Content, inside serrated	PA66MP					
MBT Range		Stainless steel, metal ball bearing	SS316	*		*	*	
MST		Punch-locking mechanism	SS304	*		*	*	
LFPC		Protective channel for stainless steel cable ties	PO	*	*	*	*	

**Colour Abbreviation Table*

BK Black	BN Brown	RD Red	OG Orange	YL Yellow	GR Green	BL Blue	VT Violet	PK Pink	GY Grey	WT White	NT Natural	BGE Beige
------------	------------	----------	-------------	-------------	------------	-----------	-------------	-----------	-----------	------------	--------------	-------------

Heat Stabiliser	Length (mm)	Width (mm)	N	MAX Cable Bundle DIA (mm) Range	**Colour	Operating Temperature	Flammability	Material Specification	Industry
	100 to 535	2.5 to 13.2	80 to 1115	22 to 150	BK BL BN GR OG PK RD VT YL WT	-40°C to +85°C	UL94 V2	HF ✓ RoHS ✓	Various
	83 to 535	2.3 to 13.2	80 to 1115	16 to 150	BK	-40°C to +85°C	UL94 V2	HF ✓ RoHS ✓	Various
*	105 to 520	2.6 to 7.7	80 to 530	24 to 145	BK NT	-40°C to +85°C	UL94 V2	HF ✓ RoHS ✓	Various
*	150 & 200	4.6	225	35 & 50	BK	-40°C to +85°C	UL94 V2	HF ✓ RoHS ✓	
*	100 to 384	2.5 to 4.6	80 to 225	20 to 110	BK NT	-40°C to +105°C	UL94 V3	HF ✓ RoHS ✓	
*	145	3.4	135	35	NT	-40°C to +85°C	UL94 V3	HF ✓ RoHS ✓ LFH ✓	
	150 to 245	4.6	35 to 66	225	GY NT	-40°C to +150°C	UL94 V3	HF ✓ RoHS ✓	
*	180 to 400	9	330 to 445	42 to 146	BK	-40°C to +105°C	UL94 V2	HF ✓ RoHS ✓	Various
*	275 to 359	9	445	69 to 92	BK GN YL BL RD	-40°C to +105°C	UL94 V2	HF ✓ RoHS ✓	
	175 to 355	9	310 to 480	40 to 92	BK	-40°C to +85°C	UL94 V2	HF ✓ RoHS ✓	
	565.3 to 1030	12.7	1115	150 to 305	BK NT	-40°C to +85°C	UL94 V2	HF ✓ RoHS ✓	
	200 to 350	4.6	200	50 to 95	BK NT	-40°C to +85°C	UL94 V2	HF ✓ RoHS ✓	
*	340 to 770	7.6 to 8.9	535 to 670	90 to 225	BK NT	-40°C to +85°C	UL94 V2	HF ✓ RoHS ✓	
	100 to 250	6.5 to 7.6	150 to 200	21 to 68	BK NT	-40°C to +85°C	UL94 V2	HF ✓ RoHS ✓	
	180 to 580	7 to 28	57 to 360	45 to 150	BK	-40°C to +85°C	UL94 HB	HF ✓ RoHS ✓	
	145	3.4	230	35	BGE	-55°C to +240°C	UL94 VD	HF ✓ RoHS ✓ LFH ✓	
	750	13	888	210	YL	-40°C to +85°C	UL94 V2	HF ✓ RoHS ✓	Various
*	210 to 600	6.1 to 8	390 to 785	47 to 184	BK NT	-40°C to +85°C	UL94 V4	HF ✓ RoHS ✓	
	5000	8	785	N/A	BK NT	-40°C to +85°C	UL94 V5	HF ✓ RoHS ✓	
	390	2.5 to 7.6	85 to 380	22 to 110	BL	-40°C to +85°C	UL94 HB	HF ✓ RoHS ✓	
	127 to 838	4.6 to 12.3	670 to 2225	25 to 254		-80°C to +538°C	Non-burning	HF ✓ RoHS ✓ LFH ✓	Various
	207 to 700	5.9 to 8.9	900 to 1500	50 to 205		-80°C to +538°C	Non-burning	HF ✓ RoHS ✓ LFH ✓	Various
	25 to 50m	7 to 16.3	N/A	N/A	BK	-40°C to +90°C	UL94 V0	HF ✓ RoHS ✓ LFH ✓	Various





HG2120E - Steinel Heat Gun (Professional)

- Thermal cut-out
- Temperature indication by thumb wheel in 9 steps

Technical Overview

Output	2200W
Operation hours	750
Temperature (°C)	80 – 630°C
Airflow rate (3 steps)	150-500l/min
Heating element	Ceramic
Protection class (without earth terminal)	II
Weight (g)	670

Model Specification

Optional Accessories	NOZREF Reflector Nozzle, NOZSUR50 50mm Surface Nozzle, NOZRED9 9mm Reduction Nozzle, NOZRED14 Nozzle Reducer 14mm, NOZREF10 Nozzle Solder Reflector 10mm, NOZSUR75 Nozzle Shaping Surface 75mm, NOZWIDE14 Nozzle Welding Wide-Slit 14mm (P142)
----------------------	---



HL1920E – Steinel Heat Gun

- 9 Step thumb wheel temperature adjustment
- Thermal fuse

Technical Overview

Output	2000W
Operation hours	600
Temperature (°C)	80 – 600°C
Airflow rate (3 steps)	150-500l/min
Heating element	Ceramic
Protection class (without earth terminal)	II
Weight (g)	840

Model Specification

Optional Accessories	NOZREF Reflector Nozzle, NOZSUR50 50mm Surface Nozzle, NOZRED9 9mm Reduction Nozzle, NOZSUR75 Nozzle Shaping Surface 75mm (P142)
----------------------	--



HL1821S - DIY Steinel Heat Gun

- Thermal fuse
- Two step heating setting

Technical Overview

Output	1800W
Operation hours	600
Temperature (°C)	300 or 550
Airflow rate	350 or 450l/min
Heating element	Micanite
Protection class (without earth terminal)	II
Weight (g)	717

Model Specification

Optional Accessories	NOZREF Reflector Nozzle, NOZSUR50 50mm Surface Nozzle, NOZRED9 9mm Reduction Nozzle (P142)
----------------------	---



CHG900 - Gas Heat Gun - Heavy Duty

The HellermannTyton CHG900 Cordless Heat Gun is powered by P445 gas cartridges, providing autonomous working of 90 minutes in one go. The tool is designed to produce flameless heat which makes it the ideal hot-air gun to apply a huge variety of heat shrink tubing and heat shrink wire markers as well as molded shapes or heat shrink boots, transition shapes, end caps and cable repair sleeves especially in harsh outdoor conditions covering freezing temperatures as low as -8°. CHG900 replaces the obsolete E4500 hot-air tool which will be discontinued upon CHG900 launch.



Technical Overview

Operating temperature	+190 °C to +900 °C
Ambient operation temperature	-8°C to +50°C
Operating time	90 minutes per cartridge (60min continuously)
Power	520 W / 1700 BTU
Weight	440g (555g incl Cartridge)

Model Specification

Optional Accessories	P444 gas cartridge 1 x Reduction Nozzle 1 x Reflection Nozzle
----------------------	---



CODE	DESCRIPTION	HG2120E	HL1920E	HL1821S
PAGE		151	151	151
	NOZRED14 Nozzle Reducer 14mm Suggested Use: Concentrated air flow, adapter for wide slit nozzle		☐	☐
	NOZRED9 Nozzle Reducer 9mm Suggested Use Delivers hot air with pinpoint precision for de-soldering and welding plastics with welding nozzle	☐	☐	☐
	NOZREF Nozzle Reflector Suggested Use Soldering pipes, fitting heatshrink tubing, thawing frozen pipes and bending pipes.	☐	☐	☐
	NOZREF10 Nozzle Solder Reflector 10mm Suggested Use Soldering and heatshrink-fitting soldering sleeves and shrink-on tubing in cable harnesses		☐	☐
	NOZSUR50 Nozzle Surface 50mm Suggested Use Evenly drying, stripping paint and removing films	☐	☐	☐
	NOZSUR75 Nozzle Shaping Surface 75mm Suggested Use Evenly drying repair filler, stripping paint and removing films		☐	☐
	NOZWIDE14 Nozzle Welding Wide-Slit 14mm Suggested Use Welding plastic sheeting and tarpaulins		☐	☐

☐ Optional



GLUEPRO400 – Steinel Hot-Melt Glue Applicator (Professional)

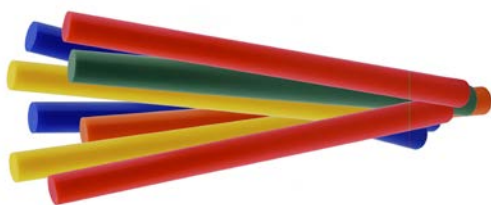
- Display for monitoring temperature to the (accuracy of 1°)

Technical Overview

Warm-up time	< 2 min
Temperature (°C)	40 – 230°C (accuracy +2°C)
Delivery rate	1.5 kg/h
Output during heat-up phase	400W
Weight (g)	600

Model Specification

Optional Accessories	Glue sticks dia. 11mm Compatible STEINEL hot-melt adhesives				
	Glue Universal 190 °C	Glue Flex 190 °C	Glue Fast 190 °C	Glue Low 130 °C	Glue Acrylate 130 °C



Glue Stick Selection Guide

Code	GLUEUNIVERSAL	GLUEACRYLATE	GLUEFAST	GLUEFLEX	GLUELOW
Uses	Multi-purpose	High resistance, temperature stable	Multi-purpose	Transparent	Low temperature
Temperature (°C)	190	200	190	190	130
Strong bond: approx.	60-90s	60s	30s	100-120s	40s
Firm after	15s	15s	8s	60-80s	80s
Material					
Wood	•	•	•	•	
Card/cardboard boxes	•	•	•	•	•
Rubber		•	•		•
Glass	•		•		
Ceramic	•		•		
Metal	•	•			
Melamine	•	•			
PA	•			•	
PC	•	•	•	•	
PE	•		•	•	
PET	•	•		•	
Plexiglas®		•	•	•	
POM	•				•
PP	•		•	•	
PS		•			
PVC	•	•	•	•	
Rigid PVC	•			•	•
PU foam					•
Polystyrene					•

Times and recommended adhesive are a rough guide only

Other options available:

GLUEULTRA 7m,11m

GLUECRYSTAL240 7mm

HEADLIGHT - LED



- 1PCS COB LED (White and Red)
- Function - white LED
- Low - White LED
- High - red light
- On - red light SOS
- Press button "A" to get the sensor function
- Waterproof grade: IP54
- Size: 38 x 45 x 66.5 mm
- Weight: 44g (excluded battery)

IP54

Maximum Output	210LM(High),110LM (Low)
Power Source	3 x AAA Batteries
Runtime	3 hours (High), 7 hours (Low)
Beam Distance	24 meters (COB white)

LEDTORCH - LED



- Weatherproof
- Anti-drop 1.2m
- Taicap switch
- Length: 145mm

Maximum Output	40Lm
Power Source	2 x AA Batteries
Runtime	3hrs on high, 40Lm
IP Rating	X4



3.1 GLOSSARY

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Lifetime Warranty LIFETIME WARRANTY

HellermannTyton carries a Lifetime Warranty on most tools and selected instruments. Instruments carry a 2 year limited warranty unless stated specifically to carry a lifetime warranty. If any product is found to be defective or faulty within this warranty, HellermannTyton will, at their sole discretion, repair or replace the affected product. This warranty does not cover batteries, fuses, or the neglect or misuse of products within abnormal conditions of operation, improper storage, damaged or altered as well as the wear of consumable products.

HellermannTyton products are warranted to be free from defects in material and workmanship at the time sold by us but our obligation under this warranty and that of the reseller is limited to the replacement of the product, and neither we nor the reseller are bound by any other warranty, expressed, implied or statutory.

HellermannTyton warrants the FIRST purchaser of the Goods, that the product/s shall be free of any defects in materials and/or workmanship for a period of two years from the verifiable date of purchase. Such verification shall include a valid proof of purchase by the FIRST purchaser. Upon receipt of the Goods the first purchaser is under obligation to check the product for any visible defects.

Under no circumstances are we or the seller liable for any loss, damage, expenses or consequential or incidental damages of any kind arising out of the use or inability to use these products. All are sold with the understanding that the user will test them in actual use and determine their adaptability for the intended uses.



Although the warranty covers most tools it does not cover all hydraulic and battery operated tools including gas solder irons where regular maintenance is required. Any software that may come with the tool or instrument does not fall under this warranty either. This warranty does not cover damages to products which are not installed, operated, used and maintained in accordance with disassembly or attempted disassembly by parties other than HellermannTyton or its authorised service representatives.

The warranty shall constitute the sole remedy available under law to the first purchaser for any damage related to, or resulting from, a defective product.

Multimeters	Clamp Meters	Testers	
TBM829 TBM811 TBM812 TBM811XEX TBM812XEX	TBM037 TBM079 TBM089	T1832 T1825 T1826 T1126 TEL28 T1812 TELE10L	TEL11 TEL11OLED T860 T887 T175HP THVD series T6236 T325

Calibration Certification

Certifies that all the instrument’s or tool’s parameters are tested against its original specification

Certificate of Conformance

The certificate is issued by the manufacturer stating that the instrument meets required specifications

VDE

Verband der Elektrotechnik is a certification mark and attestation from one of Europe’s largest technical and scientific associations for standardization of work and product testing.

ASTM-1505

Tools with double triangle are tested individually with a test Voltage of 10 000V, highest degree of safety for working on live parts up to 1000V.

GS

GS (Geprüfte Sicherheit) is a voluntary certification mark for technical equipment that has been tested and certified that it compliance with German and European safety requirements. The GS mark is based on the German Product Safety Act

SANAS

South African National Accreditation System accreditation certificates are a formal recognition that an organisation is competent to perform specific tasks.

IEC

International Electrotechnical Commission is the world’s leading organisation for the preparation and publication of International Standards for all electrical, electronic and related technologies.

True RMS (TRMS)

The normal alternating current mains power supply comprises a sinusoidal waveform that has symmetrical positive and negative half cycles. The RMS (Root Mean Square) value of an alternating current is measured in terms of the direct (dc) current that produces the same heating effect in the same resistance.

Problems arise when the mains waveform becomes distorted because of the effects of certain types of loads. This results in a non-sinusoidal waveform.

In order to get a True RMS measurement, we can measure the heat dissipated by a constant resistive load and perform the Power to Heat calculations. **(Power or Heat) = $I^2 R$** The result is a True RMS measurement. True-RMS (root mean square) instruments can measure alternating current (ac) or ac voltage with better accuracy.

Display Digits and Display Counts

Display resolution on instruments is often specified in counts or digits.

The table, below is example of common resolution display conversion between digits and counts:

Count	Display Digit
2000	3½ (3.5)
4000	3¾ (3.75)
20000	4½ (4.5)

Counts

Multimeters and testers use counts to display information. These instruments have various ranges used to obtain different values in measured readings. Counts indicate what can be displayed, before it changes to the next range, i.e. a multimeter with 5000 counts, changes to the next range when it reaches 50000 on its display.

Example, a meter with a 50000 count will read 49.999V on the display, but when it tries to display 50V, it will only read 050.00V, or simply 50.00V. Generally when the multimeter or clamp meter moves to the next range, one digit of resolution is lost.

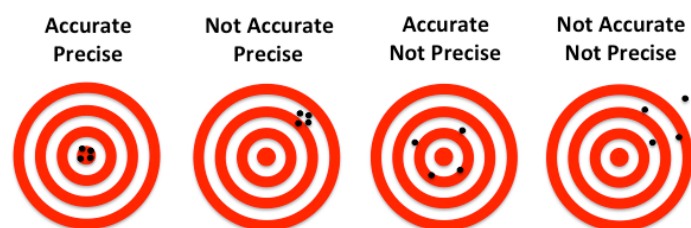
Digits

Alternatively, display resolution can be described in digits. As per the table above, when reading the digits, the whole number must be separated from the fraction.

Example, a meter with 4.5 digits, or 4 and 1/2 digits needs to be read as follows:

1. The "4" represents full digits - digits that can be represented or shown from 0-9 on the display
2. The "1/2", or "0.5" - is the first digit of the reading display as well as the maximum it can read i.e. "1/2" means the first digit that can represent the digit 0-1.

Accuracy and Precision



Accuracy

An instrument's degree of reliability and degree of acceptable error can occur under specific operating conditions. Alternatively, how close the measurement is to the actual or reference value of the signal being measured.

Accuracy may be represented as a percentage as well as digits.

Example: an accuracy of $\pm 2\%$, +2 digits means 100.0V reading on a multimeter can be from 97.8V to 102.2V.

Accuracy is generally compared to an accepted industry standard.

Precision

An instrument's degree of repeatability i.e. how reliably can the instrument repeat the same measurement and read the exact same value when making a series of measurements.

Resolution

The smallest increment an instrument can detect and display such as hundredths, thousandths, millionths.

The larger number of counts translates into higher resolution and usually DMMs with a higher resolution have a higher accuracy.

Range

The upper and lower limits an instrument can measure a value or signal such as amps, volts and ohms.

The larger number of counts should translate into higher resolution and generally a higher accuracy.

Safety Category or (CAT) Rating

Categories I-IV are used to rate a test instruments' ability to resist a voltage spike, which is applied through a specific resistance. Generally, a higher CAT rating, the safer the instrument.

CAT IV (Primary supply level) – 3-Phase

Measurements performed at the source of low voltage installations

Application: electricity meters, primary overcurrent protection devices and ripple control units

CAT III (Distribution level) – 3-Phase

Measurements performed in building installations

Application: distribution boards, circuit breakers, bus bars and junction boxes in fixed installations

CAT II (Local level) – Single phase

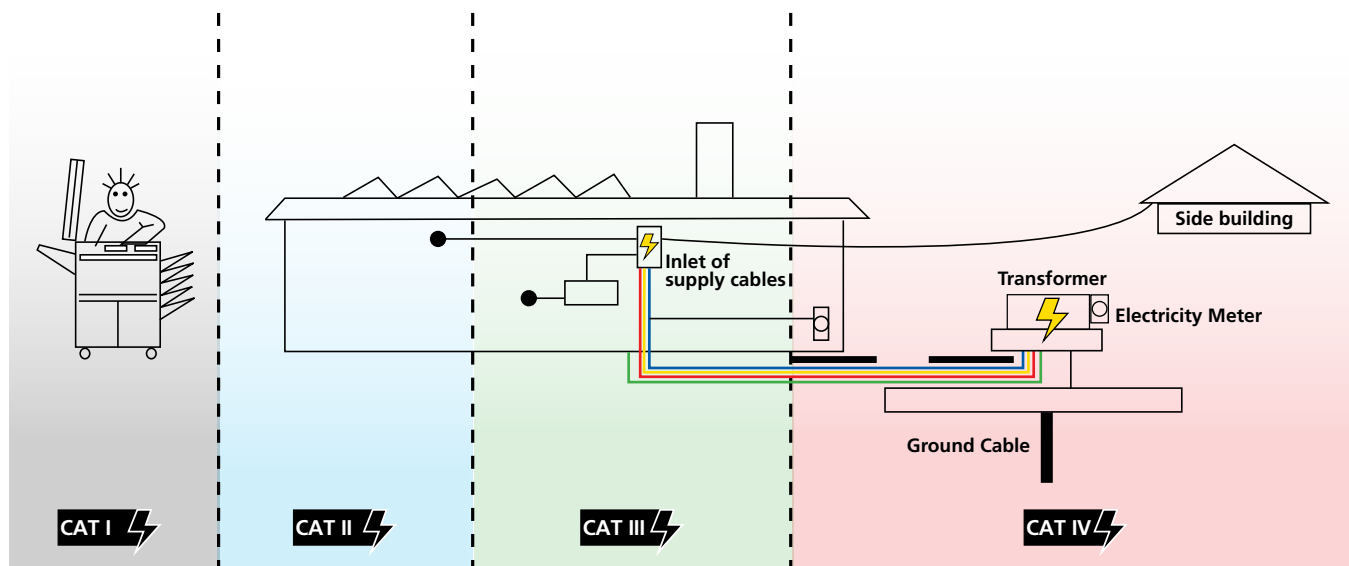
Measurements performed on circuits directly connected to the low voltage installations

Application: household appliances, mobile devices and similar

CAT I (Signal level) - Electronic

Measurement of electronic equipment not directly connected to mains

Application: Protected electronic devices



A higher voltage rating within a category signifies a higher energy transient.

Example: CAT III-1000V instrument has superior protection compared to a CAT III-600V rated instrument.

Degree of Ingress Protection (DIN EN IEC 60529)

Ingress Protection (IP) Rating (or International Protection Marking) of an instrument consists of the letters IP followed by two digits i.e. IP54. The two digits classify the degrees of protection provided against the intrusion of solid bodies including body parts like hands and fingers, dust, and accidental contact (first digit after IP), and water (second digit after IP) in electrical enclosures.



1 st Digit: Solid Object Ingress		2 nd Digit: Water Ingress	
1 st Digit	Summary of Protection	2 nd Digit	Summary of Protection
0	No protection	0	No protection
1	Protection against solid foreign bodies >50mm	1	Protection against vertically dripping water
2	Protection against medium sized solid bodies >12.5mm	2	Protection against vertically dripping water when enclosure tilted up to 15°
3	Protection against small solid bodies >2.5mm	3	Protection against spraying water (60° angle from any direction)
4	Protection against granular solid bodies >1mm	4	Protection against splashing water from any direction
5	Protection against limited ingress of dust	5	Protection against low pressure water jets
6	Complete protection against ingress of dust	6	Protection against strong jets of water
		7	Protection during temporary immersion
		8	Protection during continuous immersion
		9k	Protection against high pressure/stream jet cleaning

Cable Current Ratings

Conventional Rated Thermal Current (A)	Copper Conductor Section			
	Cable			
	No	Section (mm ²)	Dia. (mm)	AWG
8	1	1	1.15	17
12	1	1.5	1.45	15
20	1	2.5	1.83	13
25	1	4.0	2.30	11
32	1	6.0	2.80	9
50	1	10	3.60	7
65	1	16	4.62	5
85	1	25	5.79	3
115	1	35	6.64	2
150	1	50	8.21	0 or 1/0
175	1	70	9.37	00 or 2/0
225	1	95	10.4	000 or 3/0
250	1	120	12.4	4.7/0
275	1	150	13.91	5.5/0
350	1	185	16.06	6.7/0
400	1	240	17.96	7.7/0

Description of Symbols

Symbol	Description	Symbol	Description
	Sensitive zone in jaws for slim conductors in CAT III 1000V areas		Bluetooth
	Safety Category (P161)		ATEX certified electrical equipment for explosive atmosphere
	GPS		GS mark is based on the German Product Safety Act (P159)
	Lifetime Warranty on most tools and selected instruments (P159)		Relative humidity
	Sound level		True RMS (P159)
	Temperature		Certification mark for individual products tested at 1000V (P159)
	Measures basic Ohms Law of Voltage Resistance and Current		Wi-Fi

Industry Symbols

						
Aerospace	Automotive	Chemical	Connectivity	Defence	Electrical Installation	Electrical Wholesale
						
Electronics	Food	Industrial Automation	Marine	Mining	OEM	Offshore
						
Panel Building	Rail	Ship Building	Solar Energy	Tele-communication	Heavy Equipment	Wind Energy



Toptronic 2019 Test Report

[illegible]

SECTION 2- INSTALLATIONExisting Certificate: ☐ No ☐ Yes Date Issued/...../.....Number.....☐ Existing Installation ☐ Alteration/Extension ☐ New Installation ☐ Temporary Installation**Type of Installation**

☐ Residential ☐ Commercial ☐ Industrial
☐ Common Area For Multiple Users (Sectional Title)
☐ Other (Describe).....

Type of Electricity System

☐ TN-S ☐ TN-C-S ☐ TN-C
☐ TT ☐ IT ☐

Supply Earth Terminal Provided☐ YES ☐ NO**Characteristics of Supply**

Voltage ☐ 230V ☐ 400V ☐ 525V
☐ Other.....V
Number of Phase(s): ☐ One ☐ Two ☐ Three
Prospective Short-Circuit Current at the point of Control (PSCC) kA
How Determined? ☐ Calculated ☐ Measured. ☐ Data from Supplier

Main Switch Type

☐ Switch Disconnector (on-load isolator) ☐ Fuse Switch D
☐ Circuit Breaker ☐ Earth Leakage Circuit Breaker
☐ Earth Leakage Switch Disconnector

Number of Poles..... Current Rating..... A
Short-Circuit/withstand rating.....kA
Rated earth leakage tripping current surge protection ☐ 30mA ☐ OthermA
Surge protection ☐ YES ☐ NO
Is alternative supply installed? ☐ YES ☐ NO
Is any part of the installation a specialised electrical installation? If yes, complete additional test reports. ☐ YES ☐ NO
Is any part of the installation at a voltage above 1kV? If yes, a competent person has to approve the design and complete additional test reports. ☐ YES ☐ NO
Is this installation one of five or more on the same new supply? If yes, the name of the competent person who supervised the same new supply? If yes, the name of the competent person who supervised the installation has to be recorded. ☐ YES ☐ NO

NOTES:
.....
.....
.....

SECTION 3- DESCRIPTION OF INSTALLATION COVERED BY THIS REPORT

(Add additional pages, specification references or drawings (Layout of installation on Premises), etc., where applicable)

.....
.....
.....
.....
.....

SECTION 4- INSPECTION AND TESTS {new and existing Installations)

NOTE: Answer Truthfully "Yes" or "N/A" or No as witnessed.

The Report Shall not be issued if any "No" Answers exists.

NUMBER OF CIRCUITS OR POINTS COVERED BY THIS REPORT											
CIRCUITS		EXISTING INSTALLATION				NEW/ALTERED/TEMPORARY INSTALLATION					
		MAIN DISTRIBUTION BOARD	SUB DISTRIBUTION BOARD			MAIN DISTRIBUTION BOARD	SUB DISTRIBUTION BOARD				
Lighting Circuit											
Lighting Points											
Socket-Outlets Circuits											
Socket-Outlets											
Three-Phase Socket-Outlets circuits											
Three-Phase Socket-Outlets											
Socket-Outlets for Critical Application Circuits											
Socket-Outlets for Critical Application											
Mixed Circuits (number of)											
Motor Circuits											
Control Circuits											
Air-Conditioning Circuits											
Motor-Controlled Assembly Circuits											
Transformer Circuits	Lighting										
	Bell										
	Other										
Heating Circuits											
Fans Circuits											
Elevator/Escalator Circuits											
Signage Circuits											
Fixed Appliance Circuits	Cooking										
	Geyser										
	Pool Pump										
	Borehole Pump										
	Other										
Earth Leakage	Main Switch										
	Only Socket-Outlets										
Overhead Busbars											
Alternative Power Supply connections											
Other Circuits											
Notes:											
.....											

INSPECTION	EXISTING INSTALLATION	NEW/ALTERED/TEMPORARY INSTALLATION
01 - Accessible components are correctly selected		
02 - All protective devices are of correct rating		
03 - All protective devices are capable of withstanding the prospective fault level		
04 - Conductors are of the correct rating and current-carrying capacity for the protective devices and connected load		
05 - Components are correctly installed		
06 - Disconnecting devices are correctly located and all switchgear switches the phase conductors		
07 - Different circuits are separated electrically		
08 - Connection of conductors and earthing and bonding are mechanically sound		
09 - Connection of conductors and earthing and bonding are electrically continuous		
10 - Circuits, fuses, switches, terminals, earth leakage units, circuit breakers, distribution boards are correctly and permanently marked or labelled		
11 - Where an electrical circuit passes through a fire barrier, the integrity of the fire barrier has been maintained		
12 - Safety and emergency lighting and signs		
13 - (A) in the case of new installations, or additions or alterations to existing installations, the new added or altered installation complies with sans10142 Or 13 - (B) in the case of installations that existed before the publication of this sans10142, the installation complies with the general safety requirements of the sans10142, and is reasonably safe Note 1: confirm (a) or (b) or (a) and (b) Note 2: confirm n/a in the case of (a) or (b), where applicable		
14 - Where an alternative supply is installed, it complies with the requirements in respect of connections, change-over switch and indicator		
15 - The position of the readily accessible earthing terminal for earth connections of other services by installers of such services is indicated on the db		

Tests Carry out all the tests for the main distribution board. Also conduct all tests and complete copies of the tests for each distribution boards and for each supply (normal or alternative supplies), and attach as annexes to this report.	UNITS	INSTRUMENT	READING / RESULT	
			EXISTING INSTALLATION	NEW/ ALTERED/ TEMPORARY INSTALLATION
01 - Continuity of bonding Result must be $<0.02P$ If result $> \text{or} = 0.02P$, then remedy before proceeding	Ω	T1151 ☐ T1832 ☐ T1132 ☐ Other.....		
02 - Resistance of earth continuity conductor Result must be $<0.02P$ If result $> \text{or} = 0.02P$, then remedy before proceeding	Ω	T1151 ☐ T1832 ☐ T1132 ☐ Other.....		
03- Continuity of ring circuits (if applicable) Result must be $<0.02P$ If result $> \text{or} = 0.02P$, then remedy before proceeding	Ω	T1151 ☐ T1832 ☐ T1132 ☐ Other.....		
04 - Earth loop impedance test	Ω	T1825 ☐ T1826 ☐ Other.....		

05 - Prospective short-circuit current Tick if calculated ☐ Tick if measured ☐ Tick if supplied by supplier ☐	kA	T1825 ☐ T1826 ☐ Other.....		
06 - Elevated voltage between incoming neutral end external earth (ground)	V	T1151 ☐ Other		
07 - Earth resistance at electrode (if required)	Ω	T1820 ☐ T1805 ☐ T1105 ☐ T1120 ☐ Other.....		
08 - Insulation resistance Result must be >1MΩ If Result < or = 1MΩ, then remedy	MΩ	T1151 ☐ T1832 ☐ T1132 ☐		
09 - Voltage at the main distribution board with no load for each phase to neutral	V	T1151 ☐ Other		
10 - Voltage at the main distribution board with load for each phase to neutral	V	T1825 ☐ Other		
11 - Voltage at available load (worst case) for each phase to neutral	V	T1825 ☐ Other		
12 - Operation of all earth leakage units Must trip for >30mA	mA	T1812 ☐ TEL28 ☐ TEL10 ☐ TEL11 ☐ TEL1 ☐ Other.....		
13 - Operation of all earth leakage test button			CORRECT ☐	CORRECT ☐
14 - Polarity at points of consumption		TEL1 ☐ T1825 ☐ T1812 ☐ Other.....	CORRECT ☐	CORRECT ☐
15 - Phase rotation at points of consumption for three-phase systems		T860 ☐ T887 ☐ TEL12 ☐ Other.....	CORRECT ☐	CORRECT ☐
16 - All switching devices, make-and-break circuits		T1151 ☐ T1832 ☐ T1132 ☐ Other.....	CORRECT ☐	CORRECT ☐

SECTION 5- RESPONSIBILITY

NOTE: For existing Installations, complete only 5.4. For New/Altered/Temporary Installations, if not signature appears in 5.1 to 5.3, the signatory of 5.4 takes responsibility. Where there are five or more Installations on the Same Supply, a Competent Person sign at 5.5

5.1 DESIGN

I, being the Person Responsible for the DESIGN of the Electrical Installation, Particulars of which are Described in Section 3 of this form, CERTIFY that the Work for which I am Responsible, it to the Best of my Knowledge and Belief in Accordance with the Relevant Legislation. The Extent of my Liability is Limited to the Installation Described in Section 3 of this form.

For the DESIGN of the Installation:

Name (in Block Letters).....

Surname (in Block Letters).....

Signature

Position.....

Address.....

Address.....

Address.....

Address.....

Profession Registration No (Where Applicable)

Date:.....Day.....Month.....Year

5.2 MATERIAL SPECIFICATION/PROCUREMENT

I/We, being the Person(s) Responsible for the MATERIAL SPECIFICATION/PROCUREMENT for the Electrical Installation, Particulars of which are Described in Section 3 of this form, CERTIFY that the Equipment that I/We have procured, is to the Best of my/our Knowledge and Belief in Accordance with the Relevant Legislation. The Extent of Liability of the Signatory is Limited to the Installation Described in Section 3 of this form. For the MATERIAL SPECIFICATION/PROCUREMENT of the Installation:

Name (in Block Letters).....

Surname (in Block Letters).....

Signature

Name (in Block Letters).....

Surname (in Block Letters).....

Signature

For and on Behalf of.....

Address.....

Signature

Position.....

Address.....

Address.....

Position.....

Address.....

Address.....

Address.....

Address.....

Address.....

Profession Registration No (Where Applicable)
 Date:.....Day.....MonthYear

NOTE: For existing Installations, complete only 5.4. For New/Altered/Temporary Installations, if not signature appears in 5.1 to 5.3, the signatory of 5.4 takes responsibility. Where there are five or more Installations on the Same Supply, a Competent Person sign at 5.5

5.3 CONSTRUCTION

I/We, being the Person(s) Responsible for the CONSTRUCTION of the Electrical Installation, Particulars of which are Described in Section 3 of this form, CERTIFY that the Work for which I/We are Responsible, is to the Best of my/our Knowledge and Belief in Accordance with the Relevant Legislation. The Extent of Liability of the Signatory is Limited to the Installation Described in Section 3 of this form. For the MATERIAL SPECIFICATION/PROCUREMENT of the Installation:

Name (in Block Letters).....	Position.....
Surname (in Block Letters).....	Address.....
Signature	Address.....
Name (in Block Letters).....	Position.....
Surname (in Block Letters).....	Address.....
Signature	Address.....
For and on Behalf of.....	Address.....
.....	Address.....
Address.....	
Signature	Address.....
Profession Registration No (Where Applicable)	
Date:.....Day.....MonthYear	

5.4 INSPECTION AND TESTS

I, being the Person Responsible for the INSPECTION AND TEST of the Electrical Installation, Particulars of which are Described in Section 3 of this form, CERTIFY that the INSPECTION AND TESTING for which I am Responsible, and, which were done in accordance with the latest SANS10142, that the Results obtained and reflected on this report are Correct and Indicate

☐ (For Installation work Performed Since the Publication of this part of the SANS10142), Compliance with this Standard, or

☐ (For an Installation that existed before the Publication of this part of the SANS10142), that the Installation Complies with the General Safety Principles of this Standard and is Reasonably Safe.

The Extent of my Liability is Limited to the Installation Described in Section 3 of this Form. For the DESIGN of the Installation:

Name (in Block Letters).....	Registration Certificate No:.....
Surname (in Block Letters).....	Address.....
Address.....	
Address.....	
Address.....	
Signature	Address.....
Date:.....Day.....MonthYear	
Type of Registration:	
Master Installation Electrician ☐	
Installation Electrician ☐	
Single Phase Tester ☐	

NOTE: For existing Installations, complete only 5.4. For New/Altered/Temporary Installations, if not signature appears in 5.1 to 5.3, the signatory of 5.4 takes responsibility. Where there are five or more Installations on the Same Supply, a Competent Person sign at 5.5

5.5 COMPLIANCE OF INSTALLATION FROM COMMENCEMENT TO COMMISSIONING.

(This part is only Required in case of a new point of Supply which is intended to Supply Five or More Users)

I.....being the Person Responsible to Ensure that the Electrical Installation, Particulars of which are Described in Section 3 of this form and which is intended to supply One of Five or more users from the Same New Point of Supply, CERTIFY that the installation was done in Accordance with SANS 10142-1

☐ An Approved Inspection Authority for Electrical Installations

Chief Inspector's Registration Number:.....

☐ A Competent Person as Defined

Indicate Competency:.....

☐ A Professionally Registered Person

Category of Professional Registration.....

Registration Number:.....

Name (In Block Letters).....	Address.....
Surname (In Block Letters).....	Address.....
Address.....	
Address.....	
Signature	Address.....

Date:.....Day.....MonthYear

NOTE:.....

Instruments

CODE	DESCRIPTION	PAGE
C4031601	Telescopic Link Stick	58
CAT4PLUS	Cable and Pipe Locator	61
CBSPK	Circuit Buddy Safety Probe Kit	79
CBTL	Circuit Buddy 6 to 50 Volt Test Light	79
COMBI521	Compliance Tester	30
CSH230	Link Stick 9m (30ft)	58
DUSPOLA	Analogue Voltage Line Plus 1000V	56
DUSPOLE	Expert Voltage Line	56
EASYTEST	Multi Function Electrical	30
ECLIPSE	AC/DC TRMS Thermal Clamp 1500V DC	27
EVTEST100	Compliance Tester	29
F3000U	TRMS Transducer Flexible Clamp 3000A AC	21
FLASHMETER	Unbreakable/ Water Resistant DMM	8
HOTFIND	Infrared Camera	93
HT3305	Infrared Thermometer + Temperature meter	89
HT38	Circuit Breaker Finder	51
HT4005N	AC Standard Clamp	70
HVD	High Voltage Detector	59
IRONMETER	TRMS AC/DC Unbreakable DMM	8
JUPITER	Loop and RCD tester	13
MACRO EVTEST	Compliance Tester	32
MACROG3	Single Phase Compliance Tester	29
MERCURY	DMM with built in Infrared Camera	14
NEPTUNE	Insulation and Continuity Tester 1000V	13
PVISOTEST	PV Insulation Tester	76
RD7100	Cable Route Tracer	61
RD7200	Cable Route Tracer	61
RD8200	Cable Route Tracer	62
T64	TRMS/AC+DC DMM with Data Logger	11
T02AS	Universal - Test Leads	63
T10020C	Low Voltage Insulation Tester 1000V	43
T111	Non-Contact Thermometer	89
T1120	Digital Earth Resistance Tester	37
T1133HVD25E	High Voltage Tester	59
T1151	Digital Insulation Tester 1000V	42
T1151OLED	Digital Insulation Tester OLED 1000V	42
T1300H	DIY DMM	7
T175HP	Proximity Detector (Hi-Prox)	57
T180	Tone and Probe Kit	51
T1800	Analogue Insulation Continuity Tester 1000V	41
T1805	Analogue Earth Resistance Tester	36
T1805LEAD	4-Wire Earth Resistance Test Leads	65
T1820	Digital Earth Resistance Tester	37
T1825	PSC Loop Tester	45
T1826	PSC Loop Tester	46
T1832	Analogue Insulation Continuity Tester 1000V	41

Instruments

T185	LAN Tester	79
T1851	Digital Insulation Tester 1000V	42
T2000	Earth Resistance Clamp	38
T223	Digital Clamp Meter 100A AC/DC	22
T2268	Digital Tachometer	80
T235H	Electrician's DMM	7
T2550T	Handheld Cable Fault Locator	62
T2608	Digital Clamp Meter 2000A AC	24
T260D	Digital Clamp Meter 000A AC	20
T261	Digital Clamp Meter TRMS 200A AC	25
T3004	Humidity / Temperature	87
T325	Sound Level	86
T325SVD	Personal Safety Voltage Detector	57
T411	Combustible Gas Leak Detector	87
T4137	Digital Milliohm Meter	49
T416	Earth Resistance Tester	36
T4201	Anemometer	88
T45200/ T45000	Neon Screwdrivers	52
T475	Volt/Current Tracer	53
T475S	Wire Tracer & Transmitter	53
T48	DIY DMM	7
T5012	Carcheck	79
T502KJ	Professional Thermometer	88
T522	Wireless Data Logger	87
T531	LED Light Meter	86
T60	Compliance 3-Phase Network/Power Analyser	31
T6016	Digital Clamp Meter 600A AC	19
T630	Digital Luxmeter	86
T70	Phase Sequence Indicator and Voltage Detector	51
T77N	Earth Leakage 100A AC	21
T8000	Anemometer/Hygro/Lux/Temp	88
T8040LEAD	Universal - Test Leads	63
T8051	Process Calibrator	78
T8056	Digital Clamp Meter 1000A AC/DC	23
T820	DIY DMM	7
T8202	Vibration Tester	80
T835	DIY DMM	7
T855	3-Phase Rotation Indicator	50
T85D	DIY DMM	7
T860	3-Phase and Motor Rotation Indicator	50
T887	3-Phase Rotation LCD Indicator	50
T890	3-Phase Detector (Non-contact)	49
T921	DMM	8
T98	Digital Clamp Meter 1000A	20
TAL1825	Test Leads	64
TAL23CA	Test Leads	66
TAL24	Universal - Test Leads	63

Instruments

TAL25	Universal - Test Leads	63
TAL30AG	Test Leads	64
TAL30ARBK	Silicone - Test Leads	65
TAL30CRBK	Test Leads	65
TAL30HB	Test Leads	66
TAL34B	Test Leads	64
TAL35RBK	Silicone - Test Leads	63
TAL36	Wide grip crocodile clips	66
TAL36L	Wide grip crocodile clips	66
TAL38CRBK	Test Leads	65
TAL39RBK	Silicone - Test Leads	65
TAL58	Test Lead	65
TALTBM	Silicone - Test Leads	63
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TBM031	Digital Clamp Meter TRMS 600A AC	19
TBM037	Digital Clamp Meter TRMS 600A AC	22
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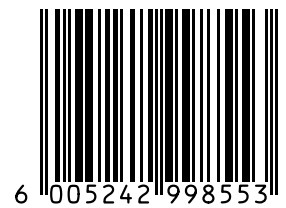
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