

Testboy®

GmbH, Germany

Stands For Quality
Since 1953



PROFESSIONAL MEASURING AND TEST INSTRUMENTS

CONTENT | OVERVIEW

	Page		Page
Testboy		Installation Tester / Adaptor	
Contact Details	04	Overview	45
Testboy Company Philosophy	05	Testboy 26	47
		Testboy TV 416/432, Testboy TV 416A/432A	48
General Information		Testboy TV 410N	49
Safety Information	06	Testboy TV 430N	50
		Testboy TV 440N	51
Voltage Testers		Testboy TV 450	52
Overview	08	Testboy TV 460	53
Testboy 10	10	Testboy TV 470	54
Testboy 11, Testboy 111	11		
Testboy 110	12	Thermo, Luxmeter and Humidity Testers	
Testboy 113	13	Overview	55
Testboy Profi LED <i>Plus</i>	14	Testboy TV 321	57
Testboy Profi LCD <i>Plus</i>	15	Testboy TV 322	58
Testboy 40 <i>Plus</i>	16	Testboy TV 325	59
		Testboy TV 331	60
Continuity Tester		Testboy TV 332	61
Overview	17		
Testboy 20	19	Accessories	62
Magnetic Field Tester		Sales Promotion	64
Overview	20		
Testboy 15, Testboy 130	22	Thermal Imaging	
		Overview	66
Multimeter		Testboy TV 290 Basic	68
Overview	23	Testboy TV 290 Control	70
Testboy 2200	25	Testboy TV 301, 302	72
Testboy 3000	26	Testboy TV 303	74
Testboy Pocket	27	Testboy TV 304	76
		Testboy TV 305	78
Current Clamps		Testboy TV 306	80
Overview	28	Testboy TV 500 FireChief	82
Testboy TV 215N	30		
Testboy TV 216N	31	Light & Sound	
Testboy TV 218	32	Overview	84
		PSW.90XXX	86
Car Electronics		Askari	87
Overview	33	Flashni	88
Testboy 50	35	Squashni	89
Testboy 70	36	Roshni	90
Testboy 72	37	Symphoni	91
Testboy 75	38	Solex	92
Testboy Car Tester	39	Symphoni Voice Plus	93
Testboy Light 500	40	Asserta 230V	94
		Asserta 24V	95
Socket Outlet Tester		Solista	96
Overview	41	Compro BL50, BL70, BL90	97
Testavit Schuki 1, Schuki 3	43	Chiasso	98
Testavit Schuki 2, Schuki 2K	44	Chiasso Razor	99
		Compro ST 36K	100
		Compro ST 40, ST 70	101
		Contact	106

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TESTBOY | COMPANY PHILOSOPHY

- | 1953 Ludwig Mers electrical installation company founded
- | 1960 Ludwig Mers GmbH & Co. KG Dedicated Electrical Engineering Works
- | 1993 The present Managing Director takes control of Ludwig Mers GmbH & Co. KG
- | 1997 New company building erected
- | 2000 Warehouse in Vechta enlarged
- | 2005 Company name changed to Testboy GmbH
- | 2005 New office and warehouse building erected in Vechta
- | 2008 Production facilities and warehouse in Vechta enlarged

We **continuously evaluate** our assortment of products to ensure they meet **changing customer requirements**. This process ensures that our devices are automatically upgraded to comply with the latest market requirements as well as applicable standards and regulations. The objective of our strategy is to combine **as many functions as possible in a single device**.

The brand names "Testboy", "Testavit" and "Schuki" have become trademark bywords for **durable and functional measuring and test instruments**. State-of-the-art production technology, **TÜV/GS tested and user-friendly products** combined with **a long service life** have made Testboy GmbH a **leading manufacturer**.

Quality and service are our primary objectives!

Your TESTBOY team



ISO 9001:2008 certified

GENERAL INFORMATION | SAFETY INFORMATION

In today's environment measuring and test instruments are essential tools for building, repairing and servicing electrical devices and systems.

The primary objective of modern test instruments is to help the user to perform safety checks, troubleshooting and functional tests quickly, safely and reliably.

Internationally valid safety standards for the safety of electrical measuring and control equipment are drawn up and ratified by the IEC (International Electrotechnical Commission). They guarantee that tests are carried out according to the same criteria and guidelines all over the world.

Measuring and test instruments are tested as follows:

- CAT II 600V** | 4,000V peak impulse test voltage 12 Ohm source
- CAT II 1000V** | 6000V peak impulse test voltage 12 Ohm source
- CAT III 600V** | 6,000V peak impulse test voltage 2 Ohm source
- CAT III 1000V** | 8000 V peak impulse test voltage 2 Ohm source
- CAT IV 600V** | 8,000V peak impulse test voltage 2 Ohm source
- CAT IV 1000V** | 12000V peak impulse test voltage 2 Ohm source

Measuring instruments are classed according to 4 different categories that indicate for which range they are approved.

- CAT I** | Electrical circuits that are not connected directly to the mains
 - Battery-operated electrical devices
 - Fused electrical circuits in electronics devices

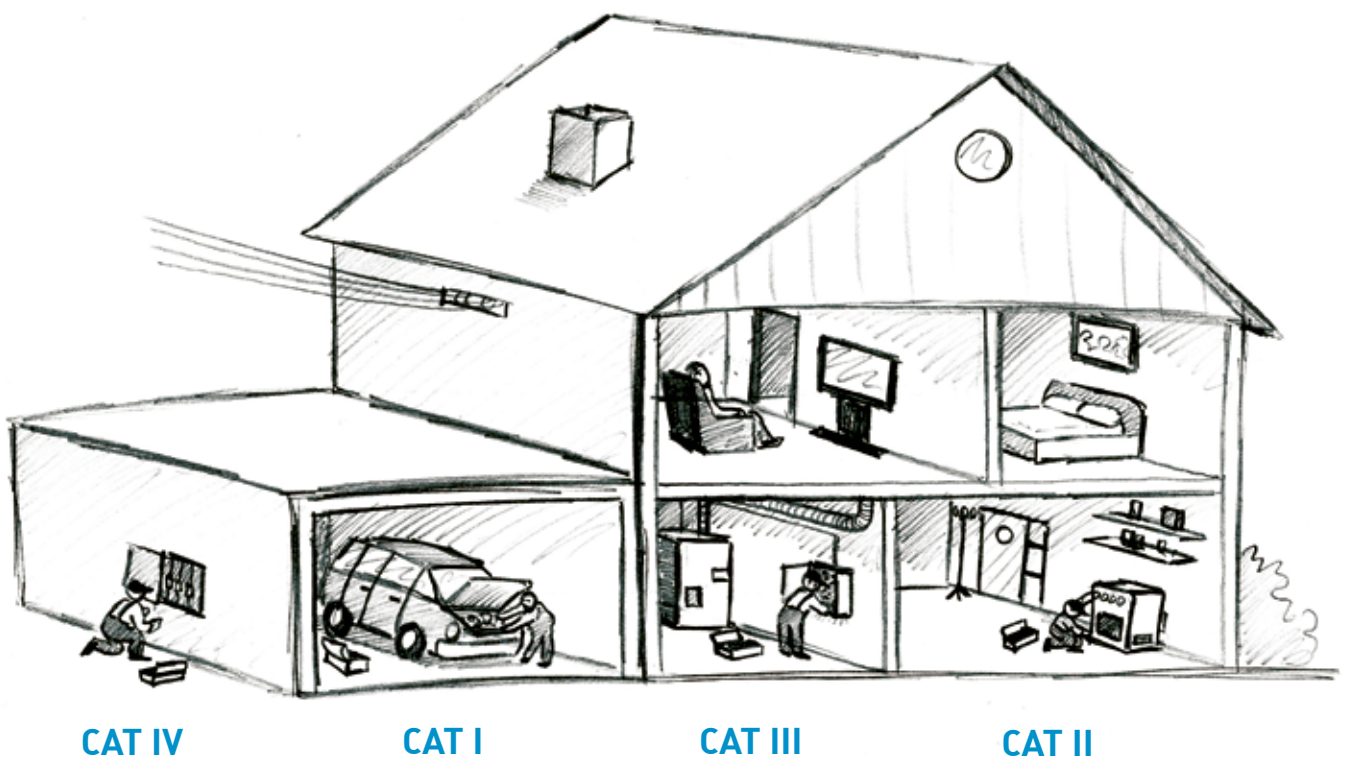
- CAT II** | Electrical circuits with no direct electrical connection to the mains
 - Socket outlets and long branch lines
 - All socket outlets that are more than 10 m removed from CAT III
 - All socket outlets that are more than 20 m removed from CAT IV

- CAT III** | In building installations, for example, distribution boards, cabling, socket outlets
 - Supply cables and short supply leads
 - Distributor boards
 - Socket outlets for large loads with short power supply leads
 - Lighting systems in large buildings
 - Supplies
 - Busbars

- CAT IV** | At the source of the low current low-voltage installation, for example electricity meters, main terminal, primary surge protection devices
 - In the open and supply cable routing
 - Supply cables from connection point to the building
 - Connection between the measuring instrument and the connection point
 - Overhead lines to individual buildings
 - Underground cables to water pumps

Manufacturers are able to provide documentary evidence that their products comply with IEC/EN 61010-1 by having the product tested for compliance by an independent, recognised certifying body. Following successful compliance testing the manufacturer is entitled to affix the corresponding GS symbol to his product.

As a safety conscious and responsible manufacturer all Testboy GmbH products are certified by TÜV - Süd GmbH (TÜV = Technical Inspectorate in Germany).



Measuring categories in accordance with IEC/EN 61010-1.

OVERVIEW | VOLTAGE TESTERS

As voltage testers belong to the basic equipment of all qualified electricians correct handling of these instruments is an absolute must for all skilled tradesman and woman working in the electrical trade.

A voltage tester measures a quantity (voltage) within a defined range.

IEC/EN 61010-1 specifies that all single pole voltage testers can be used in measurement circuits up to CAT III.

IEC/EN 61243-3, DIN VDE 0682 Part 401 details special safety requirements for two-pole voltage testers.

However, the premise that all two-pole voltages testers produced and released onto the market must meet the safety requirements specified in IEC/EN 61243-3, DIN VDE 0682 Part 401 applies to all manufacturers.

However, it remains possible to continue using voltage testers already in use.

Measurements are displayed by means of an LED or LC display. In addition, several of our instruments provide acoustic signal indication (Testboy 11, Testboy 111, Testboy 113, Testboy Profi LED *Plus* and Testboy Profi LCD *Plus*).



APPLICATIONS

1. Testboy 110
2. Testboy Profi LCD Plus
3. Testboy Profi LED Plus
4. Testboy Profi LED Plus
5. Testboy 40 Plus
6. Testboy 113
7. Testboy Profi LCD Plus
8. Testboy 111
9. Testboy 40 Plus



VOLTAGE TESTER | TESTBOY 10 | Non-contact voltage tester

The Testboy 10 is one of the more sought after products in our assortment. Its simplicity of operation and wide range of different options for use means this instrument should belong to the basic equipment of DIY enthusiasts and qualified electricians alike.

Made of impact resistant, high-strength ABS plastic the housing is suitable for use in harsh conditions.

The non-contact voltage tester detects live wires, for example in splices, cable drums, socket outlets, switches and outlet junction boxes. It is possible to localise a defective lamp in a chain of lights within seconds. An invisible cable break in an extension lead is indicated to within a tolerance of just a few millimetres.

In contrast to the inductive method of measurement the capacitive method does not require current to flow. That makes it possible to indicate breaks quickly and precisely to within a centimetre.

The Testboy 10 has been specifically constructed for use in installation work. Its user-friendly handling attributes make it particularly suitable for use in areas with restricted accessibility.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)



SPECIFICATIONS

Technical data	Testboy 10
Display	Optical
Range	110 - 1000V AC
Power supply	2x 1.5 V
Degree of protection	IP 44
Overvoltage category	CAT III 1000V
Dimensions	142 x 26 mm
Weight	22 g
Colour	Red, other colours on request
Scope of delivery	1x operating instructions 2x batteries type AAA LR03





VOLTAGE TESTERS | TESTBOY 11, 111 | Non-contact voltage testers with acoustic warning signal

The Testboy 11 and Testboy 111 are two of the more sought after products in our assortment. Their simplicity of operation and wide range of different options for use means these instrument should belong to the basic equipment of DIY enthusiasts and qualified electricians alike.

Both voltage testers are equipped to provide optical and acoustic voltage indication. Made of impact resistant, high-strength ABS plastic the housing is suitable for use in harsh conditions. The Testboy 111 is equipped with an integrated LED torch to enable defective cables to be found quickly and reliably.

The non-contact voltage testers detect live wires, for example in splices, cable drums, socket outlets, switches and outlet junction boxes. It is possible to localise a defective lamp in a chain of lights within seconds. An invisible cable break in an extension lead is indicated to within a tolerance of just a few millimetres.

In contrast to the inductive method of measurement the capacitive method does not require current to flow. That makes it possible to indicate breaks quickly and precisely to within a centimetre.

The Testboy 11 and Testboy 111 have been specifically constructed for use in installation work. Their user-friendly handling attributes make them particularly suitable for use in areas with restricted accessibility.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)

SPECIFICATIONS

Technical data	Testboy 11	Testboy 111
Display	Optical + acoustic	Optical + acoustic
Range	110 - 1000V AC	110 - 1000V AC
Power supply	2x 1.5V	2x 1.5V
Degree of protection	IP 44	IP 44
Overvoltage category	CAT III 1000V	CAT III 1000V
Dimensions	142 x 26 mm	160 x 25 mm
Weight	22 g	45 g
Integrated LED torch	No	Yes
Colour	Red, other colours on request	Red, other colours on request
Scope of delivery	1x operating instructions 2x batteries type AAA LR03	1x operating instructions 2x batteries type AAA LR03





VOLTAGE TESTER | TESTBOY 110 | Non-contact voltage tester from 12 V ~

The Testboy 110 is a further development of the proven Testboy 100. Its simplicity of operation and diverse options for use in a wide variety of applications means this instrument should belong to the basic equipment of DIY enthusiasts and professional electricians alike.

Made of impact resistant, high-strength ABS plastic the housing is suitable for use in harsh conditions. An integrated LED torch allows defective cables to be found quickly and reliably.

Non-contact Testboy voltage testers detect live wires, for example in splices, cable drums, socket outlets, switches and outlet junction boxes.

It is possible to localise a defective lamp in a chain of lights within seconds.

An invisible cable break in an extension lead is indicated to within a tolerance of just a few millimetres.

In contrast to the inductive method of measurement the capacitive method does not require current to flow. That makes it possible to indicate breaks quickly and precisely to within a centimetre.

The Testboy 110 has been specifically developed for use in installation work. Its user-friendly handling attributes make it particularly suitable for use in areas with restricted accessibility.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)



SPECIFICATIONS

Technical data	Testboy 110
Display	Optical
Range	12 - 1000V AC
Power supply	2x 1.5V
Degree of protection	IP 44
Overvoltage category	CAT III 1000V
Dimensions	160 x 25 mm
Weight	45 g
Integrated LED torch	Yes
Colour	Red, other colours on request
Scope of delivery	1x operating instructions 2x batteries type AAA LR03





VOLTAGE TESTER | TESTBOY 113 | Non-contact voltage tester from 12 V ~

The new Testboy 113 is a further development of the proven Testboy 110. Its simplicity of operation and diverse options for use in a wide variety of applications means this instrument should belong to the basic equipment of DIY enthusiasts and professional electricians alike.

Both voltage testers are equipped to provide optical and acoustic voltage indication. Made of impact resistant, high-strength ABS plastic the housing is suitable for use in harsh conditions. An integrated LED torch allows defective cables to be found quickly and reliably.

Non-contact Testboy voltage testers detect live wires, for example in splices, cable drums, socket outlets, switches and outlet junction boxes. It is possible to localise a defective lamp in a chain of lights within seconds. An invisible cable break in an extension lead is indicated to within a tolerance of just a few millimetres.

In contrast to the inductive method of measurement the capacitive method does not require current to flow. That makes it possible to indicate breaks quickly and precisely to within a centimetre.

The Testboy 113 has been specifically developed for use in installation work. Its user-friendly handling attributes make it particularly suitable for use in areas with restricted accessibility.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)

SPECIFICATIONS

Technical data	Testboy 113
Display	Optical and acoustic
Range	12 - 1000V AC
Power supply	2x 1.5V
Degree of protection	IP 44
Overvoltage category	CAT III 1000V
Dimensions	160 x 25 mm
Weight	45 g
Integrated LED torch	Yes
Colour	Red, other colours on request
Scope of delivery	1x operating instructions 2x batteries type AAA LR03





VOLTAGE TESTER | TESTBOY PROFI LED *PLUS* | Two-pole voltage tester

Thanks to its wide performance spectrum the Testboy Profi LED *Plus* is one of the more sought-after products in our assortment. The Testboy Profi LED *Plus* combines the following seven functions in a single device:

- | Displays AC and DC voltages from 6 to 1000 V
- | Single-pole phase testing
- | Two-pole phase sequence testing
- | Continuity testing up to 500k Ω (acoustic/optical)
- | Two-button fault current/RCD test
- | LED torch (white)
- | Screw-off 4mm test tips adapter

The combination of high-quality materials used for the watertight housing and the rubber grip underline the professional appearance of this instrument. The display window is protected by an unbreakable plastic cover.

Even when used daily the robust construction as well as the dust and waterproof housing guarantee a long service life. The test tips are protected by a removable cap that in turn is attached to the device. Moreover, the use of LEDs to provide optical indication across all functions guarantees the highest levels of reliability.

An acoustic signal is emitted to signalise a hazardous voltage when a 35V AC/DC voltage or above is detected.

Pushbutton load connection prevents unwanted tripping of the RCD, and ensures measurements of the protective earth conductor can also be undertaken. An acoustic signal is emitted during continuity testing from 0 to 500 k Ω .

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61243-3 (DIN VDE 0682-401)



SPECIFICATIONS

Technical data	Testboy Profi LED <i>Plus</i>
Display	Optical, 12 LEDs
Operating panel	Finger tip / RCD button
Measurement ranges	Autoranging
Voltage range	6 - 1000V AC/DC, 0 - 400Hz
Continuity testing	0 - 500k Ω with acoustic signal
Phase indication	> 100V AC
Pushbutton load connection	I _s ~ 30mA ED (DT) = 30 sec.
Power supply	2x 1.5V
Overvoltage category	CAT IV 1000V
Dimensions	238 x 70 x 30 mm
Degree of protection	IP 65
Weight	200 g
Colour	Red/black, other colours on request
Scope of delivery	1x operating instructions 2x batteries type AAA LR03
Accessories (optional)	Carry case





VOLTAGE TESTER | TESTBOY PROFI LCD PLUS | Two-pole voltage tester

Thanks to its wide performance spectrum the Testboy Profi LCD Plus is one of the more sought-after products in our assortment. The Testboy Profi LCD Plus combines the following 12 functions in a single device:

- | Displays AC and DC voltages from 6 to 1000 V
- | Single-pole phase testing
- | Two-pole phase sequence testing
- | Continuity testing up to 150 ohms (acoustic)
- | Resistance testing up to 2000 ohms
- | Diode testing
- | Data Hold function
- | Illuminated display
- | Two-button fault current/RCD test
- | LED torch (white)
- | Removable 4mm test tips adapter
- | Auto power Off

The automatic power off function extends the life of the batteries.

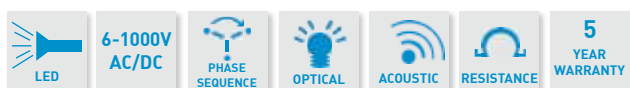
The LC display is a particularly professional feature of this instrument that makes it easy for the service or installation technician to display the phase and phase sequence. An acoustic signal is emitted to signalise a hazardous voltage when a 35V AC/DC voltage or above is detected. Pushbutton load connection prevents unwanted tripping of the RCD, and ensures measurements of the protective earth conductor can also be undertaken. Even when used daily the robust construction as well as the dust and waterproof housing guarantee a long service life. The test tips are protected by a removable cap that in turn is attached to the device.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61243-3 (DIN VDE 0682-401)

SPECIFICATIONS

Technical data	Testboy Profi LCD Plus
Display	Optical, 3 1/2 digit, LCD
Operating panel	Finger tip / RCD button, ON/OFF button, D-Hold button
Measurement ranges	Autoranging
Voltage range	6 - 1000V AC/DC, 0- 400Hz
Resistance testing	0 - 2000Ω
Continuity testing	0 ~ 150Ω with acoustic signal
Phase indication	> 100V AC
Pushbutton load connection	I _s ~ 30mA ED (DT) = 30 sec.
Power supply	2x 1.5V
Overvoltage category	CAT IV 1000V
Dimensions	238 x 70 x 30 mm
Degree of protection	IP 65
Weight	200 g
Colour	Red/black, other colours on request
Scope of delivery	1x operating instructions 2x batteries type AAA LR03
Accessories (optional)	Carry case



VOLTAGE TESTER | TESTBOY 40 PLUS | Two-pole voltage tester

Our Testboy 40 Plus combines two practical functions in a single device. It reliably displays AC and DC voltages in the range 6 to 400 V. In addition, the electronics facilitate determining the phase against the protective earth conductor.

A distinguishing characteristic of the Testboy 40 Plus is its user friendly design. The robust housing guarantees long-term reliability and has gained the approval of many customers working in the demanding electrical and tool making sectors.

The combination of materials used for the high-quality housing and the rubber grip underline the professional appearance of this instrument.

Absolute safety in performance - AC and DC voltage tests with polarity indication.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61243-3 (DIN VDE 0682-401)



SPECIFICATIONS

Technical data

Display	Testboy 40 Plus
Range	Optical, 8 LEDs
Power supply	6 - 400V AC/DC
Dimensions	From object under test
Overvoltage category	120 x 60 x 30 mm
Weight	CAT III 400V
Colour	100 g
Scope of delivery	Red/black, other colours on request
Accessories (optional)	1x operating instructions Carry case

6-400V
AC/DC

5
YEAR
WARRANTY

OVERVIEW | CONTINUITY TESTERS

Testboy continuity testers are amongst the best selling continuity testers on the German market. And the biggest success story of them all is the Testboy 2, with which everybody has come into contact at some time or other.

The Testboy 20 is the further developed version of this classic tester, which thanks to its excellent features is destined to surpass the success of the proven Testboy 2.

It is suitable for carrying out a wide variety of functional checks makes the continuity tester an essential piece of equipment for all electricians.

Different response thresholds and audible indication of changes in resistance support the qualified technician when carrying out continuity tests.



APPLICATIONS

1. Testboy 20
2. Testboy 20



CONTINUITY TESTER | TESTBOY 20 | Voltage-proof continuity tester

The Testboy 20 is a further development of the Testboy 2, the most-sold continuity tester in Germany. Millions of satisfied customers are proof of the reliability of this instrument.

The non-contact voltage sensor detects AC voltages through the insulation. The capacitive method of measurement does not require current to flow. Defective lamps in chains of Christmas tree lights or cable breaks are indicated precisely within seconds. Furthermore, the electronics also support single-pole phase determination.

In addition to fulfilling the functions of a classic cable and continuity tester the Testboy 20 is also equipped with a high-performance LED torch designed to provide up to 80 hours burn time.

Its dielectric strength up to 400 V makes this device unique!

To warn the user against touching hazardous live wires the presence of current is indicated by a glow lamp actuated by an integrated current alarm.

Identifying wire pairs through continuity testing is a standard task for the Testboy 20.

Its simplicity of operation and suitability for a wide range of applications means the Testboy 20 is a must-have piece of equipment for all electricians and service technicians.

Cable breaks and defective lamps are rapidly and precisely located and indicated with this easy-to-use device.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)

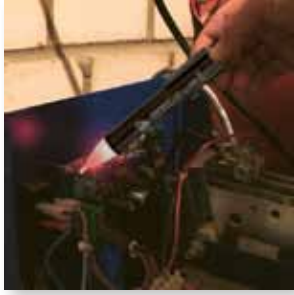
SPECIFICATIONS

Technical data	Testboy 20
Continuity testing	Optical 0 - 20Ω Acoustic 0 - 250Ω
Test voltage	4.5V
Test current	Optical ~ 10mA Acoustic ~ 2mA
Power supply	3x 1.5V
Voltage proof	Up to 400V
Degree of protection	IP 44
Dimensions	120 x 60 x 30 mm
Overvoltage category	CAT III 400V
Weight	90g (without battery)
Colour	Red, other colours on request
Scope of delivery	1x operating instructions 2x test leads
Accessories (optional)	Alligator clip Carry case



OVERVIEW | MAGNETIC FIELD TESTERS

Magnetic field testers are particularly useful devices for testing electro-magnetic switches and valves quickly and precisely. The test circuit utilised has revolutionised the test procedure for all pneumatic and hydraulic systems. This makes it possible to perform a functional test without interrupting plant operations, and as a result avoiding downtimes.



APPLICATIONS

1. Testboy 130
2. Testboy 15



MAGNETIC FIELD TESTERS | TESTBOY 15, 130 | Non-contact magnetic field testers

The Testboy 15 and the Testboy 130 are particularly suitable for rapid and precise testing of electro-magnetic switches and valves. The method used for the measurement process has simplified the test procedures for all pneumatic and hydraulic systems significantly. It is possible to perform a functional test without any setting-up time or having to halt the machine.

A magnetic field is created when power is applied to an electromagnetic switch, which the Testboy 15 and the Testboy 130 are able to detect. The tip lights up to indicate the presence of permanent or synthetic magnetic fields. The tester is so sensitive that it is often not even necessary to remove covers or trims.

With this device it is possible to test relays and magnetic coils, contactors, valves and pumps. In addition to numerous industrial applications the testers are suitable for a wide variety of testing tasks in cars and commercial vehicles as well as in the heating and sanitation sector.

Both testers are equipped with a permanent magnet for self testing.

The Testboy 130 is equipped with an energy-saving, high performance LED torch that provides a very bright, white light. With the batteries supplied the Testboy 130 torch achieves a burn time of approx. 80 hours.

Their compact design size means the testers can be carried in a shirt pocket for spontaneous use.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)



SPECIFICATIONS

Technical data	Testboy 15	Testboy 130
Display	Optical, LED	Optical, LED
Measurement ranges	All magnetic fields	All magnetic fields
Power supply	2x 1.5V	2x 1.5V
Dimensions	142 x 26 mm	160 x 25 mm
Degree of protection	IP 44	IP 44
Weight	22 g	45 g
Integrated LED torch	No	Yes
Colour	Black, other colours on request	Black, other colours on request
Scope of delivery	1x operating instructions 2x batteries type AAA LR03	1x operating instructions 2x batteries type AAA LR03



OVERVIEW | MULTIMETERS

Testboy digital multimeters offer a wide variety of functions that are designed to simplify daily work routines.

Digital or analogue

Multimeters are equipped with a digital display to provide an accurate, high resolution display. An analogue display returns an imprecise reading, because the user is required to estimate the values indicated between the scale markings. By contrast the digital display always indicates the complete measurement value.

Voltage

The principle power supply for electronics devices is 230VAC, which is then converted in so-called power supply units to an operating voltage for the electronics components (for example computer power supply packs, plug-in mains adapters and so forth). A multimeter is required to measure these voltages and display the values. The task is made even simpler if the measuring instrument features autoranging.

Continuity testing

To facilitate testing a good conductive, low resistance connection all multimeters offer a continuity test function with acoustic signal. The test voltage during the continuity test is so low that it can be guaranteed that only low-resistance connections are recognised as continuous, and not transistor or diode paths.

Accuracy

The maximum measurement error is detailed by the accuracy of the multimeter. This value is indicated in percent in relation to the actual measurement value.

Data Hold

Pressing either the "Hold" or the "DATA H" button will freeze the measurement value presently indicated in the display. This is an extremely useful function if the value has to be documented or it is not possible to read the display at the time measurements are being taken.

Extract from the EK 1 resolution

Where safety is an issue, components must be used in accordance with their rating data as specified in section 14.1 of the standard DIN EN 61010-1. A large number of (digital) multimeters on the market are fitted with a fuse approved for 250V only. The maximum value of measurement ranges for voltage measurements indicated on the multimeters is very often 600V or 1000V; hence, even applying a usual household phase-phase voltage of 400V will exceed the fuse value. Due to the fuses used in conjunction with insufficient clearance and creepage distances overvoltage events cause dangerous electric arcing to occur, which represents a fire hazard and can also endanger the health and safety of the user.



APPLICATIONS

1. Testboy Pocket
2. Testboy 3000
3. Testboy 2200
4. Testboy 3000
5. Testboy Pocket
6. Testboy 2200



MULTIMETER | TESTBOY 2200 | Digital multimeter with voltage sensor and LED torch

In addition to an extended functional range, a modern design, cutting edge technology, high-strength ABS housing and simplicity of operation ensure this instrument is suitable for universal use in industrial and trade environments as well as the harshest of conditions.

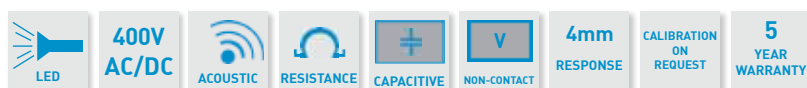
The integrated LED torch and built-in voltage sensor are distinguishing features that not only set the Testboy 2200 apart but also increase user safety.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)

SPECIFICATIONS

Technical data	Testboy 2200	
DC voltage	200mV 2, 20, 200, 400V	±0.5%, +3dpts ±0.8%, +5dpts
AC voltage	2, 20V 200, 400V	±1.5%, +5dpts ±1.5%, +5dpts
DC current	200µA, 2000µA 4 A	±1.0%, +3dpts ±1.2%, +5dpts
AC current	200µA, 2000µA 4 A	±1.3%, +5dpts ±1.5%, +8dpts
Resistance	200Ω 2k, 20k, 200kΩ 2MΩ 20MΩ	±1.0%, +5dpts ±1.0%, +5dpts ±1.0%, +5dpts ±1.8%, +5dpts
Diode test	Test current 0.6mA No-load voltage, typ.: 1.5V	
Continuity testing	Signal tone on resistance <50Ω	
Non-contact voltage testing	100 - 600V AC	
Maximum input voltage	400V DC/AC	
Input impedance	>7.5MΩ, typ.: 10MΩ (ACV & DCV)	
AC bandwidth	50 to 400HZ	
Auto power Off function	15 minutes	
Over-range protection	CAT III 300V	
Fuses	µA, mA range 0.2A/400V quick-blow 4A range 4 A/400V quick-blow	
Power supply	2x 1.5V	
Operating temperature range	0° to +40°C (32° to 104°F)	
Storage temperature range	-10° to +50 °C (14° to 122 °F)	
LED torch	Ø 5mm white, high-performance LED	
Dimensions	140 x 70 x 35 mm	
Weight	250g incl. batteries	
Scope of delivery	1x operating instructions 1x test leads 1x carry case 2x batteries 1.5V AAA, LR03	





MULTIMETER | TESTBOY 3000 | Digital multimeter with voltage sensor and LED torch

In addition to an extended functional range, a modern design, cutting edge technology, high-strength ABS housing and simplicity of operation ensure this instrument is suitable for universal use in industrial and trade environments as well as the harshest of conditions.

The integrated LED torch and built-in voltage sensor are distinguishing features that not only set the Testboy 3000 apart but also increase user safety.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)



SPECIFICATIONS

Technical data	Testboy 3000	
DC voltage	200mV 2, 20, 200, 600V	±0.5%, +3dgt ±0.8%, +5dgt
AC voltage	2, 20V 200, 600V	±1.5%, +5dgt ±1.5%, +5dgt
DC current	200µA, 2000µA 10A	±1.0%, +3dgt ±1.2%, +5dgt
AC current	200µA, 2000µA 10A	±1.3%, +5dgt ±1.5%, +8dgt
Resistance	200Ω 2k, 20k, 200kΩ 2MΩ 20MΩ	±1.0%, +5dgt ±1.0%, +5dgt ±1.0%, +5dgt ±1.8%, +5dgt
Diode test	Test current 0.6mA No-load voltage, typ.: 1.5V	
Continuity testing	Signal tone on resistance <50Ω	
Non-contact voltage testing	100 - 600V AC (optical and acoustic)	
Maximum input voltage	600V DC/AC	
Input impedance	>7.5MΩ, typ.: 10MΩ (ACV & DCV)	
AC bandwidth	50 to 400HZ	
Auto power Off function	15 minutes	
Over-range protection	CAT IV 600V	
Power supply	2x 1.5V	
Operating temperature range	0° to +40°C (32° to 104°F)	
Storage temperature range	-10° to +50 °C (14° to 122 °F)	
LED torch	Ø 5mm white, high-performance LED	
Dimensions	165 x 85 x 32mm	
Weight	300g incl. batteries	
Scope of delivery	1x operating instructions 1x test leads 1x carry case 2x batteries 1.5V AAA, LR03	





MULTIMETER | TESTBOY POCKET | High-performance multimeter with large LC-display

The Testboy Pocket harbours a high performance multimeter with a generously dimensioned and easily readable LC-display. The robust design means it is also suitable for use in harsh conditions. Thanks to the autoranging function there is no need to switch between measurement ranges; the Data Hold function allows the user to store measurement results. Its simplicity of operation and autoranging functionality make the Testboy Pocket an ideal accompaniment for all service technicians.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)

SPECIFICATIONS

Technical data	Testboy Pocket
AC voltage	1-500V $\pm 1.5\%$ +3dpts
DC voltage	1-500V $\pm 1.8\%$ +3dpts
Resistance	0-40M Ω (<200 Ω $\pm 2.5\%$ +4dpts; 200 Ω $\pm 2\%$ +3dpts)
Continuity testing	With acoustic signal
Input impedance DCV & ACV	>200k Ω
AC bandwidth	40-70Hz
Data Hold	Yes
Over-range protection	CAT III 300V
Degree of protection	IP 44
Power supply	2x batteries 1.5V AAA, LR03
Operating temperature range	0°C to +40 °C $\leq 75\%$ RH
Storage temperature range	-10°C bis +50°C $\leq 75\%$ RH
Dimensions	119 x 65 x 18 mm
Weight	123g
Colour	Red/black
Scope of delivery	1x operating instructions 2x batteries 1.5V AAA, LR03 1x carry case



OVERVIEW | CURRENT CLAMPS

Utilising current clamps makes it possible to measure AC and DC current without first disconnecting the operating voltage. This principle avoids all possible dangerous situations occurring, such as short-circuits.

Current clamps can also be equipped to carry out other measurement functions, such as voltage, resistance and continuity tests.

Simple and straightforward operation are just two of the particularly noteworthy advantages of a current clamp. The jaws of the current clamp completely enclose the live conductor under test. During the test it is possible to read the value via a digital or analogue display.



APPLICATIONS

1. Testboy TV 216N
2. Testboy TV 215N
3. Testboy TV 218
4. Testboy TV 216N
5. Testboy TV 215N
6. Testboy TV 218



CURRENT CLAMP | TESTBOY TV 215N | Digital clamp meter

The digital clamp meter Testboy TV 215N is equipped with a clearly readable display. Manual and automatic range selection supports safe working practice in a wide range of applications. Included in the range of supply the plastic case provides the device and accessories with reliable protection including during transport.

Our TV 215N is the right instrument of choice for service tasks in industry and installation work!

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)



SPECIFICATIONS

Technical data	Testboy TV 215N
Display	3½ digit LCD, 1999
Alternating current	2, 20, 200, 600A, 50 to 60Hz
Accuracy	±3.5% +20dpts below 0.5A / ±3.0% +10dpts up to 20A / ±2.5% +10dpts up to 200A / ±1.5% +5dpts up to 600A
Best resolution	1mA
AC voltage	200mV, 2, 20, 200, 600V, 40 to 200Hz
Accuracy	±0.1% +10dpts up to 200mV / ±1.0% +5dpts up to 200V / ±1.2% +5dpts up to 600V
Best resolution	1mV
Input impedance	10MΩ
DC voltage	200mV, 2, 20, 200, 600V
Accuracy	±0.8% +2dpts up to 200V / ±1.0% +2dpts up to 600V
Best resolution	100μV
Input impedance	10MΩ
Resistance	200, 2k, 20k, 200k, 2M, 20MΩ
Accuracy	±1.2% +2dpts up to 2MΩ ±2.0% +5dpts at 20MΩ
Best accuracy	100mΩ
Diode test	Test current ~1mA, test voltage ~1.5V
Resolution	1mV
Continuity testing	Continuity tone below 60Ω
Power supply	3x 1.5V
Overvoltage cat.	CAT III 600V
Dimensions	220 x 75 x 35 mm
Degree of protection	IP 44
Weight	340g
Colour	Red/black, other colours on request
Scope of delivery	1x operating instructions 1x test leads 3x batteries 1.5V AAA, LR03 1x carry case





CURRENT CLAMP | TESTBOY TV 216N | Digital clamp meter

The digital clamp meter Testboy TV 216N is equipped with a clearly readable display. Manual and automatic range selection supports safe working practice in a wide range of applications. Included in the range of supply the plastic case provides the device and accessories with reliable protection including during transport.

Our TV 216N is the right instrument of choice for service tasks in industry and installation work!

SPECIFICATIONS

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)

Technical data	Testboy TV 216N
Display	4 digit LCD, 6599
Alternating current	60A, 600A, 40 to 400Hz
Accuracy	±3.0% +10dpts
Best resolution	10mA
Direct current	60A, 600A
Accuracy	±3.0% +10dpts
Best resolution	10mA
AC voltage	600mV, 6, 60, 600V, 40 to 400Hz
Accuracy	±1.5% +10dpts up to 600mV / ±1.2% +5dpts up to 60V / ±1.5% +10dpts up to 600V
Best resolution	100µV
Input impedance	10MΩ
DC voltage	600m, 6, 60, 600V
Accuracy	±0.8% +3dpts up to 60V / ±1.0% +5dpts up to 600V
Best resolution	100µV
Input impedance	10MΩ
Freq. meas. clamp	600Hz, 1kHz, >1A AC rms
Accuracy	±1.5% +5dpts up to 1kHz
Best resolution	100mHz
Freq. meas. test leads	600Hz, 6kHz, 10kHz, >0.2V AC rms
Accuracy	±1.5% +5dpts up to 10kHz
Best resolution	100mHz
Sampling rate	10 to 95%, ±3.0%, >1A AC rms
Frequency range	10Hz to 1kHz
Resistance	600, 6k, 60k, 600k, 6M, 60MΩ
Accuracy	±1.2% +2dpts up to 6MΩ ±2.0% +5dpts up to 60MΩ
Best accuracy	100mΩ
Diode test	Test current~1mA, Test voltage ~3.3V
Resolution	1mV
Continuity testing	Continuity tone below 30Ω
Power supply	3x 1.5V
Overvoltage cat.	CAT III 600V
Dimensions	220 x 75 x 35 mm
Degree of protection	IP 44
Weight	340g
Colour	Red/black, other colours on request
Scope of delivery	1x operating instructions 1x test leads 3x batteries 1.5V AAA, LR03 1x carry case





CURRENT CLAMP | TESTBOY TV218 | Digital mini current clamp meter

The digital mini current clamp meter Testboy TV 218 features a "Data Hold" function and is equipped with a 3 3/4 digit LC display. It is designed to measure AC and DC currents across two measurement ranges (40A and 200A). The "true RMS" function provides exact measurement results.

The Testboy TV 218 is a compact and lightweight clamp meter. Its compact design size ensures it can be utilised in places where accessibility is an issue. The "Data Hold" function allows the user to freeze the measured value reading indicated in the display.

The "Auto power Off" function guarantees the instrument is turned off when not in use to save battery life.

The range of functions and compact clamp size make this the perfect tool for daily use.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)



SPECIFICATIONS

Technical data	Testboy TV 218
Display	3 3/4 digits, 4000 counts
Direct current	40A, 200A ($\pm 3.0\%$ +5dgts)
Alternating current	40A, 200A ($\pm 2.5\%$ +8dgts)
Resolution	0.01A at 40A 0,1A at 200A
Max. jaw opening	\varnothing 21 mm
Sampling rate	3 times/sec
Operating temperature range	0° to +40 °C, <75% RH
Storage temperature range	-20° to +60 °C, <80% RH
Power supply	2x 1.5V; LR44
Overtoltage category	CAT III 300V
Dimensions	155 x 50 x 25 mm
Degree of protection	IP 44
Weight	95g
Colour	Red/black, other colours on request
Scope of delivery	1x operating instructions 2x batteries type LR44 1x carry case

200A
AC/DC

TRUE
RMS

5
YEAR
WARRANTY

OVERVIEW | CAR ELECTRICS

The use of increasingly complicated electronics systems in the automotive sector means the demand for the right measuring and test instruments also continues to grow.

In response we develop instruments that fulfil this market demand.
Our electronic measuring and test instruments also comply with the specifications of the international standard IEC/EN 61010-1.



APPLICATIONS

1. Testboy 75
2. Testboy 50
3. Testboy Car Tester
4. Testboy Light 500
6. Testboy 72
6. Testboy 70



CAR ELECTRICS | TESTBOY 50 | Brake fluid tester (DOT4)

The Testboy 50 is an easy-to-use test probe that belongs to the basic equipment of all master mechanics and service technicians.

User-friendly operation and compact design are also compelling arguments for every hobby mechanic.

Using the Testboy 50 it is possible to quickly and precisely test the water content of glycol-based brake fluid. Five LEDs indicate the water content of the brake fluid in the stages 0%, < 1%, approx. 2%, approx. 3% and > 4%. That makes it possible to recognise when the brake fluid needs to be changed. The device also has a self-test function.

Car repair shops use the Testboy 50 to carry out on-the-spot checks of the brake fluid whilst completing the service and repair contract, allowing the customer to make an informed decision. Oil companies, HGV and motorbike workshops have also recognised that our brake fluid tester improves safety and broadens the range of their equipment.

Made of high-strength ABS plastic the housing underlines the professional appearance of the device. The acid-proof, glass-fibre reinforced housing contributes towards the long service life of the instrument.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)

SPECIFICATIONS

Technical data	Testboy 50
Display	Optical via five LEDs 0%, <1%, 2%, 3%, >4%
Measurement ranges	Brake fluid (DOT 4)
Power supply	1x 23A
Dimensions	150 x 25 mm
Degree of protection	IP 44
Weight	40 g
Colour	Black, other colours on request
Scope of delivery	1x operating instructions 1x battery, 23A





CAR ELECTRICS | TESTBOY 70 | Coating thickness meter

The successful concept of the coating thickness meter Testboy 70 is not based purely on its high-degree of measuring precision, but also includes its indisputably easy and safe handling characteristics. Its robust plastic housing is UV resistant and sealed to protect against splashing water. It measures the thickness of all non-magnetic coatings such as paintwork, enamel, chrome, copper, zinc and so forth on steel or iron substrates. By exchanging the measurement probes it is equally possible to measure all insulating coatings such as paints, plastics, enamels and so forth on non-magnetic metal substrates (for example, on aluminium, copper, brass). The Testboy 70 is particularly suitable for use in car repair workshops and by expert assessors to examine motor vehicles for signs of previous accident damage.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)



SPECIFICATIONS

Technical data	Testboy 70
Display	4 digit LCD
Range	0 - 1000µm / 0 - 40mil
Measurement accuracy	± (1 ~ 3% H + 1)n or 2.5µ
Min. measuring area	Ø 5 mm
Min. curvature radius	Fe : Convex 1.5 mm NFe: 3 mm
Min. substrate thickness	Fe : 0.5 mm NFe: 0.3 mm
Operating temperature	0°C to +40°C
Power supply	3x 1.5V
Dimensions	158 x 74 x 31 mm
Weight	220 g
Colour	Black, other colours on request
Scope of delivery	1x operating instructions 3x batteries 1.5V AAA LR03 1x Fe probe 1x NFe probe 1x service case





CAR ELECTRICS | TESTBOY 72 | Coating thickness meter with combi-probe

The coating thickness meter Testboy 72 is distinguished by its high-degree of measuring precision as well as its indisputably easy and safe handling characteristics. Its robust plastic housing is UV resistant and sealed to protect against splashing water.

It measures the thickness of all non-magnetic coatings on steel or iron such as paintwork, enamel, chrome, copper, zinc and so forth. It also measures the thickness of all insulating coatings such as paints, plastics, enamels on non-magnetic metal substrates (e.g. on aluminium, copper, brass). The combi-probe adapts automatically to the different material types of substrate.

The integrated measured-value memory stores the last 10 measurement values.

The swivel display ensures that measurements can also be taken under the most difficult of conditions. The Testboy 72 is particularly suitable for use in car repair workshops to examine motor vehicles for signs of previous accident damage.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)

SPECIFICATIONS

Technical data	Testboy 72
Display	3 digit LCD
Range	0 - 2000µm / 0 - 40mil
Measurement accuracy	± 2µm (+3%), ± 0.1mil (+3%)
Min. measuring area	Ø 7 mm
Min. curvature radius	Fe : Convex 1.5 mm NFe: 3 mm
Min. substrate thickness	Fe : 0.5 mm NFe: 0.3 mm
Operating temperature	0°C to +40°C
Power supply	1x 1.5V AAA
Dimensions	94 x 48 x 24.2 mm
Weight	72 g
Colour	Black, other colours on request
Scope of delivery	1x operating instructions 1x battery 1.5V AAA LR03 1x service carry case





CAR ELECTRICS | TESTBOY 75 | Ultrasonic material thickness meter

The successful concept of the material thickness meter Testboy 75 is not based purely on its high-degree of measuring precision, but also includes its indisputably easy and safe handling characteristics. Its robust plastic housing is UV resistant and sealed to protect against splashing water. This instrument is designed to measure the material thicknesses of metals, plastics and glass.

The Testboy 75 is particularly suited for applications in industry and the motor-vehicle sector.

Utilising an ultrasonic sensor the Testboy 75 is able to determine exactly the thicknesses of steel, aluminium, copper, brass, quartz glass, PVC, zinc, cast iron, polyethylene and grey cast iron.

Built to state-of-the-art specifications the Testboy 75 fulfils the requirements of applicable European and national guidelines.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)



SPECIFICATIONS

Technical data	Testboy 75
Display	4 digit LCD
Range	1.2 - 200 mm
Measurement accuracy	± 0.5 mm
Min. measuring area	Ø 5 mm
Resolution	0.1mm
Sound velocity	500 m/s to 9000 m/s
Materials	Steel, aluminium, copper, brass quartz glass, PVC, zinc, cast iron polyethylene, grey cast iron
Operating temperature	0°C to +50°C
Power supply	3x 1.5V
Dimensions	158 x 74 x 31 mm
Weight	220 g
Colour	Black, other colours on request
Scope of delivery	1x operating instructions 3x batteries 1.5 V AAA LR03 1x ultrasound sensor 1x glycerine 1x service case





CAR ELECTRICS | TESTBOY CAR TESTER | Car voltage tester

The Testboy Car Tester is ideal for troubleshooting in cars, commercial vehicles and in all applications in the 3-48 VDC range. As well as polarity, the LEDs indicate the voltage in the ranges 12, 24 and 48 V.

The integrated piercing probe eases testing of cables that are difficult to access.

The Car Tester is designed primarily for use in car and commercial vehicle applications. Polarity indication ensures it is no longer necessary to swap the test leads.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)

SPECIFICATIONS

Technical data	Testboy Car Tester
Display	Optical, 4 LEDs
Measurement ranges	3-48 VDC
Power supply	From object under test
Dimensions	145 x 25 x 16 mm
Degree of protection	IP 40
Weight	120 g
Colour	Red, other colours on request
Scope of delivery	1x operating instructions





CAR ELECTRICS | TESTBOY LIGHT 500 | LED inspection lamp with rechargeable NiMH battery / magnetic attachment

The Testboy Light 500 is a powerful LED inspection lamp powered by a rechargeable NiMH battery. Equipped with 27 super-bright white LEDs this is a robust, impact resistant, acid and oil resistant hand-held LED inspection lamp. The maintenance-free rechargeable NiMH battery provides 4.5 hours of burn time. Charge time is 2 hours. A charge adapter is included in the scope of supply. The lamp is splash-proof rated to IP 54. The integrated microprocessor ensures optimum charging, operative reliability and brightness control. Thanks to its slim and compact design the Testboy Light 500 inspection lamp is eminently suitable for use in confined spaces such as the engine compartment of motor vehicles.

The inspection lamp includes two magnets for attaching on either side and a hanging hook at the top for hands-free operation.

Your benefits:

- | 5 year manufacturer's warranty (excludes batteries).
- | IEC/EN 61010-1 (DIN VDE 0411)



SPECIFICATIONS

Technical data	Testboy Light 500
Illumination	27 bright white LEDs
LED orientation	1x central row as spot light 2x outside rows for wider illumination
Hanging	360° with swivel hanging hook
Attachment	2x sides fitted with magnets
Power supply	1x rechargeable battery 3.6V 1800mAh NiMH
Burn time	4.5 hours
Charge time	2 hours
Degree of protection	IP 54
Dimensions	320 x 40 x 45 mm
Weight	320 g
Colour	Red, other colours on request
Scope of delivery	1x operating instructions 1x charge adapter (230V~) 1x car charger (12V=)



OVERVIEW | SOCKET OUTLET TESTERS

Our socket outlet testers are indispensable test instruments that can protect against a life-threatening electric shock from incorrectly wired socket outlets.

Qualified electricians use these instruments to check socket outlets, power supply cords, extension leads and cable drums.

In conjunction with suitable adapters socket outlet testers can also be utilised for recreational applications such as in caravans, boats and so forth.

Schuki 1 and Schuki 2 testers can also be used to test RCDs (earth-leakage circuit breakers).

Junction boxes on building sites should be tested at least once a month. For daily testing to ensure flawless functioning it is sufficient to push the test button on the RCD circuit breakers.

The simple and clear design means laymen are also able to operate the socket outlet testers Testavit Schuki 1 - 3.



APPLICATIONS

1. Testavit Schuki 2
2. Testavit Schuki 3
3. Testavit Schuki 1
4. Testavit Schuki 2K



SOCKET OUTLET TESTERS | TESTAVIT SCHUKI 1/3 | Socket outlet testers

Schuki 1 | Socket outlet tester with RCD test function

Testavit Schuki 1 and Testavit Schuki 3 socket outlet testers are essential test instruments for all qualified electricians. All dangerous faulty connections in the socket outlets are indicated via the signal lamps by means of various lighting configurations. This design feature allows technicians to check installations quickly and safely.

The Testavit Schuki 1 is additionally equipped with an RCD test function. This allows testing of RCD circuit breakers with a rated current of 30 mA and a tripping time of 200 ms.

Schuki 3 | Socket outlet tester

Testavit Schuki 1 and 3 are designed to check socket outlets, cable drums, device cabling and connection cables utilised in 230 V systems. In conjunction with an adapter they can be used to check recreational applications such as boats and caravans. Correct wiring is tested.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)

SPECIFICATIONS

Technical data	Testavit Schuki 1	Testavit Schuki 3
Display	Optical, glow lamps	Optical, glow lamps
Operating voltage	230V, 50Hz	230V, 50Hz
Power supply	From object under test	From object under test
Fault current	30mA	-/-
Tripping time	200ms	-/-
RCD test	Yes	No
Dimensions	65 x 50 x 75 mm	Ø 50 x 75 mm
Degree of protection	IP 20	IP 20
Overvoltage category	CAT III 300V	CAT III 300V
Weight	100 g	70 g
Colour	Red, grey	Red, grey
Scope of delivery	1x operating instructions	1x operating instructions





SOCKET OUTLET TESTERS | TESTAVIT SCHUKI 2/2K | Socket outlet testers

Schuki 2 | Socket outlet tester with adjustable RCD test function

Testavit Schuki 2 and Schuki 2K are designed to check socket outlets, cable drums, device cabling and connection cables utilised in 230 V systems. In conjunction with an adapter they can be used to check recreational applications such as boats and caravans. Correct wiring is tested.

Schuki 2K | Socket outlet tester with adjustable RCD test function

The Testavit Schuki 2K is equipped with a practical cable and Schuko plug. This user-friendly feature makes it easier for the user to test socket outlets in difficult-to-access positions.

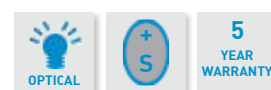
Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)



SPECIFICATIONS

Technical data	Testavit Schuki 2	Testavit Schuki 2K
Display	Optical, glow lamps	Optical, glow lamps
Operating voltage	230V, 50Hz	230V, 50Hz
Power supply	From object under test	From object under test
Fault current	10, 30, 100, 300, 500mA	10, 30, 100, 300, 500mA
Tripping time	200ms	200ms
RCD test	Yes	Yes
Dimensions	100 x 50 x 75 mm	100 x 50 x 75 mm
Degree of protection	IP 20	IP 20
Overvoltage category	CAT III 300V	CAT III 300V
Weight	180 g	250 g
Colour	Red, other colours on request	Grey, other colours on request
Scope of delivery	1x operating instructions 1x carry case	1x operating instructions 1x carry case



OVERVIEW | INSTALLATION TESTERS/ADAPTERS

All new installations and alterations to electrical equipment or installations are subjected to safety checks and sometimes require an acceptance inspection. The purpose of these inspections is to avoid injury to persons and damage to property.

Testing of electrical equipment is regulated in DIN VDE 0100, Part 610.

In some cases a visual safety inspection of the electrical equipment is insufficient. In such cases a measurement protocol is used to check adherence to the legally accepted limit values.

However, it is not just electrical equipment that must comply with the applicable standard; the test instruments themselves are also subject to the specifications of a standard – the IEC/EN 61010-1, DIN VDE 0411.

Adherence to these regulations ensures the safety of all persons directly and indirectly involved with the safety check.

In practical applications it is necessary to undertake numerous measurements on live components so that using a clearly designed and easy to operate measuring instrument from Testboy can prove to be best practise.

Different measuring instruments are available on the market for different applications: for example phase-sequence indicators, insulation measuring instruments, earth resistance measuring instruments, cable tracers and so forth.



APPLICATIONS

1. Testboy 26
2. Testboy TV 410N
3. Testboy TV 416



INSTALLATION TESTER / ADAPTER | TESTBOY 26 | Cable tracer set with LED torch

The Testboy 26 is a cable tracer that simplifies the task of searching for cables buried in walls or routed through cable ducts.

The depth to which the Testboy 26 can detect cables depends on the type of wall (for example, brick, plaster, concrete).

A padded case with belt loop is included in scope of delivery. This ensures both devices are stowed away reliably for safe transport.

Alligator clips or the modular connector fitted to the end of a cable modulate a carrier signal from the transmitter. That allows the other end of the cable to be detected quickly and precisely - without having to make direct contact or strip the insulation from the cable. The transmitter is voltage-proof up to 400V.

The Testboy 26 is able to exactly identify twin conductors (for example in telecommunications engineering).

As well as being equipped with a socket for earphones for working in loud surroundings, the sensitivity of the easy-to-use receiver is infinitely adjustable. The user can optionally select if the transmitter transmits either a continuous or alternating tone. The integrated continuity tester detects short-circuits quickly and reliably.

Your benefits:

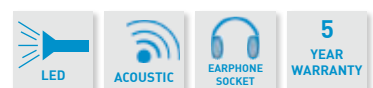
- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)



SPECIFICATIONS

Technical data

Technical data	Testboy 26
Display	Acoustic
Power supply	2x 9V
Dimensions	230 x 55 x 23 mm (receiver) 55 x 57 x 23 mm (transmitter)
Weight	244 g
Colour	Red, other colours on request
Scope of delivery	1x operating instructions 1x transmitter 1x receiver 2x batteries 9 V block 1x carry case





INSTALLATION TESTER / ADAPTER | TESTBOY TV 416/432 (A) | CEE adapter

Testboy TV 416/432 | CEE adapter with phase sequence indicator

The TV 416/432 consists of a combination of CEE connector, Schuko socket and integrated electronics for phase sequence measurements. The integrated signal lamps indicate missing or incorrect wiring. Utilised in combination with either the Testavit Schuki 1, 2, or 2K it is possible to test the wiring and the effectiveness of the RCD circuit breaker. The Testboy TV 416/432 (A) is available in two versions for 16A and 32A CEE socket outlets.

Testboy TV 416A/432A | CEE combi-adapter (16/32A)

Made from high-strength PA material the Testboy TV 416A/432A is a compactly designed combi-adapter comprising CEE connector (16A/32A) with earthed socket outlet and self-closing lid. Belgium and French versions are also available. Utilised in combination with either the Testavit Schuki 1, 2, 2K or 3 it is possible to detect possibly life-threatening wiring errors in CEE sockets.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)



SPECIFICATIONS

Technical data	Testboy TV 416/432	Testboy TV 416A/432A
Display	Glow lamps	-/-
Power supply	From object under test	-/-
Degree of protection	IP 44	IP 44
Overvoltage category	CAT III 400V	CAT III 400V
Dimensions	165 x 65 mm	165 x 65 mm
Weight	250 g	250 g
Colour	Red/white/blue	Red/white/blue
Scope of delivery	1x operating instructions	1x operating instructions

* FOR TEST PURPOSES ONLY





INSTALLATION TESTER / ADAPTER | TESTBOY TV 410N | Phase sequence tester

The phase sequence tester Testboy TV 410N indicates the presence of all three phases and determines phase orientation based on the order of the phases.

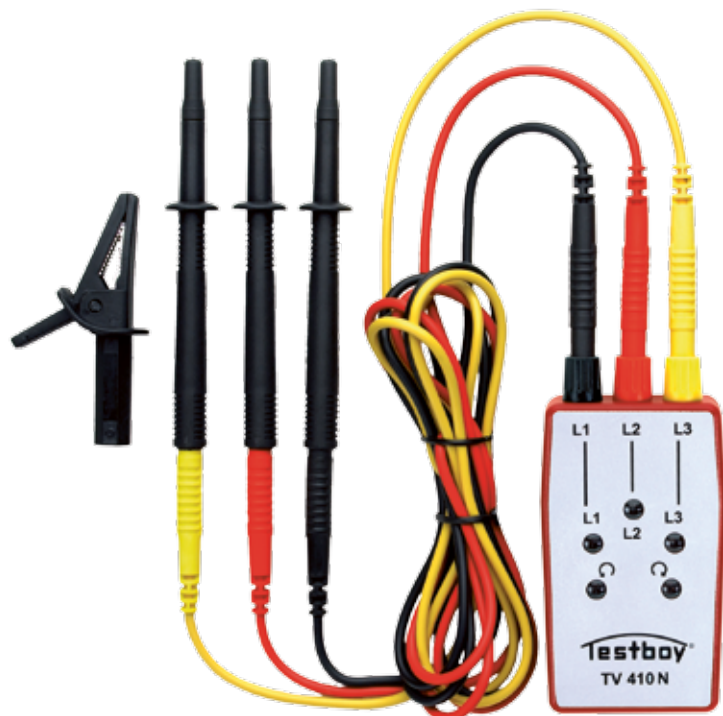
The housing is made of impact high-strength ABS plastic. The fully insulated 4-mm sockets and corresponding comprehensive, adaptable cable set ensure safe testing and rapid phase determination in a three-phase system.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)

SPECIFICATIONS

Technical data	Testboy TV 410N
Display	Optical, 5 glow lamps
Voltage range	60 - 400V AC
Current consumption	< 3mA
Frequency range	50 / 60Hz
Power on time	30 s
Power supply	From object under test
Overvoltage category	CAT III 400V
Dimensions	115 x 60 x 25 mm
Degree of protection	IP 44
Weight	75 g
Colour	Red, other colours on request
Scope of delivery	1x operating instructions 3x professional test tips 3x 4 mm - safety leads 1x professional crocodile clip 1x carry case





INSTALLATION TESTER / ADAPTER | TESTBOY TV 430N | Digital insulation tester

The Testboy TV 430N is a digital insulation tester boasting three selectable test voltages 250, 500 and 1000 VDC with which it is easy to check the insulation resistance of devices, electrical equipment and circuits. It also features a continuity tester and AC voltmeter to round off the spectrum of applications for which this tester can be deployed.

The most important aspect of an insulation resistance measurement is the exclusion of any capacitance. This is achieved by undertaking measurements with DC voltage. To obtain meaningful results the test voltages and test current are defined so that the influence exerted by the current or voltage dependent resistances remains the same. The initial test measurement of insulation resistance must be carried out between each active conductor and earth.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)

SPECIFICATIONS

Technical data

Testboy TV 430N

Display	3½ digit LC display
Insulation test	
Test voltage	250V / 500V / 1000V DC
Range	2MΩ to 2000MΩ
Resolution	1kΩ
Test current	1mA
Accuracy	0.25MΩ to 200MΩ ±3% +3dgt 200MΩ to 2000MΩ ±5% +5dgt
Continuity testing	
Acoustic signal	< 50Ω
Test voltage	~2.8V
AC voltage measurement	
Range	0 to 600 VAC
Resolution	1V
Accuracy	±1.5% +3dgt
Power supply	6x 1.5V
Overtoltage category	CAT II 600V
Dimensions	188 x 110 x 62 mm
Degree of protection	IP 20
Weight	485 g
Colour	Red, other colours on request
Scope of delivery	1x test lead set 1x operating instructions 6x batteries 1.5V AA LR06 1x carry case





INSTALLATION TESTER / ADAPTER | TESTBOY TV 440N | Digital earth resistance tester

The earth resistance tester Testboy TV 440 is utilised to check the resistance between the ground reference and the connection point of the earthing system. Earth resistance measurements are prescribed for systems that are protected by automatic disconnection of the supply, lightning strike protection systems, telecommunications and fuel storage depots.

The Auto power Off function prevents uncontrolled discharging of the batteries. The integrated timer turns the instrument off after five minutes of measurements; in this instant the Data Hold function saves the last measurement result.

The requirements for measuring resistance to earth are described in the standards DIN VDE 0413, Part 5 and EN 61557-5. Earth resistance is determined by measurements based on the current/voltage method. For measurement purposes an alternating current is fed between the auxiliary earth stake and the earth electrode to be measured.

The voltage drop is measured and the earth resistance is determined using a probe positioned by the ground reference of the earth electrode to be measured.

The alternating current prevents influences through polarisation at the junction between the metal earth electrode and earth.

Measurements can be undertaken according to the two- or three-wire measurement principle.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)

SPECIFICATIONS

Technical data	Testboy TV 440N
Display	3½ digit LC display
Measurement ranges	Earth resistance 20 Ω, 200Ω, 2000Ω ±2% +3dpts Earth voltage 0 to 200V, 40 to 400Hz, ±1.5% +5dpts
Resolution	0.01Ω at 20Ω 0.1Ω at 200Ω 1Ω at 2000Ω
Measuring system	Constant current, 2mA
Power supply	6x 1.5V
Overvoltage category	CAT II 600V
Dimensions	168 x 110 x 62 mm
Degree of protection	IP 40
Weight	590 g
Colour	Red, other colours on request
Scope of delivery	1x operating instructions 2x earth stakes 1x test lead set 6x batteries 1.5V AA LR06 1x carry case





INSTALLATION TESTER | TESTBOY TV 450 | Installation tester VDE 0100-600

The Testboy TV 450 is an easy to operate DIN VDE 0100 compliant measuring instrument. Stored fuse and RCD characteristic curves assess the measurement result as GOOD/BAD. The ability to test AC/DC sensitive RCDs (type B) is a particularly distinguishing feature of the Testboy 450. A further advantage is the software provided in the scope of supply.

The large LC display with backlighting offers excellent clarity, making it easy to read results, information, measurement parameters and messages. GOOD/BAD LED indicators are positioned on the sides of the LC display.

The Testboy TV 450 is housed in a robust and ergonomic housing. Its lightweight design and integrated magnetic holder support fatigue-free working. The instrument has been designed to ensure it is as clear-cut and simple as possible to operate. Each test is supported by its own specific Help screen, which describes how the measurement is to be performed.

Your benefits:

- | 5 year manufacturer's warranty
- | DIN VDE 0100 – 600, ÖVE E8001, NIN/NIV
- | Testing of AC/DC sensitive RCDs (type B)
- | USB and RS232 interfaces
- | Logging software (in scope of supply)



SPECIFICATIONS

Technical data	Testboy TV 450
Measurements	
Voltage measurement	0 – 550V AC
Earth resistance measurement	0 - 9999Ω
Insulation resistance	0 – 999MΩ / 50, 100, 250, 500, 1000V
RCD analysis	
Contact voltage RCD V_c	0 – 100V
Tripping time	0 to max. 2500ms
Tripping current	10, 15, 30, 100, 300, 500 and 1000mA
Display	128x64 pixels with backlighting and integrated GOOD/BAD indication
Power supply	9VDC (6x batteries or rechargeable, size AA)
Operating temperature	0 to +40 °C
Degree of protection	IP 40
Over-range protection	CAT III 600V / CAT IV 300V
Measured value memory	1900
Interface	USB and RS232
Zubehör	Universal test leads 3 x 1.5m Test lead for Schuko socket outlet Test tips (3x - blue, black and green) Crocodile clips (3x - blue, black and green) Mains adapter + 6 rechargeable NiMH AA Complete carry strap Short guide CD with operating instructions and PC software Product test data





INSTALLATION TESTER / ADAPTER | TESTBOY TV 460 | Installation tester VDE 0701/0702/0751

The Testboy TV 460 is a test instrument designed for testing and repeat testing of portable appliances and equipment in accordance with DIN VDE 0701/0702 and 0751. These standards provide a framework for protection and safety.

The required level of safety of portable appliances and equipment can only be guaranteed by regular testing. With the Testboy TV 460 the user is able to perform tests and document measurement results in line with the applicable standards.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)
- | Software (in scope of supply)

SPECIFICATIONS

Technical data	Testboy TV 460
Display	Dot matrix LC display 128x64 pixels
Power supply	230V $\pm 10\%$; 50Hz $\pm 2\%$
Input current	Max. 16A
Operating temperature	0 to +40 °C
Degree of protection	IP 44
Over-range protection	CAT III 600V
Weight	1445g
Interface	USB
Measurements	
PE conductor resistance	0.1 to 20 Ω ; $\pm 10\%$
Insulation resistance	0.1 to 200M Ω ; $\pm 10\%$
Contact current	0.1 to 20mA; $\pm 5\%$
Subst. leakage current	0.1 to 20mA; $\pm 5.0\%$
Load current	0.2 to 16.0A; $\pm 5\%$
Power	0 to 3700VA; $\pm 5\%$
PELV test	From 25Veff
Accessories	1x operating instructions 1x test lead set 1x Windows® software CD 1x USB connection cable 1x carry case 1x mains lead



5
YEAR
WARRANTY

incl.
software

USB

DKD
CALIBRATED



INSTALLATION TESTER / ADAPTER | TESTBOY TV 470 | Installation tester VDE 0701/0702/0751

The Testboy TV 470 is a convenient, easy-to-use test instrument designed for safety and repeat testing of portable equipment in accordance with DIN VDE 0701/0702 and 0751. These standards provide a framework for protection and safety testing.

The required level of safety of portable equipment can only be guaranteed by regular testing. With the Testboy TV 470 the user is able to perform tests and document measurement results in line with the applicable standards.

If these standards are amended or supplemented in future our update service will provide you with updates free of charge.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)
- | Semi-automatic test procedure
- | Good/bad assessment at the end of the test
- | Data storage for up to 500 test objects
- | Help screen support for each measurement
- | Barcode reader (in scope of supply)
- | Logging software (in scope of supply)

SPECIFICATIONS

Technical data	Testboy TV 470
Display	Dot matrix LC display 128x64 pixels
Power supply	230V $\pm 10\%$; 50Hz $\pm 2\%$
Input current	Max. 16A
Operating temperature	0 to +40 °C
Degree of protection	IP 44
Over-range protection	CAT III 600V
Weight	1445g
Interface	USB
Measurements	
PE conductor resistance	0.1 to 20 Ω ; $\pm 10\%$
Insulation resistance	0.1 to 200M Ω ; $\pm 10\%$
Contact current	0.1 to 20mA; $\pm 5\%$
Subst. leakage current	0.1 to 200mA $\pm 5\%$
Load current	0.2 to 16.0A; $\pm 5\%$
Power	0 to 3700VA; $\pm 5\%$
PELV test	From 25Veff
Accessories	1x operating instructions 1x test lead set 1x Windows® software CD 1x USB connection cable 1x carry case 1x mains lead 1x barcode reader



OVERVIEW | THERMO, LUXMETER AND HUMIDITY TESTERS

Thermometers

Thermometers are used to measure and display the temperature in all areas of daily life. In Germany, the temperature is usually measured and indicated in degrees Celsius (°C). In some English speaking countries the temperature is given in Fahrenheit (°F).

Luxmeters

Luxmeters are used to measure the illuminance of light sources. The internationally recognised unit of measurement is Lux (L). Too bright or dazzling light is extremely unpleasant for the human eye; in individual cases it can cause illness. As it is hard to imagine not having different light sources in practically all areas of private and public life, guidelines have been developed for many different fields, with the added objective of preventing accident hazards.

Humidity testers

Moisture has a huge influence on many materials, which in turn can have negative effects in the house building industry. These can also endanger human health. With a humidity tester it is possible to track down critical values and undertake counter measures in good time.



APPLICATIONS

1. Testboy TV 322
2. Testboy TV 325
3. Testboy TV 331
4. Testboy TV 321
5. Testboy TV 332
6. Testboy TV 325

THERMO, LUXMETER AND HUMIDITY TESTERS | TESTBOY TV 321 | Digital 2-channel thermometer

The Testboy TV 321 is a digital 2-channel thermometer designed for universal use that can be operated with any commercially available K-type thermocouple. An elegantly shaped and practical design, straightforward handling characteristics, large and easily readable display make this instrument eminently suitable for use in mobile troubleshooting tasks and for checking appliances and systems with temperature-specific parameters. Made of impact resistant, high-strength ABS plastic the housing is suitable for use in harsh conditions.

The comprehensive range of accessories makes the digital 2-channel thermometer TV 321 a universal thermometer for everyone. This instrument is particularly suitable for use in the following fields:

- | Car repair workshops (engines, gear boxes, catalytic converters, brakes, air conditioning units etc.)
- | Heating installations
- | Refrigeration and air conditioning systems
- | Electrical trades (electrical cabinets, transformers, cables and so forth)
- | Industry (paint shops, food processing industry, plastics processing industries and so forth)

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)

SPECIFICATIONS

Technical data	Testboy TV 321
Display	4 digit LCD
Range	-200°C to 1370°C; -328°F to +2498°F
Accuracy	-200°C ~ +200 °C ± 0.1°C; 200 °C ~ 1370°C ± 1 °C -200°F ~ +200 °F ± 0.1°C; 200 °F ~ 2498°F ± 1°C
Operating temperature	0°C to +50°C; (32°F to 122°F)
Storage temperature	-10°C to +60 °C; (14°F to 140°F)
Humidity	0 ~ 80% RH
Sampling rate	0.6x per second
Power supply	1x 9V
Dimensions	164 x 54 x 34 mm
Weight	200 g
Colour	Red/anthracite, other colours on request
Scope of delivery	1x operating instructions 1x battery 9V block 2x K-type
Accessories (optional)	Insertion probe Surface probe Liquid probe





THERMO, LUXMETER AND HUMIDITY TESTERS | TESTBOY TV 322 | Infrared thermometer

Distinguishing characteristics of the practical infrared thermometer Testboy TV 322 with a pistol design are its easy and uncomplicated handling attributes. The integrated laser pointer ensures precise temperature measurements. The selectable display illumination guarantees the measurement data can be read reliably even under poor lighting conditions. Made of impact resistant, high-strength ABS plastic the housing is also suitable for use in harsh conditions.

Features:

- | Data Hold function
- | Auto power Off function
- | °C or °F indication
- | Selectable laser point
- | Selectable display illumination
- | Carry case for safe transport

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)

The Testboy TV 322 is particularly suitable for use in the following fields:

- Car repair workshops (engines, gear boxes, catalytic converters, brakes, air conditioning units etc.)
- Heating installations
- Refrigeration and air conditioning systems
- Electrical trades (electrical cabinets, transformers, cables and so forth)
- Industry (paint shops, plastics processing industries and so forth)

Built to state-of-the-art specifications the Testboy TV 322 fulfils the requirements of applicable European and national guidelines.



SPECIFICATIONS

Technical data

Testboy TV 322

Display	3 digit display with backlighting
Detector	Thermopile
Optical resolution	8 : 1
Range	-20°C to +380°C; -4°F to +716°F
Response time	< 1 second
Overrange indicator	"1" at temperatures >+380 °C/+716 °F or <-20 °C/-4 °F
Emissivity	0.95 (fixed)
Automatic power Off	After approx. 15 seconds
Operating temperature	0 °C to +50 °C (32 °F to +122°F)
Humidity	10 to 80% RH
Measurement accuracy	±2.0°C (±1.8 °F)
Power supply	1x 9V block
Dimensions	175 x 90 x 40 mm
Weight	150 g
Colour	Red, other colours on request
Scope of delivery	1x operating instructions 1x battery 9V block 1x carry case





THERMO, LUXMETERS AND HUMIDITY TESTERS | TESTBOY TV 325 | Infrared thermometer

Infrared thermometer with integrated LED torch. The Testboy TV 325 is a practical infrared thermometer with pistol design. Selectable display illumination guarantees measurement data can be read reliably even under poor lighting conditions. In addition, the TV 325 can be operated with any commercially available K-type thermocouple. Suitable for use in harsh conditions the housing is made of impact resistant, high-strength ABS plastic and fits snugly in the user's hand.

Features:

- | Data Hold function
- | Auto power Off function
- | °C or °F indication
- | Selectable laser point
- | Selectable LED torch
- | Selectable display illumination
- | Min-Max value memory
- | Mean value determination
- | Carry case for safe transport

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)

A comprehensive spectrum of performance as well as good and simple handling characteristics ensure the TV 325 is extremely suitable for portable use in environments with restricted access as well as in industry. It is particularly suitable for tasks in car repair shops, heating, refrigeration and air conditioning installations as well as the electrical trades. Built to state-of-the-art specifications the Testboy TV 325 fulfils the requirements of applicable European and national guidelines.

SPECIFICATIONS

Technical data	Testboy TV 325
Display	4 digit LC display
Detector	Thermopile
Optical resolution	12 : 1
Range	-60 °C to +500 °C; -76 °F to +932 °F -64 °C to +1400 °C; -83.2 °F to +1999 °F (with K-type probe)
Response time	< 0.5 second
Automatic power Off	After approx. 10 seconds
Operating temperature	0 °C to +50 °C (32 °F to +122°F)
Humidity	10 to 90% RH
Measurement accuracy, Infrared (15-35 °C object temp.)	±1.0°C (±1.8 °F) (ambient temp. 25 °C)
Measurement accuracy, Infrared (-33-500 °C object temp.)	±2°C or ±2% (4°F), whichever is greater (ambient temp. 23 °C ±3°C)
Measurement accuracy with type K probe	±1 °C or ±1% (1.8 °F), whichever is greater (ambient temp. 23 °C ±6 °C)
Emissivity correction	0.95 default; adjustable from 0.10 to 1.00 in steps of 0.01
Resolution	0.1° [-9.9° to +199.9°]
Temperature probe	Connection options for div. K-Type-Fühler
Power supply	2x 1.5V
Dimensions	49 x 133 x 146 mm
Weight	222 g
Colour	Red, other colours on request
Scope of delivery	1x operating instructions 1x carry case 1x k-type probe





LED

K-type

CALIBRATION
ON
REQUEST



LASER

°C/°F

5
YEAR
WARRANTY

THERMO, LUXMETERS AND HUMIDITY TESTERS | TESTBOY TV 331 | Digital luxmeter

The Testboy TV 331 is a digital luxmeter boasting an elegantly shaped and practical design. The luxmeter is automatically set to zero when activated with the lid still on. The following functions make this device particularly suitable for use in professional applications:

Features:

- | Auto power Off function
- | Data Hold function
- | Automatic zero calibration
- | Max. range of 40 000 Lux

The location of the sensor on the front of the instrument above the display enabling one-hand operation is particularly advantageous for the user. To ensure its light sensitivity is comparable to that of the human eye the sensor utilised in the Testboy TV 331 is equipped with a light filter. The angle of incidence is cosine corrected and compensated. No matter if taking measurements in conference rooms, classrooms, offices or public buildings and facilities the Testboy TV 331 guarantees safe and pleasant working conditions. By taking quick and precise on-the-spot measurements this instrument provides the basis for making decisions about possible corrective measures.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)



SPECIFICATIONS

Technical data

Technical data	Testboy TV 331
Display	25 mm high LC display, 4 1/2 digits
Range	0.00 to 39.99 / 399.9 / 39990lx 0000 to 3.999 / 39.99 / 399.9 / 3999fc
Resolution	0.01lx to 10lx; 0.001fc to 1fc
Accuracy	± 3% ±5dgts
Temperature characteristics	± 0.1% / Kelvin
Response time	0.5 second
Light sensor	SI photodiode
Operating conditions	0°C to +40°C (32°F ~ 104°F); 0 ~ 80% RH
Storage conditions	-10 °C to +50°C (14 °F ~ 122 °F); 0 ~ 70% RH
Overrange indicator	"---" Display
Power supply	1x 9V
Dimensions	196 x 54 x 33 mm
Weight	200 g
Colour	Red, other colours on request
Scope of delivery	1x operating instructions 1x battery 9V block 1x carry case

5
YEAR
WARRANTY



THERMO, LUXMETERS AND HUMIDITY TESTERS | TESTBOY TV 332 | Digital luxmeter

The Testboy TV 332 is a digital luxmeter in a practical and robust plastic housing. The 18 mm high, contrast-rich LC display makes it possible to read the measured illuminance quickly, reliably and accurately. The measurement range spans from 0-50 000 Lux. The use of a silicon photodiode behind a large diffuser attached to the instrument by means of a coiled cable ensures the illuminance can be read in any position.

Features:

- | Coiled cable
- | Removable sensor cap
- | Carry case for safe transport

The digital luxmeter Testboy TV 332 is a highly accurate measuring instrument designed to precisely determine the illumination and angle of light incidence on a given surface. Measurements are taken with a photo element; the measurement result is displayed on four measurement areas on the LC display.

No matter if taking measurements in conference rooms, classrooms, offices or public buildings and facilities the Testboy TV 332 guarantees safe and pleasant working conditions. By taking quick and precise on-the-spot measurements this instrument provides the basis for making decisions about possible corrective measures.

Your benefits:

- | 5 year manufacturer's warranty
- | IEC/EN 61010-1 (DIN VDE 0411)

SPECIFICATIONS

Technical data	Testboy TV 332
Display	18 mm high LC display, 3½ digits
Ranges	0 - 50000 lux in 3 ranges
Measurement rate	0.4 second
Operating temperature	0 °C to +50 °C (32 °F to 122 °F)
Operating conditions	Less than 80% RH
Overrange indicator	"1" Display
Power supply	1x 9V
Current consumption	< 2mA
Dimensions	118 x 70 x 29 mm
Weight	200 g
Colour	Red, other colours on request
Scope of delivery	1x operating instructions 1x removable sensor cap 1x battery 9V block 1x carry case



ACCESSORIES | TESTBOY

CROCODILE CLIPS

Testboy 2200, Testboy 3000, Testboy Pocket, Testboy 20, Testboy TV 216N, Testboy TV 215N, Testboy TV 460, Testboy TV 470 and Testboy TV 410N



GS-38 TEST TIPS

Testboy Profi LED *Plus* and Testboy Profi LCD *Plus*



SCREW-OFF TEST TIPS

Testboy Profi LED *Plus* and Testboy Profi LCD *Plus*



TEST TIP CAPS

Testboy Profi LED *Plus* and Testboy Profi LCD *Plus*



TEST LEADS SET

Testboy 20, Testboy TV 216N, Testboy TV 215N, Testboy 2200, Testboy 3000, Testboy TV 460 and Testboy TV 470



ACCESSORIES | TESTBOY

K-type probes

Testboy TV 321 / TV 325

- 1| TP-K04 insertion probe
Measurement range: -50 °C to +600°C / tolerance:
± 2.2°C
- 2| TP-K03 surface probe, straight
Measurement range: -50 °C to +400°C / tolerance:
± 2.2°C
- 3| TP-K05 surface probe, angled
Measurement range: -50 °C to +400°C / tolerance:
± 2.2°C
- 4| TP-K06 room probe
Measurement range: -50 °C to +800°C / tolerance:
± 2.2°C
- 5| TP-K02 Immersions probe
Measurement range: -50 °C to +700 °C / tolerance:
± 2.2°C



Carry cases

Two-pole voltage testers and continuity testers



SALES PROMOTION | TESTBOY

TESTBOY 110 DISPLAY



Testboy 110 (in display pack, 21 items)

Non-contact voltage testers from 12V

- | Optical display
- | LED torch function
- | Housing made of impact-resistant high-strength ABS plastic
- | Voltage range 12-1000 VAC
- | IEC/EN 61010-1 (DIN VDE 0411)
- | 5 year manufacturer's warranty

Further product information is available on page 12

TESTBOY 110 PACKAGE



Testboy 110 (in display pack, 21 items) + angled display board

Non-contact voltage testers from 12V

- | Optical display
- | LED torch function
- | Housing made of impact-resistant high-strength ABS plastic
- | Voltage range 12-1000 VAC
- | IEC/EN 61010-1 (DIN VDE 0411)
- | 5 year manufacturer's warranty

Further product information is available on page 12

TESTBOY Profi LCD PLUS DISPLAY



Testboy Profi LCD PLUS (in display pack, 10 items)

Two-pole voltage tester with LC display

- | Displays AC and DC voltages from 6V to 1000V
- | Two-button fault current/RCD test (30mA)
- | Ultra-bright LED torch function (white)
- | Simple to operate click-system to adapt to socket outlet dimensions
- | Special test tips - also suitable for WAGO terminals
- | Screw-off 4mm test tip adapter and GS 38 test sets
- | Optimum one-hand operation
- | CAT IV 1000V to IEC/EN 61243-3 (DIN VDE 0682-401)
- | 5 year manufacturer's warranty

Further product information is available on page 15

TESTBOY Profi LED PLUS DISPLAY



Testboy Profi LED PLUS (in display pack, 10 items)

Two-pole voltage tester with LED display

- | Displays AC and DC voltages from 6V to 1000V
- | Two-button fault current/RCD test (30mA)
- | Ultra-bright LED torch function (white)
- | Simple to operate click-system to adapt to socket outlet dimensions
- | Special test tips - also suitable for WAGO terminals
- | Screw-off 4mm test tip adapter and GS 38 test sets
- | Optimum one-hand operation
- | CAT IV 1000V to IEC/EN 61243-3 (DIN VDE 0682-401)
- | 5 year manufacturer's warranty

Further product information is available on page 14

SALES PROMOTION | TESTBOY

TESTBOY Profi LED *PLUS* and TESTBOY Profi LCD *PLUS* DISPLAY



Testboy Profi LED *PLUS* and Testboy Profi LCD *PLUS* (5 items in each display pack)

Two-pole voltage tester with LED display or LC display

- | Displays AC and DC voltages from 6V to 1000V
- | Two-button fault current/RCD test (30mA)
- | Ultra-bright LED torch function (white)
- | Simple to operate click-system to adapt to socket outlet dimensions
- | Special test tips - also suitable for WAGO terminals
- | Screw-off 4mm test tip adapter and GS 38 test sets
- | Optimum one-hand operation
- | CAT IV 1000V to IEC/EN 61243-3 (DIN VDE 0682-401)
- | 5 year manufacturer's warranty

Further product information is available on pages 14 and 15

TESTBOY HIGHLIGHTS HANDS-ON STATE OF THE ART TECHNOLOGY



Testboy sales cabinet

Our top class device presentation cabinet for your showroom.
The cabinet comes complete with the following products:

- | 2 x Testboy Profi LED *Plus*
- | 2 x Testboy Profi LCD *Plus*
- | 1 x Testboy 40 *Plus*
- | 2 x Testboy 20
- | 2 x Testboy 3000
- | 1 x Testboy Pocket
- | 1 x Testboy TV 215N
- | 1 x Testboy TV 216N
- | 1 x Testboy 218
- | 1 x Testboy 26
- | 1 x Testboy 110
- | 1 x Testboy 113
- | 1 x Testboy TV 325

THERMAL IMAGING | INFRARED THERMAL IMAGING CAMERAS

The human eye is unable to detect infrared radiation. However, infrared radiation is emitted by any object that has a temperature greater than absolute zero (-273.15°C).

Just about any component that receives or transmits energy actually warms up first before the energy is emitted. Cost-effective energy monitoring systems are thus of critical importance for establishing the reliability of electrical or mechanical systems.

Infrared thermal imaging is one of the most effective and reliable technologies available for preventative maintenance. It is a quick, thorough and safe process for pro-actively identifying thermal problems before they become serious disturbances.

By converting infrared radiation into electrical signals, infrared cameras can create images that can be viewed by humans. Testboy® infrared cameras feature powerful diagnostics for industrial facilities, industrial processes, electrical cabinets, controllers and buildings.

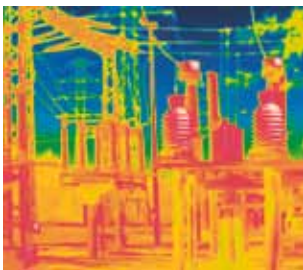
Their reliable analysis of problems and problem sources can help you avoid production outages or fires. In addition, Testboy® infrared cameras help to improve building quality and save energy.

High-resolution sensors within Testboy® infrared cameras deliver a detailed image evaluation. This image evaluation can even be carried out on-site when using our models TV 302, TV 304 and TV 305.

Benefits of Testboy infrared cameras

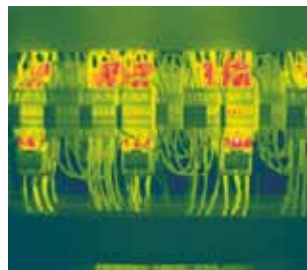
- | 3 year manufacturer's warranty
- | 50Hz technology - delivers high-resolution images in real time
- | Includes full version Testboy - Reporter software
- | Includes in-house training at Testboy®
- | In-house Testboy Service Centre
- | Demonstration instruments

For additional information, product demonstrations and training please contact a member of our sales and service team at thermography@testboy.de or info@testboy.de



High voltage

Non-contact testing without interrupting plant operations



Electrical engineering

Thermal imaging of electrical cabinets for preventative maintenance



Heating + sanitation

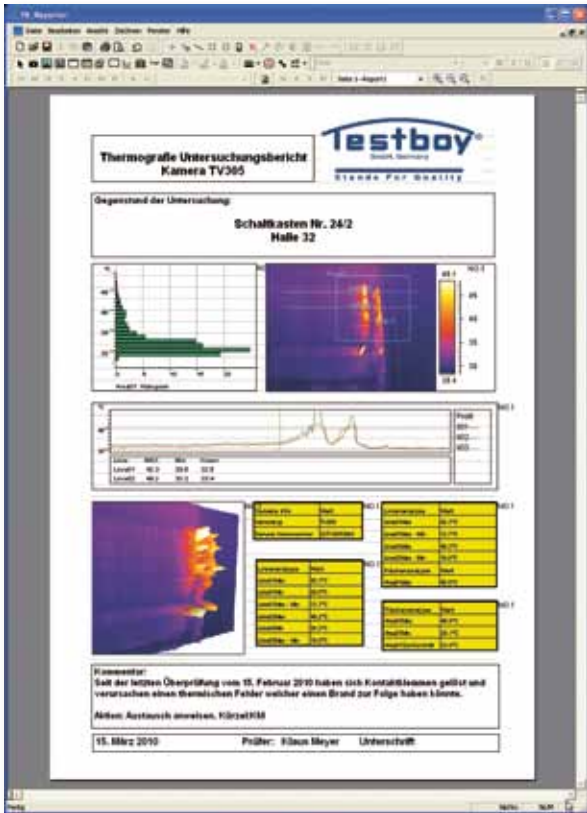
Recognise weak points in real-image quality



Industry

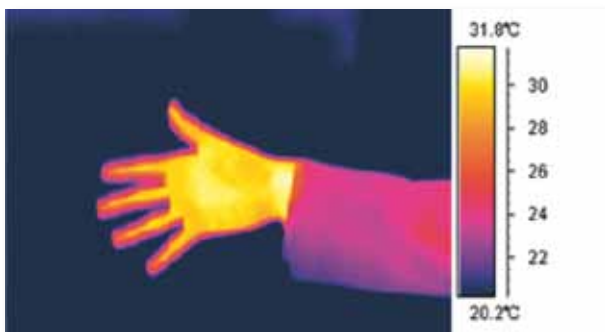
Rapid processes – detectable only with 50Hz technology

TESTBOY® | REPORTER SOFTWARE



The professional way to create infrared and building inspection reports.

The Testboy® Reporter software has been developed by thermography professionals and optimised to quickly provide comprehensive, meaningful inspection reports. This software offers the user an efficient representation for creating thermography reports. Users can tailor the appearance, structure and content of reports by specifying and saving customized templates. These templates can define diagrams, text modules and corporate logos. Radiometric images transferred to the PC (in which each pixel has been assigned a value) can be post-processed and adapted. For example, measurement points and linear profiles can be specified, or temperature scales and colour palettes changed. Calculated evaluative information is automatically transferred to the report; results then change automatically if any changes are made to the measurement scales.



20 Hz



50 Hz

THERMAL IMAGING | TESTBOY TV 290 BASIC | Infrared thermal imaging camera

With the inexpensive Testboy TV 290 you can make hotspots visible on a thermal image before any serious damage occurs. The 0.12 °C temperature resolution and large LC display allow you to see the smallest of temperature variances. And thanks to the detector's 50Hz capture frequency you can also view clear images in real time. The low-weight design of the TV 290 and its simplicity of operation allows you to perform non-contact temperature measurements of the objects being observed. The camera can store as many as 1000 infrared images in JPEG format, which you can download to your PC and analyse using the Testboy® Reporter software contained in the scope of supply.

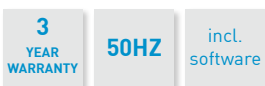
Your benefits:

- | Includes Testboy® - Reporter software
- | 50Hz Image capturing and playback frequency
- | 3 year manufacturer's warranty



Fields of application

- | Preventative maintenance - detecting electrical and mechanical problems
- | Detecting leaks and localising heating pipes
- | Heating, sanitation e.g. localising leaks (underfloor heating, concealed)
- | Electrical installations, e.g. thermal imaging of electrical cabinets
- | Service, e.g. maintenance of engine bearings





TECHNICAL SPECIFICATIONS

Imaging performance	
Detector type	TV 290 BASIC
Resolution	Focal Plane Array (FPA), uncooled microbolometer
Pixel size/ detector size	160 x 120 pixels
Spatial resolution (IFOV)	25µm / 4mm x 3mm
Thermal sensitivity (NETD)	1.9 mrad
Field of view (FOV) / min. focus distance	≤0,12°C bei 30°C
Detector data acquisition	18° x 13° / 0.3m
Spectral range	50Hz
Focus / zoom	8 ~ 14µm
	Manual / -
Image representation / display	
LC display	2.5" colour LCD
Image frequency	50Hz
CCD camera	-
Measurement characteristics	
Temperature range	-20°C ~ +250°C
Accuracy	± 2 °C or ± 2% (whichever is greater)
Emissivity correction	Variable from 0.1 to 1.0 (in steps of 0.01)
Moveable spot / measurement area / line profile	1 / 1 / -
Surface areas max.-min. temp. / surface areas mean	1 / 1
Isotherm analysis / temp. difference	1 / -
Alarm (acoustic / optical)	1 / 1
Colour palette	3
Image adjustment	Automatic / manual (gain and brightness)
Ambient temperature influence	Automatic correction according to user input
Atmospheric interference correction	-
Other settings	Date, time, temperature unit, language
Image storage	
Storage medium	Internal flash memory stores up to 1000 images
Storage mode	Manual single image storage
File format	JPEG, including 14-bit thermal measurement data
Voice annotation	-
Power supply	
Recharg. battery / ext. power supply	Yes / -
Battery type	Li-Ion, rechargeable
Battery operating time	Up to 3 hours continuous operation per battery
Charging system	Intelligent charger
Power saving	Automatic power off / sleep mode (user selectable)
Interfaces	
Video output / audio output	- / -
USB	Yes
Other interfaces	-
Ambient conditions	
Operating temperature	-15°C ~ +50°C
Storage temperature	-25°C ~ +60°C
Humidity	≤ 90% non-condensing
Degree of protection	IP 54
Physical characteristics	
Dimensions (L x H x W)	270mm x 100mm x 72mm
Weight (without battery)	600g
Tripod mounting	1/4"-20
Laser pointer	Class 2, 1MW / 635nm (red)
Accessories	
Accessories included	Carry case, 1x rechargeable Li-Ion battery, battery charger with power pack, USB cable, lens cap, operating instructions, "Testboy® Reporter" analysis and evaluation software on CD
Optional accessories	Spare rechargeable Li-Ion battery, light-tight hood

THERMAL IMAGING | TESTBOY TV 290 CONTROL | Infrared thermal imaging camera

The Testboy TV 290 Control is a user-friendly 50Hz monitoring infrared camera. The infrared camera Testboy TV 290 Control has been specially developed for deployment at airports. It offers an uncomplicated solution providing quick and reliable screening for increased temperature (for example fever).

Your benefits:

- | Includes Testboy® - Reporter software
- | 50Hz Image capturing and playback frequency
- | Alarm function
- | 3 year manufacturer's warranty



Large area scanning

Larger numbers of people are thermally scanned from a distance in real time to detect unusual body temperatures.

Non-contact monitoring

Non-contact temperature measurements are undertaken for the well-being of operating personnel to prevent them being infected.

Video output

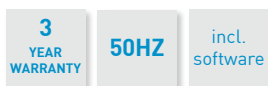
Video output is available on the TV 290 Control. The camera can be connected to a monitor to improve monitoring.

Power supply

In addition to the rechargeable batteries included in the scope of supply (each capable of 3 hours continuous operation) the TV 290 Control can also be operated from a 230V power supply.

Auto-Alarm function

Even a slight increase in body temperature is immediately indicated by the optical and acoustic alarm. This function is automatic and does not require special focus setting procedures.





TECHNICAL SPECIFICATIONS

Imaging performance		TV 290 CONTROL	
Detector type		Focal Plane Array (FPA), uncooled microbolometer	
Resolution		160x120 pixels	
Pixel size/ detector size		25µm / 4mm x 3mm	
Spatial resolution (IFOV)		1.9 mrad	
Thermal sensitivity (NETD)		≤0,1°C bei 30°C	
Field of view (FOV) / min. focus distance		18° x 13° / 0.3m	
Detector data acquisition		50Hz	
Spectral range		8~14µm	
Focus / zoom		Manual / 2x electronic	
Image representation / display			
LC display		2.5" colour LCD	
Image frequency		50Hz / 60Hz	
CCD camera		-	
Measurement characteristics			
Temperature range		+20 °C ~ +50 °C	
Accuracy		± 1 °C	
Emissivity correction		Variable from 0.1 to 1.0 (in steps of 0.01)	
Moveable spot / measurement area / line profile		4 / 3 / √	
Surface areas max.-min. temp. / surface areas mean		√ / √	
Isotherm analysis / temp. difference		√ / √	
Alarm (acoustic / optical)		√ / √	
Colour palette		11	
Image adjustment		Automatic / manual (gain and brightness)	
Ambient temperature influence		Automatic correction according to user input	
Atmospheric interference correction		Automatic correction according to user input	
Other settings		Date, time, temperature unit, language	
Image storage			
Storage medium		Internal flash memory for up to 2000 images	
Storage mode		Automatic / manual single image storage	
File format		JPEG, including 14-bit thermal measurement data	
Voice annotation		Up to 40 seconds per image	
Power supply			
Recharg. battery / ext. power supply		Yes / yes (10-15 VDC)	
Battery type		Li-Ion, rechargeable	
Battery operating time		Up to 3 hours continuous operation	
Charging system		Intelligent charger	
Power saving		Automatic power off / sleep mode (user selectable)	
Interfaces			
Video output / audio output		PAL/NTSC / yes	
USB		Yes	
Other interfaces		-	
Ambient conditions			
Operating temperature		-15°C~+50°C	
Storage temperature		-25°C~+60°C	
Humidity		≤90% nicht kondensierend	
Degree of protection		IP 54	
Physical characteristics			
Dimensions (L x H x W)		270mm×100mm×72mm	
Weight		600g	
Tripod mounting		1/4"-20	
Laser pointer		Class 2, 1MW / 635nm (red)	
Accessories			
Accessories included		Carry case, 2x rechargeable Li-Ion batteries, battery charger with power pack, USB cable, lens cap, light-tight hood, earphone, audio/video cable, operating instructions, "Testboy Reporter®" analysis and evaluation software on CD	

THERMAL IMAGING | TESTBOY TV 301, TV 302 | Infrared thermal imaging camera

Reveal poorly insulated parts of buildings that contribute to energy loss or hidden faults in electrical installations. You can pinpoint the location of hidden cabling to avoid damage. Expose air inflows, thermal bridges, leakages and damp areas - and help to minimize repair costs at the same time. With our infrared cameras you can use thermal images to make hotspots visible in manufacturing facilities, office buildings, hospitals and buildings in general - before any serious damage occurs. Thanks to the real 50Hz detector capture frequency our infrared cameras are able to supply clear images in real time. The wide-angle lens delivered with the camera enables you to extend your view of the object. It is also possible to record voice annotations up to 40 seconds in length with each thermal image. The TV 301 provides precise images of temperatures up to +500 °C and the TV 302 optionally even up to +1000 °C. Images can be stored automatically on the TV 301 and the TV 302 (adjustable from 1 to 9000 seconds).

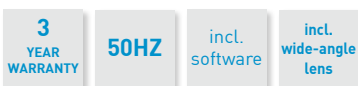
Your benefits:

- | Includes wide-angle lens
- | Voice recording facility
- | Alarm function
- | Includes Testboy® - Reporter software
- | 50Hz Image capturing and playback frequency
- | 3 year manufacturer's warranty



Fields of application

- | Preventative maintenance - detecting electrical and mechanical problems
- | Detecting leaks and localising heating pipes
- | Building thermography
- | Energy saving and building construction consultation
- | Process monitoring - real time observation to support efficient and reliable operations
- | Heating-sanitation, electrical installation
- | Maintenance





TECHNICAL SPECIFICATIONS

	TV 301	TV 302
Imaging performance		
Detector type	Focal Plane Array (FPA), uncooled microbolometer	
Resolution	160 x 120 pixels	
Pixel size/ detector size	35µm / 5.6mm x 4.2 mm	
Spatial resolution (IFOV)	1.9 mrad	
Thermal sensitivity (NETD)	≤0,06°C bei 30°C	≤0,06°C bei 30°C
Field of view (FOV) / min. focus distance	18° x 13° / 0.3m	
Detector data acquisition	50Hz	
Spectral range	8 ~ 14µm	
Focus / zoom	Manual / -	Manual / 2x electronic
Image representation / display		
LC display	2.5" colour LCD	
Image frequency	50Hz / 60Hz	
CCD camera	-	
Measurement characteristics		
Temperature range	-20°C ~ +500°C	-20 °C ~ +500 °C (optional up to +1,000°C)
Accuracy	± 2 °C or ± 2% (whichever is greater)	
Emissivity correction	Variable from 0.1 to 1.0 (in steps of 0.01)	
Moveable spot / measurement area / line profile	1 / 1 / -	4 / 3 / √
Surface areas max.-min. temp. / surface areas mean	√ / √	√ / √
Isotherm analysis / temp. difference	√ / -	√ / √
Alarm (acoustic / optical)	√ / √	√ / √
Colour palette	8	11
Image adjustment	Automatic / manual (gain and brightness)	
Ambient temperature influence	Automatic correction according to user input	
Atmospheric interference correction	Automatic correction according to user input	
Other settings	Date, time, temperature unit, language	
Image storage		
Storage medium	Internal flash memory for up to 2000 images	
Storage mode	Automatic / manual single image storage	
File format	JPEG, including 14-bit thermal measurement data	
Voice annotation	Up to 40 seconds per image	
Power supply		
Recharg. battery / ext. power supply	Yes / yes (10-15 VDC)	
Battery type	Li-Ion, rechargeable	
Battery operating time	Up to 3 hours continuous operation per battery	
Charging system	Intelligent charger	
Power saving	Automatic power off / sleep mode (user selectable)	
Interfaces		
Video output / audio output	PAL/NTSC / yes	
USB	Yes	
Other interfaces	-	
Ambient conditions		
Operating temperature	-15°C ~ +50°C	
Storage temperature	-25°C ~ +60°C	
Humidity	≤ 90% non-condensing	
Degree of protection	IP 54	
Physical characteristics		
Dimensions (L x H x W)	270mm x 100mm x 72mm	
Weight (without battery)	600g	
Tripod mounting	1/4"-20	
Laser pointer	Class 2, 1mW / 635nm (red)	
Accessories		
Accessories included	Carry case, 2x rechargeable Li-Ion batteries, battery charger with power pack, USB cable, lens cap, light-tight hood, earphone, audio/video cable, operating instructions, "Testboy® Reporter" analysis and evaluation software on CD, wide-angle lens 7.5mm(0.5x)	
Optional accessories	Tele lens 50 mm (3x)	

THERMAL IMAGING | TESTBOY TV 303 | Infrared thermal imaging camera

The TV 303 is an inexpensive infrared camera suitable for universal deployment. You will be able to expose air inflows, thermal bridges, leakages and damp areas - and in so doing help to minimize repair costs. With the Testboy TV 303 you can make hotspots visible on a thermal image before any serious damage occurs. The 0.10 °C temperature resolution and large LC display allow you to see the smallest of temperature variances. And thanks to the detector's 50Hz capture frequency you can also view clear images in real time. The wide-angle lens delivered with the camera gives you the option of being able to choose between two different fields of view.

Your benefits:

- | Includes wide-angle lens
- | Testboy® - Reporter software
- | 50Hz Image capturing and playback frequency
- | 3 year manufacturer's warranty



Fields of application

- | Preventative maintenance - detecting electrical and mechanical problems
- | Detecting leaks and localising heating pipes
- | Building thermography
- | Heating, sanitation e.g. localising leaks (underfloor heating, concealed)
- | Electrical installations, e.g. electrical cabinets Thermal Imaging
- | Service, e.g. maintenance of engine bearings





TECHNICAL SPECIFICATIONS

Imaging performance	
Detector type	TV 303
Resolution	Focal Plane Array (FPA), uncooled microbolometer
Pixel size/ detector size	160 x 120 pixels
Spatial resolution (IFOV)	25µm / 4.0mm x 3.0 mm
Thermal sensitivity (NETD)	1.9 mrad
Field of view (FOV) / min. focus distance	≤0,10°C bei 30°C
Detector data acquisition	18° x 13° / 0.3m
Spectral range	50Hz
Focus / zoom	8 ~ 14µm
	Manual / -
Image representation / display	
LC display	2.5" colour LCD
Image frequency	50Hz
CCD camera	-
Measurement characteristics	
Temperature range	-20°C ~ +350°C
Accuracy	± 2 °C or ± 2% (whichever is greater)
Emissivity correction	Variable from 0.1 to 1.0 (in steps of 0.01)
Moveable spot / measurement area / line profile	1 / 1 / -
Surface areas max.-min. temp. / surface areas mean	√ / √
Isotherm analysis / temp. difference	√ / -
Alarm (acoustic / optical)	√ / √
Colour palette	3
Image adjustment	Automatic / manual (gain and brightness)
Ambient temperature influence	Automatic correction according to user input
Atmospheric interference correction	-
Other settings	Date, time, temperature unit, language
Image storage	
Storage medium	Internal flash memory stores up to 1000 images
Storage mode	Manual single image storage
File format	JPEG, including 14-bit thermal measurement data
Voice annotation	-
Power supply	
Recharg. battery / ext. power supply	Yes / -
Battery type	Li-Ion, rechargeable
Battery operating time	Up to 3 hours continuous operation per battery
Charging system	Intelligent charger
Power saving	Automatic power off / sleep mode (user selectable)
Interfaces	
Video output / audio output	- / -
USB	Yes
Other interfaces	-
Ambient conditions	
Operating temperature	-15°C ~ +50°C
Storage temperature	-25°C ~ +60°C
Humidity	≤ 90% non-condensing
Degree of protection	IP 54
Physical characteristics	
Dimensions (L x H x W)	270mm x 100mm x 72mm
Weight (without battery)	600g
Tripod mounting	1/4"-20
Laser pointer	Class 2, 1mW / 635nm (red)
Accessories	
Accessories included	Carry case, 2x rechargeable Li-Ion batteries, battery charger with power pack, USB cable, lens cap, light-tight hood, operating instructions, "Testboy® Reporter" analysis and evaluation software on CD, wide-angle lens 7.5mm (0.5x)

THERMAL IMAGING | TESTBOY TV 304 | Infrared thermal imaging camera

Are you looking for an easy-to-use, high performance infrared camera with top drawer imaging quality? Then the Testboy TV 304 is right for you. It features 384 x 288 pixel resolution and thermal sensitivity ≤ 0.06 °C (NETD). More than 110 000 pixels ensure thermal detection of even the smallest detail in the building envelope. The detector's 50-Hz capture frequency allows temperatures of up to 500°C to be displayed in real time on the 2.8-inch display. With up to four movable measurement points and up to three movable measurement areas as well as a line profile this camera is ideal for on-site analyses.

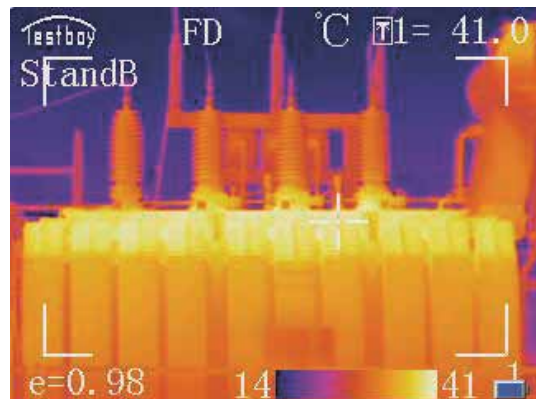
Your benefits:

- | Includes Testboy® - Reporter software
- | Voice recording facility
- | Alarm function
- | 50Hz Image capturing and playback frequency
- | 3 year manufacturer's warranty



Fields of application

- | Preventative maintenance - detecting electrical and mechanical problems
- | Detecting leaks and localising heating pipes
- | Building thermography
- | Energy saving and building construction consultation
- | Public utility companies – real time analysis of power substations, transmission lines and systems
- | Process monitoring – real time observation to support efficient and reliable operations
- | Research and development
- | Electronics design – close range PCB analysis
- | Heating-sanitation
- | Maintenance
- | Public utility companies
- | Industrial and production processes, industrial engineering





TECHNICAL SPECIFICATIONS

	TV 304 - 20	TV 304 - 40	TV 304 - 75
Imaging performance			
Detector type	Focal Plane Array (FPA), uncooled microbolometer		
Resolution	384 x 288 pixels		
Pixel size/ detector size	35µm / 13.4mm x 10.1mm		
Spatial resolution (IFOV)	1.75 mrad	0.88 mrad	0.47 mrad
Thermal sensitivity (NETD)	≤0,06°C bei 30°C		
Field of view (FOV) / min. focus distance	38° x 28° / 0.5 m	16° x 12° / 0.5 m	8.6° x 6.4° / 0.5 m
Focal distance	20 mm	40 mm	75 mm
Detector data acquisition	50Hz		
Spectral range	8~14µm		
Focus / zoom	Manual / 2x electronic		
Image representation / display			
LC display	2.8" colour LCD		
Image frequency	50Hz / 60Hz		
CCD camera	-		
Measurement characteristics			
Temperature range	-20 °C ~ +500 °C		
Accuracy	± 2 °C or ± 2% (whichever is greater)		
Emissivity correction	Variable from 0.1 to 1.0 (in steps of 0.01)		
Moveable spot / measurement area / line profile	4 / 3 / √		
Surface areas max.-min. temp. / surface areas mean	√ / √		
Isotherm analysis / temp. difference	√ / √		
Alarm (acoustic / optical)	√ / √		
Colour palette	11		
Image adjustment	Automatic / manual (gain and brightness)		
Ambient temperature influence	Automatic correction according to user input		
Atmospheric interference correction	Automatic correction according to user input		
Other settings	Date, time, temperature unit, language		
Image storage			
Storage medium	Internal flash memory, SD card for storing up to 4000 images		
Storage mode	Automatic / manual single image storage		
File format	JPEG, including 14-bit thermal measurement data		
Voice annotation	Up to 40 seconds per image		
Power supply			
Recharg. battery / ext. power supply	Yes / yes (10-15 VDC)		
Battery type	Li-Ion, rechargeable		
Battery operating time	Up to 3 hours continuous operation per battery		
Charging system	Intelligent charger		
Power saving	Automatic power off / sleep mode (user selectable)		
Interfaces			
Video output / audio output	PAL/NTSC / yes		
USB	Yes		
Other interfaces	Ext. power supply; SD card slot		
Ambient conditions			
Operating temperature	-15°C~+50°C		
Storage temperature	-25°C~+60°C		
Humidity	≤90% non-condensing		
Degree of protection	IP 54		
Physical characteristics			
Dimensions (L x H x W)	310mm x 127mm x 90mm		
Weight (without battery)	910g		
Tripod mounting	1/4"-20		
Laser pointer	Class 2, 1mW / 635nm (red)		
Accessories			
Accessories included	Carry case, 2x rechargeable Li-Ion batteries, battery charger with power pack, USB cable, lens cap, light-tight hood, earphone, audio/video cable, operating instructions, "Testboy® Reporter" analysis and evaluation software on CD		
Optional accessories	Car charger adapter, wide-angle lens, tele lens		

THERMAL IMAGING | TESTBOY TV 305 | Infrared thermal imaging camera

The Testboy TV 305 is a great choice. With its 384 x 288 pixels and their excellent thermal sensitivity (≤ 0.06 °C NETD) this camera offers first class resolution and image quality. Moreover, the detector's 50Hz capture frequency allows temperatures to be displayed in real time on the large four-inch display. The TV305 also features an innovative image in image function. In addition to the thermal image this technology also provides a real image. With the TV 305 suspect components can be identified more quickly and included in reports to allow repairs to be carried out quickly and effectively.

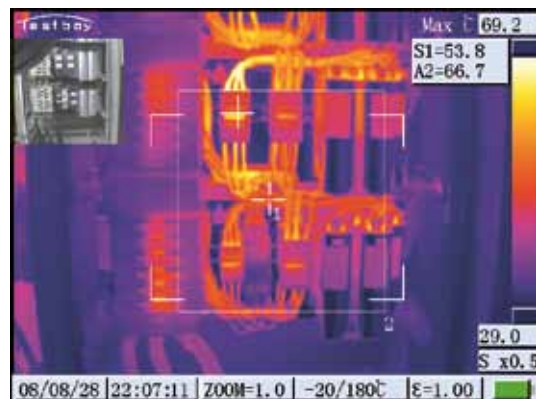
Your benefits:

- | Image in image function
- | On-site analysis
- | 50Hz Image capturing and playback frequency
- | 3 year manufacturer's warranty



Fields of application

- | Preventative maintenance – detecting electrical and mechanical problems
- | Public utility companies – real time analysis of power substations, transmission lines and systems
- | Process monitoring – real time observation to support efficient and reliable operations
- | Research and development
- | Electronics design – close range PCB analysis



3
YEAR
WARRANTY

50HZ

incl.
software



TECHNICAL SPECIFICATIONS

Imaging performance	TV 305
Detector type	Focal Plane Array (FPA), uncooled microbolometer
Resolution	384 x 288 pixels
Pixel size/ detector size	45 µm / 14.4 mm x 10.8 mm
Spatial resolution (IFOV)	0.88 mrad
Thermal sensitivity (NETD)	≤0,06°C at 30°C
Field of view (FOV) / min. focus distance	16° x 12° / 0.5m
Detector data acquisition	50Hz
Spectral range	8 ~ 14µm
Focus / zoom	Automatic, manual / 1-8 x electronic
Image representation / display	
LC display	4" colour LCD (640 x 480)
Image frequency	50Hz / 60Hz
CCD camera	Yes (300 000 pixels, image-in-image, full frame)
Measurement characteristics	
Temperature range	-20 °C ~ +500 °C (optional up to +1200 °C)
Accuracy	± 2 °C or ± 2% (whichever is greater)
Emissivity correction	Variable from 0.1 to 1.0 (in steps of 0.01)
Moveable spot / measurement area / line profile	10 / 5 / √
Surface areas max.-min. temp. / surface areas mean	√ / √
Isotherm analysis / temp. difference	√ / √
Alarm (acoustic / optical)	√ / √
Colour palette	9
Image adjustment	Automatic / manual (gain and brightness)
Ambient temperature influence	Automatic correction according to user input
Atmospheric interference correction	Automatic correction according to user input
Other settings	Date, time, temperature unit, language
Image storage	
Storage medium	Internal flash memory / CF card for storing up to 4000 images
Storage mode	Automatic / manual single image storage
File format	JPEG, including 14-bit thermal measurement data
Voice annotation	Up to 40 seconds per image
Power supply	
Recharg. battery / ext. power supply	Yes / yes (10-15 VDC)
Battery type	Li-Ion, rechargeable
Battery operating time	Up to 2 hours continuous operation per battery
Charging system	Intelligent charger
Power saving	Automatic power off / sleep mode (user selectable)
Interfaces	
Video output / audio output	PAL/NTSC; VGA /yes
USB	Yes
Other interfaces	-
Ambient conditions	
Operating temperature	-15°C ~ +50°C
Storage temperature	-25°C ~ +60°C
Humidity	≤ 90% non-condensing
Degree of protection	IP 54
Physical characteristics	
Dimensions (L x H x W)	305 mm x 130 mm x 135 mm
Weight (without battery)	1,690 g
Tripod mounting	1/4"-20
Laser pointer	Class 2, 1mW / 635nm (red)
Accessories	
Accessories included	Carry case, 2x rechargeable Li-Ion batteries, external LC display, battery charger with power pack, CF card and card reader, USB cable, lens cap, earphone audio/video cable, operating instructions, "Testboy Reporter®" analysis and evaluation software on CD
Optional accessories	Wide-angle lens 20 mm (0.5x), tele lens 80 mm (2x)

THERMAL IMAGING | TESTBOY TV 306 | Infrared thermal imaging network camera

The TV 306 is a high-quality infrared camera designed for temperature measurements in industrial automation applications and fixed installations. Our infrared technology allows you to conveniently capture thermal information about product quality and influences during the production run. In addition, thermal imaging cameras are useful during research and product development as well as in the laboratory. The temperature measurement system integrated in the TV 306 is both professional and precise. This camera is the perfect choice for stationary applications and any automation tasks for which non-contact, high-resolution measurements are required. Utilising the TV 306 enables you to detect variances in temperature of just 0.06 °C across a range of -20 °C to +500 °C. The camera provides precise, high resolution infrared images as well as a refresh rate of 50Hz (real time). Each TV 306 can be assigned an individual network address. It can be quickly and easily integrated into your existing control and monitoring systems. An alarm can be set to trigger automatically if the temperature exceeds or falls below a predefined limit value. Thanks to its compact and lightweight design the TV 306 is also suitable for use in places where access is difficult. The auto-focus feature guarantees a sharp infrared image. Just connect the camera to a PC to view the high-quality images in real time. A PC can be used for complete control over the camera and auto-focus function.

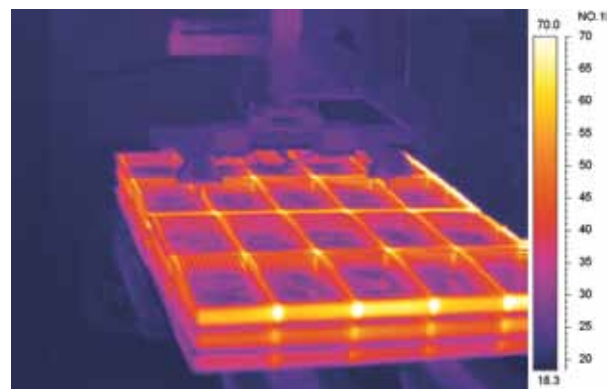
Your benefits:

- | 50Hz Image capturing and playback frequency
- | Thermal video recording
- | Network camera and network software
- | Includes Testboy® - Reporter software
- | 3 year manufacturer's warranty



Fields of application

- | Process monitoring – real time observation to support efficient and reliable operations
- | Research and development
- | Automation applications
- | Object monitoring



3
YEAR
WARRANTY

50HZ

incl.
software



TECHNICAL SPECIFICATIONS

	TV 306 - 160	TV 306 - 384
Imaging performance		
Detector type	Focal Plane Array (FPA), uncooled microbolometer	
Resolution	160 x 120 pixels	384 x 288 pixels
Pixel size/ detector size	35 µm / 5.6 mm x 4.2 mm	35 µm / 13.4 mm x 10.0 mm
Spatial resolution (IFOV)	1.3 mrad	0.88 mrad
Thermal sensitivity (NETD)	0.1°C at 30 °C	≤0.06°C at 30 °C
Field of view (FOV) / min. focus distance	12° x 9° / 0.5m	16° x 12° / 0.5m
Detector data acquisition	50Hz	
Spectral range	8 ~ 14µm	
Focus / zoom	Manual / -	Automatic, manual / -
Measurement characteristics		
Temperature range	-20°C ~ +500°C	-20 °C ~ +500 °C (optional up to 1000 °C)
Accuracy	± 2 °C or ± 2% (whichever is greater)	
Emissivity correction	Variable from 0.1 to 1.0 (in steps of 0.01)	
Moveable spot / measurement area / line profile	4 / 3 / √	
Surface areas max.-min. temp. / surface areas mean	√ / √	
Isotherm analysis / temp. difference	√ / √	
Alarm (acoustic / optical)	√ / √	
Colour palette	11	
Image adjustment	Automatic / manual (gain and brightness)	
Ambient temperature influence	Automatic correction according to user input	
Atmospheric interference correction	Automatic correction according to user input	
Other settings	Temperature unit, language, IP address	
Image storage		
Storage medium	-	
Storage mode	Single frames, continuous or interval collection with time correction from PC; up to 200 frames	
File format	Single image storage - .bmp; digital video - MPEG 4	
Voice annotation	-	
Power supply		
Recharg. battery / ext. power supply	- / yes (10-15 VDC; ≤ 6W)	
Power saving	Automatic power off / sleep mode (user selectable)	
Interfaces		
Video output / audio output	PAL/NTSC / -	
USB	-	
Other interfaces	RJ-45 Ethernet interface, RS485 remote interface	
Ambient conditions		
Operating temperature	-15°C ~ +50°C	
Storage temperature	-25°C ~ +60°C	
Humidity	≤ 90% non-condensing	
Degree of protection	IP 67	
Physical characteristics		
Dimensions (L x H x W)	240 mm x 92 mm x 107 mm	
Weight	790 g	
Tripod mounting	1/4"-20	
Laser pointer	-	
Accessories		
Accessories included	Carry case, lens cap, video cable, LAN cable, operating instructions, analysis and evaluation software on CD	
Optional accessories	Wide-angle lens, tele lens	

THERMAL IMAGING | TESTBOY TV 500 FireChief | Life-saving camera

The FireChief Testboy TV 500 has been specially designed for tough fire fighting tasks. It is ready for operation in less than 20 seconds and can run continually for two hours on each rechargeable battery. No matter if working in thick smoke or total darkness - this fully radiometric camera guarantees the fireman a commanding perspective in all surroundings as well as providing reliable assistance in the search for missing persons or other heat sources. This waterproof and dustproof camera has a 3.5" TFT LCD screen that provides quick selection options of different colour palettes to meet specific task-related needs. One-hand operation facilitates error-free handling even when wearing thick protective gloves. No matter if having to crawl, work overhead or on top of a ladder - the light-weight 1300g compact camera can be comfortably operated with just one hand over long periods of time.

Your benefits:

- | Car charger cable included in scope of supply
- | Suitable for left and right-handed users
- | Free height of fall 1.80 m
- | Waterproof to 1 m
- | Complies with fire protection standard UL94-V0 with IP67 rating
- | 50Hz Image capturing and playback frequency
- | 3 year manufacturer's warranty



Fields of application

- | Fire fighting tasks
- | Accident recovery
- | Life saving
- | Detect burning embers
- | Search for missing persons in smoke-filled buildings





TECHNICAL SPECIFICATIONS

Imaging performance		TV 500 FireChief
Detector type	Focal Plane Array (FPA), uncooled microbolometer	
Resolution	160x120 pixels	
Spatial resolution (IFOV)	3.3 mrad	
Thermal sensitivity (NETD)	≤0,08°C bei 30°C	
Field of view (FOV)	30° x 23°	
Detector data acquisition	50Hz	
Spectral range	8~14µm	
Focus	Fixed	
Startup time	≤20s at 30°C until image output	
Image representation / display		
LC display	3.5" TFT LCD, 260 000 colours, 640x480 pixels	
Measurement characteristics		
Temperature range	-20°C ~ +500°C	
Measurement mode	Fixed spot	
Measurement correction	0.96 fixed emissivity	
Colour palette	6 (firefighting palettes, grey, rainbow and so forth)	
Power supply		
Battery type	Rechargeable Ni-MH battery	
Battery operating time	Up to 2 hours continuous operation	
Charging system	Intelligentes Ladegerät (Ladevorgang ≤2 Stunden)	
Battery life	More than 1000 charge cycles	
Ambient conditions		
Long-term operating temperature	-15°C~+50°C	
Short-term operating temperature	+50°C~+260°C	
Storage temperature	-40°C~+70°C	
Degree of protection	IP 67 (waterproof to 1 meter)	
Flame rating	UL94-V0	
Free height of fall	1.8m	
Physical characteristics		
Dimensions (L x W x H)	190mm×128mm×273mm	
Weight	≤1.3Kg	
Accessories		
Accessories included	Carry case, 2x Ni-MH rechargeable batteries, batter charger incl. car charger cable, operating instructions	

OVERVIEW | LIGHT & SOUND

From the point of view of fire detection and burglar alarm technology as well as industry beacons and warning sirens are essential devices. Beginning with the Askari, which can be screwed onto a control panel, buried in or mounted on a wall, through to the 120 dB Asserta siren we offer a large range of devices to raise fire alarms or signalise dangerous procedures.

It is also possible to combine sirens and beacons. The Flashni is an example of such a combination in a single unit.

Then there is the Solista range equipped with future-oriented, energy saving and efficient LED technology



APPLICATIONS

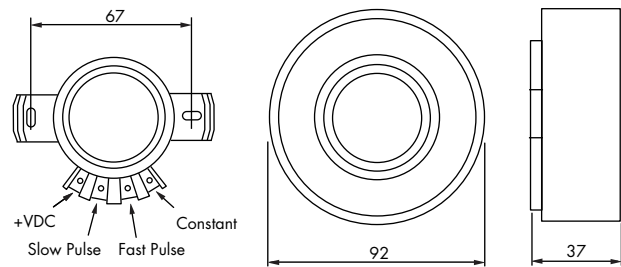
1. Asserta 24V
2. Signal pillars
3. Flashni
4. PSW.90XXX
5. Solista
6. Symphoni Voice Plus
7. Solex
8. Compro BL 70
9. Chiasso Razor

LIGHT & SOUND | PSW.90XXX | Piezo siren

PSW.90XXX series Piezo sirens operate on a voltage of 12-110 VDC and a frequency of approx. 2.8 kHz. It is possible to choose between a continuous tone, a slow or a fast pulse tone. Characteristics such as a low energy consumption, high sound volume and IP 65 protection class rating make this solution suitable for use in indoor and outdoor areas.

Your benefits:

- | Long service life
- | Low power consumption
- | Reliable
- | No high-frequency interference
- | Penetrating, harmonic content sound
- | Quick and easy to mount



SPECIFICATIONS

Technical data	PSW.90030	PSW.90080	PSW.90120
SPL	110 ±3dB	110 ±5dB	110 ±3dB
Resonant frequency	2.7 ±0.5kHz	2.7 ±0.5kHz	2.9 ±0.5kHz
Current consumption	<35 mA at 12 VDC	<65 mA at 50 VDC	<30 mA at 110 VDC
Operating voltage	12 VDC	50 VDC	110 VDC
Operating voltage	3 ~ 30 VDC	30 ~ 80 VDC	80 ~ 120 VDC
Tone mode	Constant, fast and slow pulse tone		
Operating temperature	-20° ~ +70°C		
Storage temperature	-30° ~ +80 °C		
Connection	Terminals		
Plastic	PBT		
Colour	Grey		

2
YEAR
WARRANTY

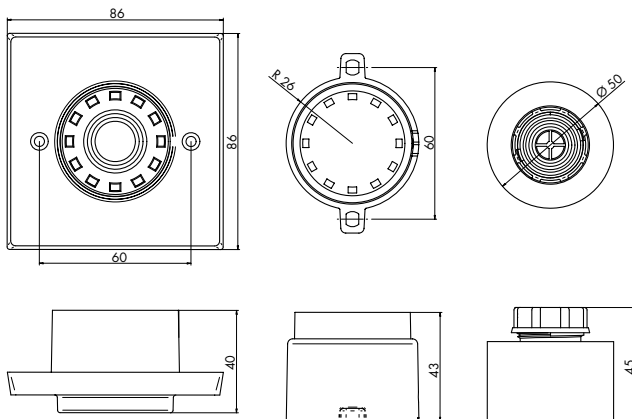


LIGHT & SOUND | ASKARI | Piezo siren

The Askari siren has been designed for deployment in a wide variety of applications. It is possible to choose between 32 signal tones and set the volume in all Askari siren design variations. Distinguishing characteristics include low power consumption and high rated output performance. Mounting options range from fitting on switchboard and instrument panels through to cable ducts and surface-mounted housings. Their broad spectrum of setting options means Askari sirens can be utilised as simple warning devices as well as in fire and burglar alarm systems.

Your benefits:

- | Very good sound output
- | Low power consumption
- | 32 selectable tones
- | Automatic synchronisation
- | Sound volume control
- | Second tone for two-tone alarm



SPECIFICATIONS

Technical data	Askari Compact	Askari Flange	Askari Panel
Display	Acoustic	Acoustic	Acoustic
Voltage range	9-28 VDC	9-28 VDC	9-28 VDC
Sound volume	68-106 dB(A)	63-101 dB(A)	63-101 dB(A)
Signal tones	32	32	32
Degree of protection	IP 54 (with back box)	IP 65	IP 65
Current consumption	6-35 mA, depending on tone	6-35 mA, depending on tone	6-35 mA, depending on tone
Housing material	ABS	ABS	ABS
Operating temperature	-25 °C to +70 °C	-25 °C to +70 °C	-25 °C to +70 °C
Approvals	VdS, CNPP	-	-
Dimensions	86 x 86 x 42 mm	Ø 60 x 43 mm	Ø 50 x 45 mm
Weight	110g	90g	95g
Colour	Red or white	Red or white	Red or white
Scope of delivery	1x operating instructions	1x operating instructions	1x operating instructions



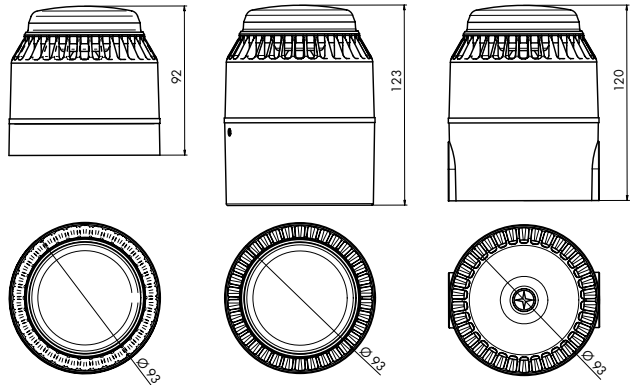


LIGHT & SOUND | FLASHNI | Combi siren

The combination siren Flashni consists of a siren and an integrated Xenon beacon. Rated to IP 65 Flashni sirens are suitable for a broad range of applications. As well as in industrial applications they are suitable for use in fire and burglar alarm technology.

Your benefits:

- | Very good sound output
- | 32 selectable alarm tones
- | Automatic synchronisation
- | Sound volume control
- | Colour combinations
- | Suitable for S, D and U-bases

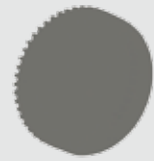


SPECIFICATIONS

Technical data	Flashni 12V DC	Flashni 24V DC
Display	Optical / acoustic	Optical / acoustic
Features	S-, D- or U-base	S-, D- or U-base
Voltage range	9-15 VDC	18-30 VDC [*]
Sound volume	Up to 104 dB(A), depending on tone	Up to 110 dB(A), depending on tone
Alarm tones	32	32
Current consumption	Up to 111 mA, depending on tone	Up to 85mA, depending on tone
Flash power	0.7 joule	0.7 joule
Flash rate	60 x per minute	60 x per minute
Degree of protection	S-base IP 54; D-/U-base IP 65	S-base IP 54; D-/U-base IP 65
Housing material	Housing: ABS; lens: PC	Housing: ABS; lens: PC
Operating temperature	-10°C to +55°C	-10°C to +55°C
Dimensions	Ø 93 x 92mm S-base Ø 93 x 121mm D-/U-base	Ø 93 x 92mm S-base Ø 93 x 121mm D-/U-base
Weight	325g S-base; 400g D-/U-base	325g S-base; 400g D-/U-base
Housing colours	Red or white	Red or white
Lens colour	Red, orange, blue, green or clear	Red, orange, blue, green or clear
Scope of delivery	1x operating instructions	1x operating instructions

* 100 to 230 VAC with powered deep base





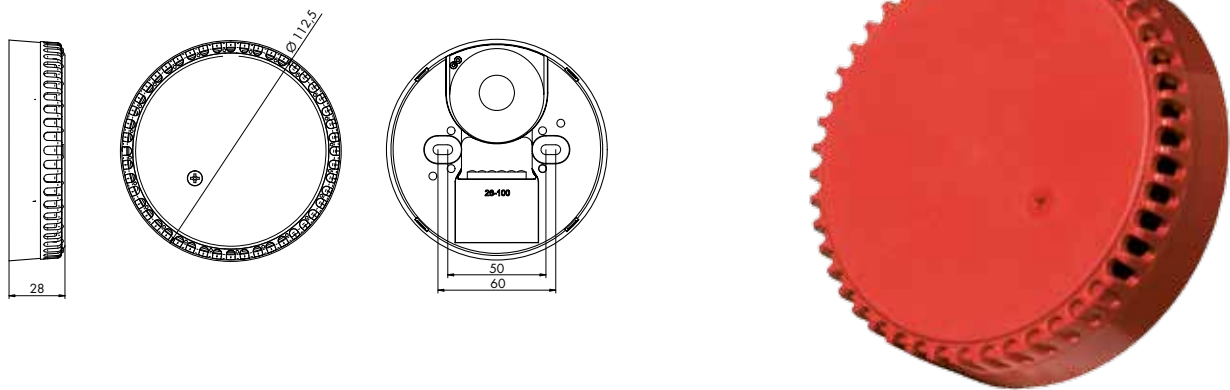
LIGHT & SOUND | SQUASHNI | Platform siren

The design of the platform siren Squashni makes it possible to fit an additional detector such as a smoke or gas detectors or beacons directly onto the base.

This designed-in feature guarantees cost-saving installation. 32 different tones can be set. With VdS-approved fire alarm technology, low power consumption and flat design these sirens are particularly suitable for indoor installation.

Your benefits:

- | Low power consumption
- | Cover to allow use as single siren
- | Minimum installation costs
- | Sound volume control
- | Mounting base for detectors



SPECIFICATIONS

Technical data	Squashni	Squashni Micro
Display	Acoustic	Acoustic
Voltage range	18-28 VDC	18-28 VDC
Sound volume	67-102 dB(A), depending on tone	83-97 dB(A), depending on tone
Alarm tones	32	32
Current consumption	8 - 35mA, depending on tone	3 - 10mA, depending on tone
Degree of protection	IP21C	IP21C
Housing material	ABS	ABS
Operating temperature	-10°C to +55°C	-10°C to +55°C
Dimensions	Ø 112 x 30mm	Ø 102 x 35mm
Weight	150g	150g
Housing colour	Red or white	Red or white
Approvals	VdS, CNPP & UL	VdS & UL
Scope of delivery	1x operating instructions	1x operating instructions



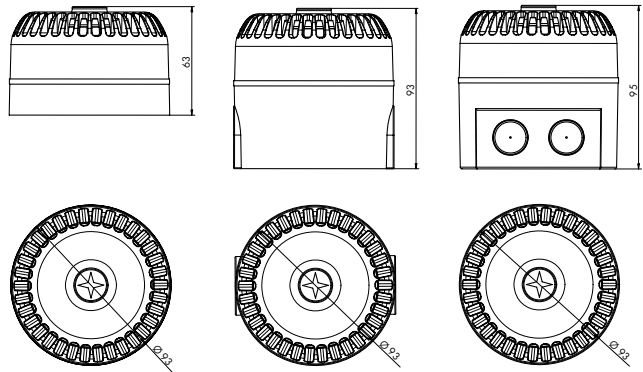


LIGHT & SOUND | ROSHNI LOW PROFILE (ROLP) | Electronic Siren

Featuring 32 selectable warning tones including a DIN tone for fire alarm and safety technology the ROLP warning siren has been developed in accordance with VdS guidelines and fulfils the demands of a wide variety of application requirements. The robust design, long service life and proven reliability ensure this siren can be utilised in all sectors including industrial applications. Characteristics particularly worthy of mention are low power consumption in conjunction with optimum efficiency and automatic synchronisation.

Your benefits:

- | Very good sound output
- | Low power consumption
- | 32 selectable alarm tones
- | Automatic synchronisation
- | Sound volume control
- | Second tone for two-tone alarm
- | Suitable for S, D and U-bases



SPECIFICATIONS

Technical data	Roshni LP
Features	S-, D- or U-base
Display	Acoustic
Voltage range	9-28 VDC (*)
Sound volume	64-111 dB(A), depending on tone
Alarm tones	32
Degree of protection	S-base IP 54; D-/U-base IP 65
Current consumption	3 - 33mA, depending on tone
Housing material	ABS
Operating temperature	-25 °C to +70 °C
Approvals	VdS, LPCB, UL & CNPP
Dimensions	Ø 93 x 63mm S-base Ø 93 x 93 mm D-/U-base
Weight	280 g S-base 310g D- / U-base
Colour	Red or white
Scope of delivery	1x operating instructions

* 100 to 230 VAC with powered deep base





LIGHT & SOUND | SYMPHONI | High performance electronic siren

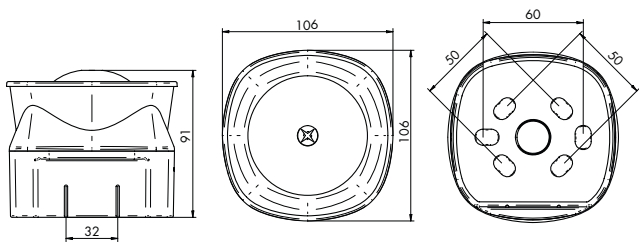
The high-performance electronic siren Symphoni High Output has been specially developed for use in applications requiring sound volume outputs up to 120 dB.

The robust design, two-tone alarm and loud sound volumes offer a wide palette of application options for utilisation in fire alarm technology and industry.

Low power consumption is a further distinguishing characteristic of the Symphoni Low Power siren.

Your benefits:

- | Very good sound output
- | Low power consumption
- | Selectable alarm tones
- | Automatic synchronisation
- | Sound volume control
- | Second tone for two-tone alarm



SPECIFICATIONS

Technical data	Symphoni High Output	Symphoni Low Power
Display	Acoustic	Acoustic
Voltage range	9-28 VDC	12-30 VDC
Sound volume	88-120 dB(A), depending on tone	100 dB(A) at 24 VDC all alarm tones
Alarm tones	32	3
Current consumption	190 - 260mA, depending on tone	5mA at 24 VDC all alarm tones
Degree of protection	IP 42 (*)	IP 42 (*)
Housing material	ABS	ABS
Operating temperature	-25°C to +55°C	-10°C to +55°C
Dimensions	109 x 109 x 95 mm	109 x 109 x 95 mm
Weight	580g	210g
Housing colours	Red or white	Red or white
Scope of delivery	1x operating instructions	1x operating instructions

* IP 66 with strengthened back box



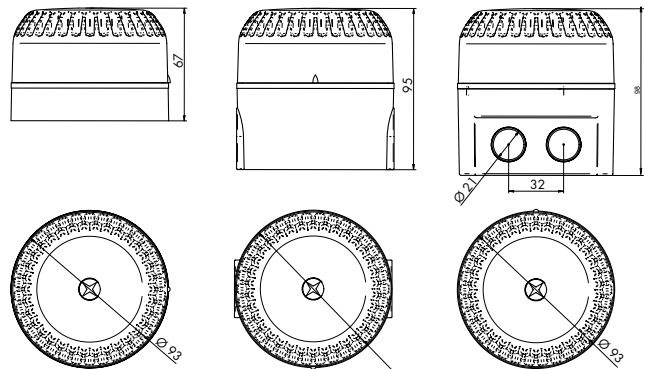


LIGHT & SOUND | SOLEX | Xenon beacon Solex

The highest levels of efficiency and reliability ensure xenon beacons are suitable for a broad spectrum of applications, for example in fire and burglar alarm technologies as well as in industry. Suppression of inrush current peak is the outstanding feature of the Solex beacon.

Your benefits:

- | Wide voltage range up to 60 VDC
- | Startup current limit
- | Automatic synchronisation
- | Constant performance levels across the whole voltage range
- | Sabotage-proof version available
- | 5 lens colours
- | VdS approval



SPECIFICATIONS

Technical data	SOLEX		
Model	Solex 3	Solex 10	Solex 15
Operating voltage	10-60 VDC (*)	10-60 VDC (*)	10-60 VDC
Current consumption	35 mA at 24 VDC	80mA at 24 VDC	220mA at 24 VDC
Light source	Xenon	Xenon	Xenon
Light output	2.5 Cd	10 Cd	15 Cd
Flash rate	1 Hz +/- 20%	1 Hz +/- 20%	1 Hz +/- 20%
Operating temperature	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C
IP rating		S-base IP 54; D-/U-base IP 65	
Lens colours		Red, yellow, clear, blue or green	
Housing colours	Red, white	Red, white	Red, white
Weight		S-base 150g, D-/U-base 180g	
Material		Housing: ABS FR; lens: PC	
Certificate	VdS	VdS	VdS

* 100 to 230 VAC with powered deep base

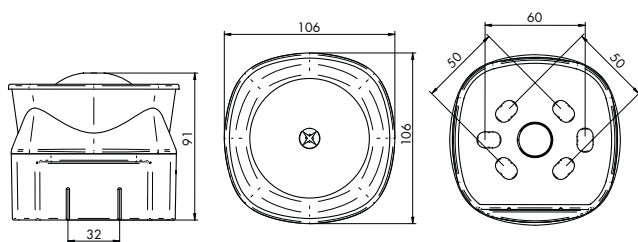


LIGHT & SOUND | SYMPHONI VOICE PLUS | Voice sounder

The Symphoni Voice Plus has been developed as a sounder featuring tone and additional voice output functionality. Distinguishing characteristics include low power consumption in conjunction with high rated output performance. A clearly understandable voice output and selectable sound volume control ensure the Symphoni Voice Plus siren is suitable both for use as a simple warning device as well as for integrating in fire and burglar alarm systems.

Your benefits:

- | Wide voltage range up to 60 VDC
- | Very good sound output
- | Low power consumption
- | Selectable sound volume control
- | 8 selectable tones
- | Wide selection of different voice messages for a wide range of applications and requirements



SPECIFICATIONS

Technical data	Symphoni Voice Plus	
Type	Voice sounder	Voice sounder / beacon
Operating voltage	9-60 VDC	9-60 VDC
Current consumption	12mA at 24 VDC	12mA (siren) + 4mA (beacon) at 24 VDC
Sound volume at 1m	Tone: 100 dB(A), voice output: 97 dB(A)	Tone: 100 dB(A), voice output: 97 dB(A)
Sound volume control	-10 dB(A) [switch selection]	-10 dB(A) [switch selection]
Messages	Storage for up to 16 messages	Storage for up to 16 messages
Alarm signals	8	8
Flash intensity	-	2 Cd at 24 VDC
Flash rate	-	1 Hz
Flash colour	-	Red flash
IP rating	IP21C	IP21C
Operating temperature	-10 °C to +55 °C	-10 °C to +55 °C
Colours	Red or white	Red or white
Material	Housing: ABS	Housing: ABS, lens: Polycarbonate



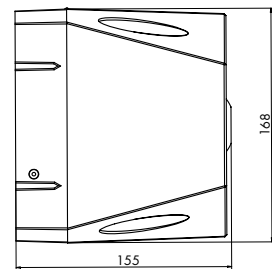
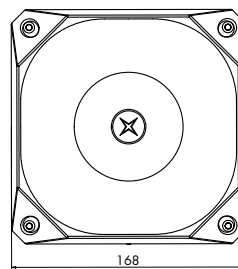


LIGHT & SOUND | ASSERTA 230V | Industry sounder 230 VAC

The Asserta sounder has been specifically developed for use in industrial facilities with loud ambient noise levels. All models offer 42 different universally adjustable alarm tones. Rated to IP 66 Asserta sounders are suitable for a broad range of application solutions in harsh environmental conditions.

Your benefits:

- | High sound volumes
- | IP 66 protection class rating
- | 42 selectable alarm tones
- | Easy to install
- | Highly efficient
- | Three-tone alarm
- | Combination with suitable beacon possible



SPECIFICATIONS

Technical data	Asserta Range 230V AC			
Type	Siren	Siren	Siren & beacon	Siren & beacon
Model	Sounder AS/110	Sounder AS/120	Sounder & Beacon AS/110/B	Sounder & Beacon AS/120/B
Display	Acoustic	Acoustic	Optical / acoustic	Optical / acoustic
Voltage range	110/230 VAC	110/230 VAC	230 VAC	230 VAC
Sound volume	110 dB(A) at 1m	120 dB(A) at 1m	110 dB(A) at 1m	120 dB(A) at 1m
Current consumption	35 mA at 230 VAC	70mA at 230 VAC	50mA	105mA
Alarm tones	42	42	42	42
Flash power	-	-	2.0J	2.0J
Flash rate	-	-	2Hz	2Hz
Degree of protection	IP 66	IP 66	IP 66	IP 66
Housing material	ABS	ABS	ABS	ABS
Lens material	-	-	Polycarbonate	Polycarbonate
Operating temperature	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C
Dimensions	168 x 168 x 155mm	168 x 168 x 155mm	168 x 168 x 155mm 137 x 101 x 83.6mm	168 x 168 x 155mm 137 x 101 x 83.6mm
Weight	2000g	2000g	2500g	2500g
Housing colours	Red or grey	Red or grey	Red or grey	Red or grey
Lens colour	-	-	Red, yellow or clear	Red, yellow or clear
Scope of delivery	1x operating instructions	1x operating instructions	1x operating instructions	1x operating instructions

120
dB

2
YEAR
WARRANTY

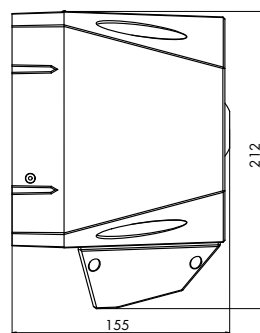
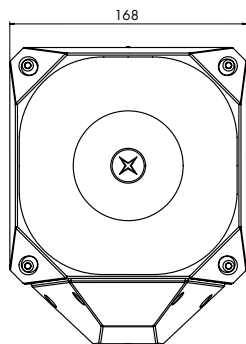


LIGHT & SOUND | ASSERTA 24V | Industry sounder 24V DC

The Asserta sounder has been specifically developed for use in industrial facilities with loud ambient noise levels. All models offer 42 different universally adjustable alarm tones. Rated to IP 66 Asserta sounders are suitable for a broad range of application solutions in harsh environmental conditions.

Your benefits:

- | High sound volumes
- | IP 66 protection class rating
- | 42 selectable alarm tones
- | Easy to install
- | Highly efficient
- | Three-tone alarm
- | Combination with suitable beacon possible



SPECIFICATIONS

Technical data	Asserta Range 24V AC			
Type	Siren	Siren	Siren & beacon	Siren & beacon
Model	Sounder AS/110	Sounder AS/120	Sounder & Beacon AS/110/B	Sounder & Beacon AS/120/B
Display	Acoustic	Acoustic	Optical / acoustic	Optical / acoustic
Voltage range	18-30 VDC	18-30 VDC	18-30 VDC	18-30 VDC
Sound volume	110 dB(A) at 1m	120 dB(A) at 1m	110 dB(A) at 1m	120 dB(A) at 1m
Current consumption	120mA	450mA	320mA	450mA
Alarm tones	42	42	42	42
Flash power	-	-	3.6J / 2.0J	3.6 J / 2.0 J
Flash rate	-	-	0.75 / 1 / 1.25 / 2Hz	0.75 / 1 / 1.25 / 2Hz
Degree of protection	IP 66	IP 66	IP 66	IP 66
Housing material	ABS	ABS	ABS	ABS
Lens material	-	-	Polycarbonate	Polycarbonate
Operating temperature	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C
Dimensions	168 x 168 x 155mm	168 x 168 x 155mm	168 x 168 x 155mm 137 x 101 x 83.6mm	168 x 168 x 155mm 137 x 101 x 83.6mm
Weight	1600g	1600g	1800g	1800g
Housing colours	Red or grey	Red or grey	Red or grey	Red or grey
Lens colour	-	-	Red, yellow or clear	Red, yellow or clear
Scope of delivery	1x operating instructions	1x operating instructions	1x operating instructions	1x operating instructions

2
YEAR
WARRANTY

120
dB

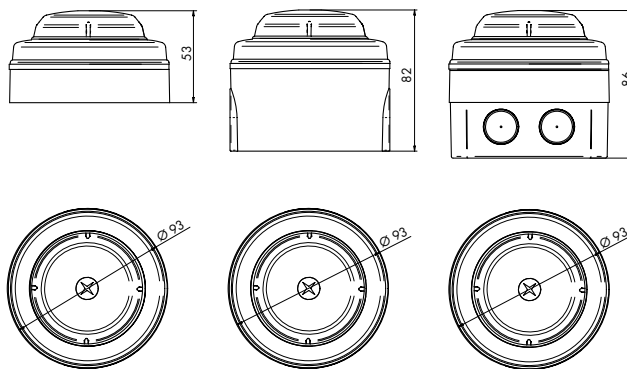


LIGHT & SOUND | SOLISTA | LED beacon / siren

LED beacons are an essential component completing fire alarm and generic alarm technology solutions in particular in environments where the acoustic awareness of sirens is impaired by high levels of ambient noise. The use of LED technology ensures the Solista requires very little power. It can be combined with ROLP sirens, Clarifire and Squashni.

Your benefits:

- | Low power consumption
- | Highly reliable
- | Single device or as flashing and sound combination
- | Compact size
- | Suitable for S, D and U-bases



SPECIFICATIONS

Technical data	Solista			
Type	Solista Beacon	ROLP Solista	Clarifire Solista	Solista SQM
Model	(stand-alone)	(with Roshni LP)	(with Clarifire)	(with Squashni Micro)
Display	Optical	Optical/acoustic	Optical/acoustic	Optical/acoustic
Voltage range	9-28 VDC	9-28 VDC	18-28 VDC	9-30 VDC
Current consumption	3mA-6mA	20mA	23mA	3mA-6mA
Flash rate	0.5Hz-1Hz	1Hz	1Hz	0.5Hz-1Hz
Flash intensity	>0.5Cd at 3mA >1.0Cd at 6mA	> 0.5Cd	> 0.5Cd	>0.5Cd at 3mA > 1.0Cd at 6mA
Degree of protection	S-base IP 54; D-/U-base IP 65	S-base IP 54; D-/U-base IP 65	S-base IP 54; D-/U-base IP 65	IP 42
Housing material	ABS	ABS	ABS	ABS
Lens material	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Operating temperature	-10°C to +55°C	-10°C to +55°C	-10°C to +55°C	-10°C to +55°C
Dimensions	Ø 93 x 53mm S-base Ø 93 x 83mm D-/U-base	Ø 93 x 78mm S-base Ø 93 x 108mm D-/U-base	Ø 95 x 98mm S-base Ø 93 x 128mm D-/U-base	Ø 102 x 57.7mm -
Weight	100g	300g	300g	260g
Housing colours	Red or white	Red or white	Red or white	Red or white
Lens colour	Red	Red	Red	Red
Scope of delivery	1x operating instructions	1x operating instructions	1x operating instructions	1x operating instructions



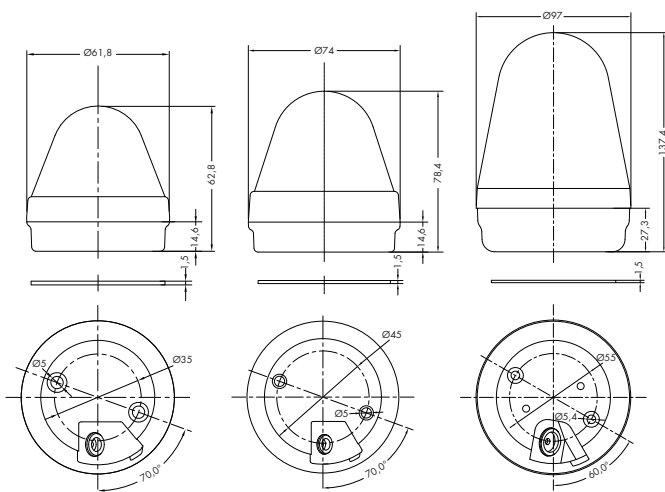


LIGHT & SOUND | COMPRO BL50, BL70, BL90 | Beacons

The beacons BL50, BL70 and BL90 are designed for use in different fields of applications. A common distinguishing factor that all models share is their extremely low power requirements in fire alarm technology. In industrial environments these beacons are utilised, for example, to draw attention to or warn against given operating statuses.

Your benefits:

- | Robust construction
- | IP 65 protection class rating
- | Easy to install
- | Highly efficient
- | LED beacon
- | Suitable for a wide variety of solutions: continuous light, flashing light (other settings available on request)
- | Base or wall mounting options



SPECIFICATIONS

Technical data	Compro BL50	Compro BL70	Compro BL90
Voltage range	24 VDC	24 VDC	24 VDC
Operating options	Continuous light, flashing light	Continuous light, flashing light	Continuous light, flashing light
Degree of protection	IP 65	IP 65	IP 65
Housing material	PC	PC	PC
Operating temperature	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C
Dimensions	Ø 61.8 x 62.8mm	Ø 74 x 78.4mm	Ø 97 x 137.4mm
Weight	68g	108g	254g
Housing colour	Black	Black	Black
Lens colour	Red, yellow, green, blue, clear	Red, yellow, green, blue, clear	Red, yellow, green, blue, clear
Scope of delivery	1x operating instructions	1x operating instructions	1x operating instructions
Dimensions - accessories	Mounting bracket for BL50 Ø 54 x 30mm	Mounting bracket for BL70 Ø 65 x 38mm	Mounting bracket for BL90 Ø 65 x 38mm



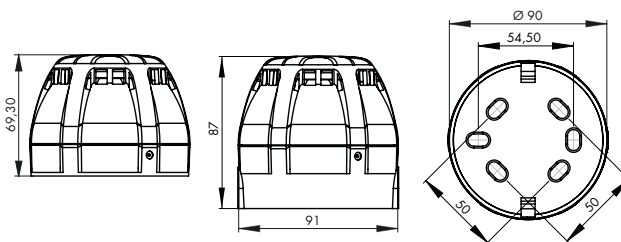


LIGHT & SOUND | CHIASSO | Electronic siren

Featuring 39 selectable warning tones including a DIN tone for fire alarm and safety technology the CHIASSO warning siren fulfils the demands of a wide variety of application requirements. The robust design, long service life and proven reliability ensure this siren can be utilised in all sectors including industrial applications. Characteristics particularly worthy of mention are low power consumption in conjunction with optimum efficiency and automatic synchronisation.

Your benefits:

- | Very good sound output
- | Low power consumption
- | Exclusive design
- | 39 selectable tones
- | Automatic synchronisation
- | Two-tone alarm
- | Sound volume control
- | Suitable for a wide variety of solutions
- | VdS approval pending



SPECIFICATIONS

Technical data	Chiasso
Features	S- or D-base
Display	Acoustic
Voltage range	9-28 VDC
Sound volume	60-120 dB(A) / 97 dB(A) for DIN tone
Alarm tones	39
Degree of protection	S-base IP 54; D-base IP 65
Current consumption	9-35mA / max. 30mA for DIN tone
Housing material	ABS FR
Operating temperature	-20°C to +70°C
Approvals	VdS (pending)
Dimensions	Ø 91 x 69.30mm S-base Ø 91 x 87mm D-base
Weight	212g S-base; 244g D-base
Colour	Red or white
Scope of delivery	1x operating instructions

* Encapsulated version optional

** Ex product also available

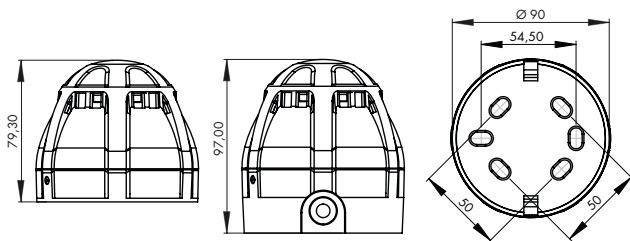


LIGHT & SOUND | CHIASSO RAZOR | Combi siren

The combination siren CHIASSO RAZOR consists of a siren and an integrated LED beacon. Rated to IP 65 Chiasso Razor sirens are suitable for a broad range of applications. As well as in industrial applications they are suitable for use in fire and burglar alarm technology.

Your benefits:

- | Very good sound output
- | Low power consumption
- | Exclusive design
- | 39 selectable tones
- | Automatic synchronisation
- | Two-tone alarm
- | Sound volume control
- | Suitable for a wide variety of solutions
- | LED technology
- | VdS approval pending



SPECIFICATIONS

Technical data	Chiasso Razor
Features	S- or D-base
Display	Optical / acoustic
Voltage range	9-28 VDC
Sound volume	67-100 dB(A) / 97 dB(A) for DIN tone
Alarm tones	39
Degree of protection	S-base IP 54; D-base: IP 65
Current consumption	max. 40mA / 40mA for DIN tone
Housing material	Housing: ABS FR; lens: PC
Operating temperature	-25°C to +70°C
Approvals	VdS (pending)
Dimensions	Ø 90 x 79.30mm S-base Ø 90 x 97mm D-base
Weight	230g S-base; 260g D-base
Housing colour	Red or white
Lens colour	Red, yellow, green, blue, clear
Scope of delivery	1x operating instructions



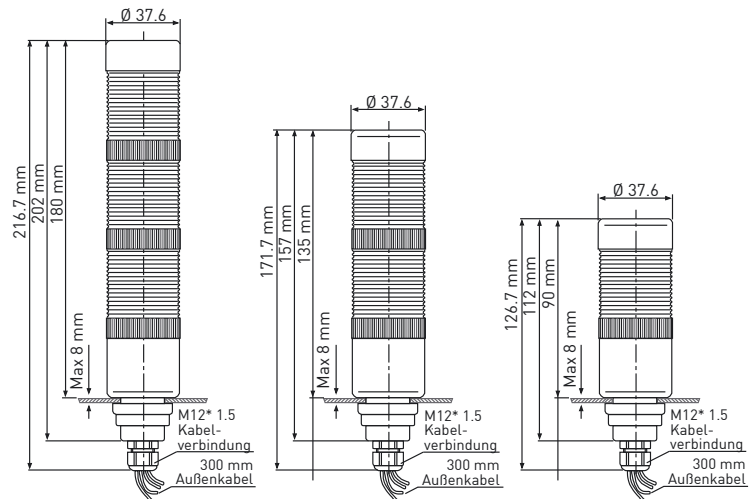


LIGHT & SOUND | COMPRO ST 36K | Signal pillar

Developed for use in industrial environments the LED signal pillar ST 36K provides an optical signal to draw attention to a given operating status. Pre-assembled with either one or as many as three elements including an integrated cable the ST 36K has been designed for quick and easy installation. This solution can also be supplemented with an optional acoustic warning signal.

Your benefits:

- | Suitable for a wide variety of solutions
- | Different combination options
- | Impact resistant housing
- | Siren option to add auxiliary siren
- | LED signal pillar
- | Very easy to install



SPECIFICATIONS

Technical data	Compro ST 36K (24 VDC)	Compro ST 36K (230 VAC)
Voltage range	24 VDC	230 VAC
Operating options	Continuous light, flashing light	Continuous light, flashing light
Degree of protection	IP 65	IP 65
Housing material	PC	PC
Operating temperature	-25°C to +70°C	-25°C to +70°C
Dimensions	Ø 37.6 x 90mm 1 element Ø 37.6 x 135mm 2 elements Ø 37.6 x 180mm 3 elements	Ø 37.6 x 90mm 1 element Ø 37.6 x 135mm 2 elements Ø 37.6 x 180mm 3 elements
Weight	64g 1 element 94g 2 elements 116g 3 elements	64g 1 element 94g 2 elements 116g 3 elements
Housing colour	Black	Black
Lens colour	Red, yellow, green	Red, yellow, green
Scope of delivery	1x operating instructions	1x operating instructions

2
YEAR
WARRANTY

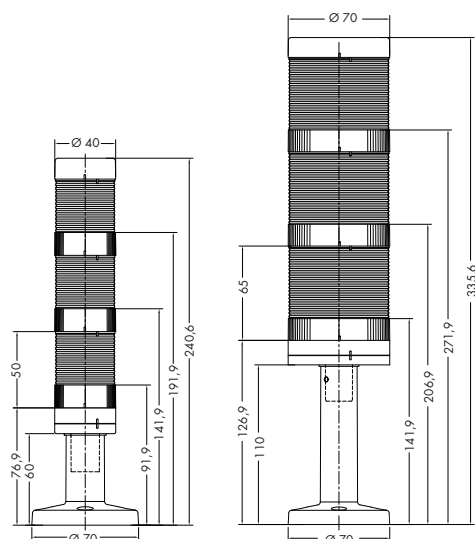


LIGHT & SOUND | **COMPRO ST 40, ST 70** | Signal pillar

Developed for use in industrial environments the LED signal pillars ST 40 and ST 70 provide an optical signal to draw attention to a given operating status. Signal pillars consisting of one or several elements provide a versatile approach to a wide variety of solutions. Continuous or flashing light solutions can be selected with other variations available on request.

Your benefits:

- | Suitable for a wide variety of solutions
- | Different combination options
- | Impact resistant housing
- | Siren option to add auxiliary siren
- | LED signal pillar
- | Very easy to install



SPECIFICATIONS

Technical data	Compro ST 40 (24 VDC)	Compro ST 70 (24 VDC)
Voltage range	24 VDC	24 VDC
Operating options	Continuous light, flashing light	Continuous light, flashing light
Degree of protection	IP 65	IP 65
Housing material	PC	PC
Operating temperature	-25°C to +70°C	-25°C to +70°C
Dimensions	Ø 40 x 141.9mm 1 element Ø 40 x 191.9mm 2 elements Ø 40 x 240.6mm 3 elements	Ø 70 x 206.9mm 1 element Ø 70 x 271.9mm 2 elements Ø 70 x 335.6mm 3 elements
Weight	42g 1 element 84g 2 elements 126g 3 elements	96g 1 element 192g 2 elements 288g 3 elements
Housing colour	Black	Black
Lens colour	Red, yellow, green, blue, clear	Red, yellow, green, blue, clear
Scope of delivery	1x operating instructions	1x operating instructions



CONTACT I

- Quotation request (please tick favoured instruments)
 Contract (please enter the number of instruments in the box)
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Voltage Testers:

- Testboy 10
 Testboy 11
 Testboy 110
 Testboy 111
 Testboy 113
 Testboy Profi LED *Plus*
 Testboy Profi LCD *Plus*
 Testboy 40 *Plus*

Magnetic Field Tester:

- Testboy 15
 Testboy 130

Continuity Tester:

- Testboy 20

Multimeters:

- Testboy 2200
 Testboy 3000
 Testboy Pocket

Current Clamps:

- Testboy TV 215N
 Testboy TV 216N
 Testboy TV 218

Socket Outlet Tester:

- Testavit Schuki 1
 Testavit Schuki 2
 Testavit Schuki 2K
 Testavit Schuki 3

We are:

- Wholesalers Resellers End users

Car Electronics:

- Testboy 50
 Testboy 70
 Testboy 72
 Testboy 75
 Testboy Car Tester
 Testboy Light 500

Installation Testers / Adaptors:

- Testboy 26
 Testboy TV 416
 Testboy TV 432
 Testboy TV 416A
 Testboy TV 432A
 Testboy TV 410N
 Testboy TV 430N
 Testboy TV 440N
 Testboy TV 450
 Testboy TV 460
 Testboy TV 470

Thermo, Luxmeters and Humidity testers:

- Testboy TV 321
 Testboy TV 322
 Testboy TV 325
 Testboy TV 331
 Testboy TV 332

Thermal imaging:

- Testboy TV 290 Basic
 Testboy TV 290 Control
 Testboy TV 301
 Testboy TV 302
 Testboy TV 303
 Testboy TV 304
 Testboy TV 305
 Testboy TV 306
 Testboy TV 500 FireChief

Light & Sound:

- PSW.90XXX
 Askari
 Flashni
 Squashni
 Roshni
 Symphoni
 Solex
 Symphoni Voice Plus
 Asserta 230V
 Asserta 24V
 Solista
 Compro BL50
 Compro BL70
 Compro BL90
 Chiasso
 Chiasso Razor
 Compro ST 36k
 Compro ST 40
 Compro ST 70
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