

OCCUPATIONAL SAFETY, ENVIRONMENT

Industry | Laboratory | Quality Assurance



SAUTER Pictograms

 Adjusting program (CAL) For quick setting of the instrument's accuracy. External adjusting weight required	 Data interface USB To connect the measuring instrument to a printer, PC or other peripheral devices	 KERN Communication Protocol (KCP) It is a standardized interface command set for KERN balances and other instruments, which allows retrieving and controlling all relevant parameters and functions of the device. KERN devices featuring KCP are thus easily integrated with computers, industrial controllers and other digital systems	 Motorised drive The mechanical movement is carried out by an electric motor
 Calibration block Standard for adjusting or correcting the measuring device	 Bluetooth* data interface To transfer data from the balance/measuring instrument to a printer, PC or other peripherals		 Motorised drive The mechanical movement is carried out by a synchronous motor (stepper)
 Peak hold function Capturing a peak value within a measuring process	 WIFI data interface To transfer data from the balance/measuring instrument to a printer, PC or other peripherals	 GLP/ISO record keeping of measurement data with date, time and serial number. Only with SAUTER printers	 Fast-Move The total length of travel can be covered by a single lever movement
 Scan mode Continuous capture and display of measurements	 Data interface infrared To transfer data from the measuring instrument to a printer, PC or other peripheral devices	 Measuring units Weighing units can be switched to e.g. non-metric. Please refer to website for more details	 Conformity assessment Models with type approval for construction of verifiable systems
 Push and Pull The measuring device can capture tension and compression forces	 Control outputs (optocoupler, digital I/O) To connect relays, signal lamps, valves, etc.	 Measuring with tolerance range (limit-setting function) Upper and lower limiting can be programmed individually. The process is supported by an audible or visual signal, see the relevant model	 DAKkS calibration possible The time required for DAKkS calibration is shown in days in the pictogram
 Length measurement Captures the geometric dimensions of a test object or the movement during a test process	 Analogue interface To connect a suitable peripheral device for analogue processing of the measurements	 Protection against dust and water splashes IPxx The type of protection is shown in the pictogram cf. DIN EN 60529:2000-09, IEC 60529:1989 +A1:1999+A2:2013	 Factory calibration (ISO) The time required for factory calibration is specified in the pictogram
 Focus function Increases the measuring accuracy of a device within a defined measuring range	 Analogue output For output of an electrical signal depending on the load (e.g. voltage 0 V – 10 V or current 4 mA – 20 mA)	 Battery operation Ready for battery operation. The battery type is specified for each device.	 Package shipment The time required for internal shipping preparations is shown in days in the pictogram
 Internal memory To save measurements in the device memory	 Statistics Using the saved values, the device calculates statistical data, such as average value, standard deviation etc.	 ZERO Resets the display to “0”	 Pallet shipment The time required for internal shipping preparations is shown in days in the pictogram
 Data interface RS-232 Bidirectional, for connection of printer and PC	 PC Software To transfer the measurement data from the device to a PC	 Rechargeable battery pack Rechargeable set	
 Profibus For transmitting data, e.g. between scales, measuring cells, controllers and peripheral devices over long distances. Suitable for safe, fast, fault-tolerant data transmission. Less susceptible to magnetic interference	 Printer A printer can be connected to the device to print out the measurement data	 Integrated power supply unit Integrated, 230V/50Hz in EU. More standards e.g. GB, AUS or US on request	
 Profinet Enables efficient data exchange between decentralised peripheral devices (balances, measuring cells, measuring instruments etc.) and a control unit (controller). Especially advantageous when exchanging complex measured values, device, diagnostic and process information. Savings potential through shorter commissioning times and device integration possible	 Network interface For connecting the scale/measuring instrument to an Ethernet network		

*The *Bluetooth®* word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by KERN & SOHN GmbH is under license. Other trademarks and trade names are those of their respective owners.

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A

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SAUTER Hotlines



Technical questions about our products?

You will find assistance here quickly: +49 7433 9933- ...

Service Hotline

for general technical questions about your SAUTER product

→ 199

SAUTER Measuring Instruments

for all technical questions concerning our SAUTER measuring instruments, test benches, force measuring accessories (clamps etc.), SAUTER software

→ 555

Industrial Scales

for all technical questions concerning our basic scales (laboratory & industry), pocket balances, school balances, bench scales, price-computing scales, platform scales, counting scales, counting systems, floor scales, pallet truck scales, crane scales, veterinary scales

→ 333

System Solutions Industry 4.0

for all technical questions concerning the interlocking of the latest information and communication technology with our scales, load cells and measuring devices as well as questions about KERN software


→ 200

BASIC
★



Photometer for precise light measurement up to 200,000 Lux

Features

- Helps to determine if workplace lighting meets standard requirements, e.g. DIN EN 12464-1 “Lighting of workplaces indoors”
- Photo sensor: silicon diode
- Cosine correction for angular incident light
- Track function for continuous recording of changing environmental conditions
- Peak Hold function to capture peak value
- Selectable measuring units: fc (foot-candle), lux
- Sturdy protective cover for the photo sensor
- Increased service life: Impact protection by means of a protective casing
-  Delivery in a robust box

Technical data

- Measuring frequency: 2 Hz
- Cable length (Photo sensor) approx. 1 m
- Battery operation, batteries standard (9 V block), AUTO-OFF function to preserve the battery
- Overall dimensions W×D×H 160×72×40 mm
- Net weight approx. 0,25 kg

9

STANDARD



OPTION



Model	Measuring range	Readout	Price excl. of VAT ex works €	Option	
				Factory calibration certificate	
	[Max] lx	[d] lx		KERN	€
SAUTER SO 200K	200	0,1	84,-	961-190	325,-
	2000	1			
	20000	10			
	200000	100			



BASIC
★



Compact photometer, optimised for accurate light measurement, including LED light measurement

9

Features

- For measuring illumination of office workstations, production workstations, etc.
- Photo sensor: silicon diode, filtered
- Cosine correction for angular incident light
- Data-hold function, to freeze the current measurement
- 1 Rotatable sensor unit (+90 and -180°) for optimum alignment to the light source
- Track function for continuous recording of changing environmental conditions
- By pressing the key, the current measured value can be frozen until the key is pressed again
- Selectable measuring units: fc (foot-candle), lux
- Easy to toggle between units at the press of a button
- Option of fitting a stand on the rear of the housing, 1/4" thread
- Sturdy protective cover for the photo sensor
- 2 Increased service life: Impact protection through delivery in a soft box with light protection

Technical data

- Measurement precision up to 20.000 Lux: ± 4 % of the result + 10 scale intervals
- Measurement precision from 20.000 Lux: ± 5 % of the result + 10 scale intervals
- Repeatability: ± 2 % of [Max]
- Temperature error: ± 0,1 % von [Max]/°C
- Measuring frequency: 2 Hz
- Ready for use: Batteries included, 9 V block, operating time up to 200 h
- Overall dimensions W×D×H 185×68×38 mm
- Net weight approx. 0,15 kg

STANDARD



BATT



1 DAY

OPTION



ISO
±10 DAYS

Model	Measuring range	Readout	Price excl. of VAT ex works €	Option	
				Factory calibration certificate	
SAUTER SP 200K	[Max] lx	[d] lx		KERN	€
	200	0,1			
	2000	1	105,-	961-190	325,-
	20000	10			
	200000	100			

BASIC
★



Versatile sound level meter

Features

- Sound level meter with basic functions for measuring noise in areas such as, environment, mechanical applications, car industry and much more
- Measures the sound intensity in the workplace
- Helps in differentiating between normal noise influences, and excessive noise, nuisances e.g. in a production hall
- 1 Data interface RS-232, included
- Multi measuring functions:
 - Lp: Standard sound level measuring function
 - Leq: Energy equivalent sound level measuring mode (type A)
 - Ln: Shows the deviation from a pre-defined limit in %

- Selectable methods of evaluation:
 - A: As sensitive as the human ear
 - C: Sensitive for noisier environmental conditions, where there are machines, plant, motors etc.
 - F: For areas with constant sound intensity
- Limit value function: programmable value for the maximum level value
- Track function for continuous recording of changing environmental conditions
- Peak Hold function to capture peak value
- Internal memory for 30 measured values, transferable to PC with SAUTER ATC-01
- 2 Delivered in a robust carrying case

Technical data

- Measuring precision: 3 % of [Max]
- Battery operation, batteries standard (4×1.5 V AAA)
- Overall dimensions W×D×H 223×62×25 mm
- Net weight approx. 0,20 kg

Accessories

- Data transfer software, interface cable included, SAUTER ATC-01, € 100,-
- Adjustment device for regular adjustment of the sound level meter, SAUTER ASU-01, € 290,-
- Foam protective cover, SAUTER ASU-02, € 8,-

STANDARD

PEAK

MEMORY

RS 232

TOL

BATT

1 DAY

OPTION

SOFTWARE

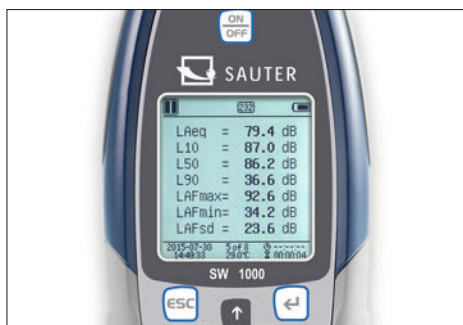
ISO +10 DAYS

Model	Type	Measuring range	Readout	Price excl. of VAT ex works €	Option	
					Factory Calibration Certificate	
SAUTER SU 130	Lp A	[Min]-[Max] dB	[d] dB	120,-	KERN 961-281	€ 240,-
	Leq C					
	Ln F					



9

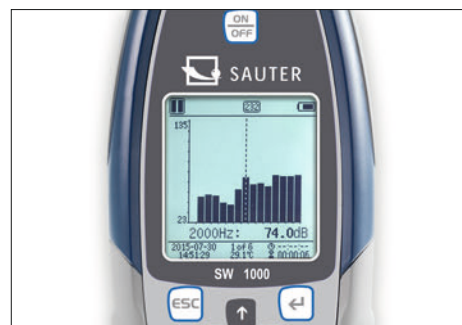
First-class professional Class I, Class II sound level meter



Data logging function with date and time in the device...



... and data transfer using MicroSD (4G) memory card (included in delivery), RS-232 or USB



Different sound pressure levels can be selected, such as, LAeq, LcPeak, LaF, LaFMax, LaFMin, SD, SEL, E



Features

- Ideal for measurements for workplaces outdoor, e.g. at airports, on building sites, in road traffic etc. with wide frequency access
- Modern microcontroller architecture for increased stability and accuracy
- A specially-developed algorithm permits a compliant dynamic range of more than 120 dB! (SW 1000: > 123 dB; SW 2000: > 122 dB)
- Three profiles and 14 user-defined measurements can be calculated in parallel with different frequency and time weighting
- LN statistics and display of the graph showing the progression of time
- User-defined integral interval measurement up to a maximum of 24 hours is possible
- Frequency weighting (filter) A, B, C, Z
- Time interval during measurement: F (fast), S (slow), I (pulse)
- Freely-definable limits for the output of an optical alarm signal
- Peak Hold function to capture peak value
- Octave function for targeted sound analysis, can be expanded to 1/3 octave through the purchase of a licence
- TRACK function with graphic display of a measurement
- Calibration mode (with optional calibrator)
- Trigger mode: external start/stop of measurement via 3,5 mm connector
- Automatic measurement for timer function is possible
- Operating languages: EN, DE, FR, ES, PT
- **2** Option of fitting a stand on the rear of the housing, 1/4" thread
- **1** Delivery in robust transport case

Technical data

- Applicable standards:
 - IEC61672-1:2014-07
 - GB/T3785.1-2010
 - 1/1 Octave in accordance with IEC 61260:2014
- 1/2" microphone
- Output (direct or alternating current) AC (max 5 VRMS), DC (10 mV/DB)
- Mains adapter external, standard
- Battery operation possible, 4×1.5 V AA not included, operating time up to 10 h
- Permissible ambient temperature -10 °C/50 °C
- Overall dimensions W×D×H 200×85×40 mm
- Net weight approx. 0,40 kg

Accessories

- Plug-In for data transfer of measuring data from the measuring instrument and transfer to a PC, e.g. in Microsoft Excel®, SAUTER AFI-2.0, see *internet*
- **2** Stand, W×D×H 430×90×90 mm, SAUTER SW-A05, **€ 70,-**
- SD-memory card, storage capacity 4 GB, SAUTER SW-A04, **€ 54,-**
- Foam protective cover, SAUTER SW-A03, **€ 47,-**
- **3** Calibrator for regular adjustment of the sound level meter, class 1, as well as testing the linearity of sound level meters
 - Applicable standards: IEC60942:2003 Class 1, ANSI S1.40-1984, GB/T 15173-1994.
 - Output frequency 1 kHz (+/- 0,5 %)
 - Output of acoustic pressure, can be selected at 94 dB or 114 dB (± 0.3 dB)
 - Distortion factor < 2 %
 - Stabilisation time < 10 s
 - Permissible ambient temperature range -10 °C/50 °C
 - The calibrator is designed for 1/2" as well as 1/4" microphones (adapter included in the delivery) in accordance with the IEC 61094-4 standard
 - Battery operation, 2× 1.5 V AA, not standard, operating time up to 40 hours
 - Dimensions W×D×H 70×70×48 mm
 - Net weight approx. 137 g, SAUTER BSWA-01, **€ 800,-**
- Factory calibration certificate, for calibrator, SAUTER 961-291, **€ 300,-**
- DAkkS calibration certificate, for calibrator, SAUTER 963-291, **€ 270,-**
- Expansion of the octave band to 1/3 octave, SAUTER SW-A10, **€ 440,-**

STANDARD



OPTION



Model	Accuracy class	Measuring range linear [Min]-[Max] dB	Readout [d] dB	Frequency range [Min]-[Max] kHz	Sensitivity mv/Pa	Price excl. of VAT ex works €	Option	
							Factory Calibration Certificate	
SAUTER							KERN	€
SW 1000	Class 1	20 – 134	0,1	0,01 – 20	50	2250,-	961-281	240,-
SW 2000	Class 2	25 – 136	0,1	0,02 – 12,5	40	1110,-	961-281	240,-



Infrared thermometer for industry, environmental engineering and maintenance work

9 Features

- 1 Determines the temperature of surfaces precisely
- Light EBTN colour display for optimum readability under the most varied environmental conditions
- MAX/MIN/AVG/DIF value memory to store the highest, lowest and average measured temperatures in a defined period of time as well as the difference between the highest and lowest value
- Limit-alarm function with memory for five temperatures or emission values respectively, which trigger an audible and visual signal (three-colour LED) when the value goes below or above these values
- 2 Main application areas: Temperature measurement in industry (e.g. metal processing, machine construction), environmental engineering, agriculture, laboratory and maintenance work (e.g. wind turbines)

SAUTER JIT 100

- Laser (Class 2 < 1 mW) to mark the measurement point
- Locked measurement for processes where the temperature needs to be monitored, i.e. the measured values are locked and protected from external influences
- With mounting hole for column mount

SAUTER JIT 200

- Double laser for even better positioning
- Hold function for measurements
- Time-based measurement is possible
- Internal data memory for up to 99 measurements with date and time
- With mounting thread for column mount

Technical data

- Laser class 2
- Tolerance range: +/- 1,5 °C or +/- 1,5 %
- Battery operation, 9 V block standard, operating time up to 9 h

STANDARD

PEAK
JIT 200

MEMORY
JIT 200

STATISTIC
JIT 200

UNIT
JIT 200

TOL

BATT

1 DAY

Model	Measuring range	D:S Optic	Overall dimensions W×D×H	Net weight approx.	Price excl. of VAT ex works €
SAUTER	°C		mm	kg	
JIT 100	-32 – 420	12:1	162×90×48	0,25	99,-
JIT 200	-32 – 1100	20:1	179×127×53	0,35	160,-

The oldest Precision Balance Factory in Germany

SAUTER GmbH

c/o KERN & SOHN GmbH

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- Operating Instructions
- Descriptive Image and Video Material
- Useful KERN Services
- Technical Glossary
- KERN Dealer Portal
- Practical Filter and Search Functions



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CONFORMITY
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