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Instruction Manual
Digital Lightmeter

SAUTER SO 200K

Version 1.2
12/2014
GB

PROFESSIONAL MEASURING

SO_200K-BA-e1412

GB

SAUTER TN-EE

Version 1.2 12/2014

Instruction Manual

Digital Lightmeter

The purchase of this SAUTER Digital Lightmeter marks a step forward into the field of measurement precision. Although this instrument is a complex and delicate instrument, its ruggedness will allow many years of use. Please read the following instructions carefully and always keep this manual within easy reach.
We hope you are pleased with your high quality Light Meter. If you have any queries, wishes or helpful suggestions, do not hesitate to call our service number.

Summarize:

1. Instruction

This digital light meter is a precision instrument used to measure illuminance in the field. It is totally cosine corrected for the angular incidence of light.
The light meter is compact, tough and easy to handle due to its construction. The light sensitive component used in the meter is a very stable, long life silicone diode.

2. Features

* Light-measuring levels ranging from 0.1Lux to 200,000 Lux,
  0.01 FC to 20,000 FC repeatedly
* High accuracy and rapid response
* Peak-Hold function for holding measuring values
* Unit and sign display for easy reading
* Automatic zeroing
* Meter corrected for Luminous Efficiency function
* The Correction factor doesn't have to be manually calculated for non-standard light sources
* Short rise and fall times

3. Specifications

Display: 3 ½ digit LCD

Measuring range: 200; 2,000; 20,000; 200,000 Lux
(20,000 Lux range reading x 10, 200,000 Lux range reading x 100)
20; 200; 2,000; 20,000 FC (20,000 FC range reading x 10)
1 FC= 10.76 Lux

Over range display: Highest digit of "1" is displayed

Accuracy: ±3% rdg ± 0.5% f.s (± 5% rdg ± 10 dgt as > 20,000 Lux / 2,000 FC range).
Calibrated to standard incandescent lamp at colour temperature 2856K

Repeatability: ± 2%

Temperature Characteristics: ± 1%/°C

Measuring Rate: approximately 2.0 times/sec.

Photo detector: one silicone photo diode with filter

Operating Temperature: 0°C to 40°C (32°F to 104°F)

Operating Humidity: 0 to 70 RH

Storage Temperature: -10°C to 50°C (14°F to 122°F)
Storage Temperature: 0 to 80% RH

Power Source: One 9V battery, 6F22
Battery life (typically): 200h, alkaline battery

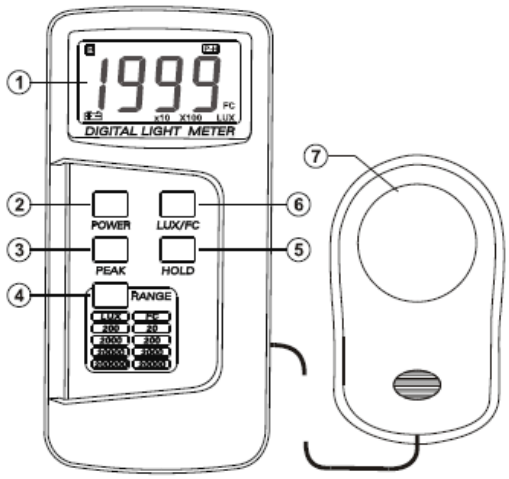
Dimensions: 148mm x 70mm x 40mm

Photo detector lead length: 1500mm (approx.)
Photo detector dimensions: 100mm x 60mm x 28mm

Weight: approx. 250g (5.8 oz)

Accessories: Carrying case, instruction manual, battery

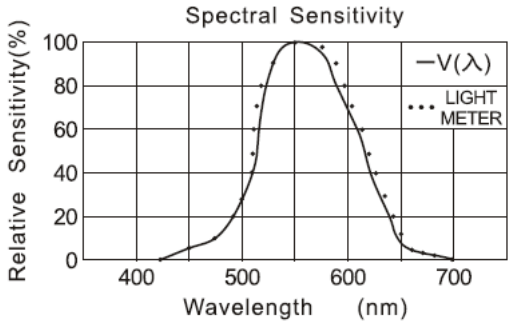
4. Name of parts and positions



1. LCD Display: 3 ½ digits with a maximum reading of 1999.
2. Power key: the power key turns the light meter ON or OFF.
3. Data-Peak button: the PEAK key has to be pressed again to clear the peak recording mode.
4. Range button: the range button has to be pressed to change the ranges of 200Lux/20FC; 2,000Lux/200FC; 20,000Lux/2,000FC; 200,000Lux/ 20,000FC circularly.
5. Data-Hold button: If the HOLD key is pressed, the HOLD mode is selected. When this mode is being selected, the light meter will stop all further measurements.
If the HOLD button is pressed again, this operation will be cancelled and the light meter will be ready to take measurements.
6. Lux/FC Unit button: This key has to be pressed to choose the Lux or FC unit.
7. Photo detector

5. Spectral sensitivity characteristics

Concerning the detector, the applied photo diode with filters makes the spectral sensitivity characteristic almost meeting the standard C.I.E. (International Commission on Illumination) photopic curve V (λ) as described in the following chart below



6. Operation instructions

1. Power-key: The power key has to be pressed to turn the light meter ON or OFF.
2. Selection of the Lux/FC scale: The range selection switch has to be set to the desired Lux/FC range.
3. The photo detector cap has to be removed and it has to be faced to the light source in a horizontal position.
4. The illuminance nominal has to be read from the LCD display.
5. Over range: If the instrument only displays one “1” in the M.S.D., the input signal has been too strong and a higher range should be selected.
6. Data-HOLD mode: The HOLD key has to be pressed to select the HOLD mode, the light meter will stop all further measurements.
If the HOLD button is pressed again, this operation will be cancelled and the light meter will return to normal operation.
7. Data-PEAK mode: The PEAK key has to be pressed to select the PEAK mode. If this item is selected, the light meter stops all further measurements. If the PEAK key is pressed again, P-H mode is being cancelled and it returns to normal operation.
8. When the measurement is completed, the photo detector cap has to be clipped on again and the power key has to be turned off.

7. Battery check and replacement

1. As the battery power is not sufficient, the LCD will display the symbol "🔋" and replacement of a new battery type 9V is required.
2. Therefore, the instrument has to be powered off. Then the battery cover has to be pressed and pushed (at the same time) in the direction of the arrow shows to open.
3. The battery has to be disconnected from the instrument and replaced with a standard 9V transistor battery.
4. The battery cover has to be snapped on again.

8. Maintenance

1. The white plastic disc on the top of the detector should be cleaned with a damp cloth from time to time and if necessary.
2. The instrument may not be stored when temperature or humidity is excessively high.
4. The calibration interval for the photo detector will vary according to operational conditions, but generally the sensitivity decreases in direct proportion to the product of luminous intensity by the operational time.
In order to maintain the basic accuracy of the instrument, a periodical calibration is recommended.

9. Recommended illumination

Locations	Lux
OFFICE	
Conference, Reception room	200~750
Clerical work	700 ~ 1,500
Typing drafting	1,000 ~ 2,000
SCHOOL	
Auditorium, Indoor Gymnasium	100~300
Class room	200~750
Laboratory Library Drafting room	500~1,500
HOSPITAL	
Sickroom, Warehouse	100~200
Medical Examination room	300~750
Operating room	750~1,500
Emergency Treatment	750~1,500
FACTORY	
Packing work, Entrance passage	150~300
Visual work at production line	300~750
Inspection work	750~1,500
Electronic parts assembly line	1,500~3,000
HOTEL	
Public room, Cloakroom	100~200
Reception, Cashier	220~1,000
STORE	
Indoors Stairs Corridor	150~200
Show window, Packing table	750~1,500
Forefront of show window	1,500~3,000

NOTE:
When the photo detector is covered, the instrument will always display “000”; if not, please find the adjustable resistance on the back of it.

10. CE Declaration of Conformity

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Konformitätserklärung

Declaration of conformity for apparatus with CE mark
Konformitätserklärung für Geräte mit CE-Zeichen
Déclaration de conformité pour appareils portant la marque CE
Declaración de conformidad para aparatos con marca CE
Dichiarazione di conformità per apparecchi contrassegnati con la marcatura CE

D	Konformitäts-erklärung	Wir erklären hiermit, dass das Produkt, auf das sich diese Erklärung bezieht, mit den nachstehenden Normen übereinstimmt.
GB	Declaration of conformity	We hereby declare that the product to which this declaration refers conforms with the following standards.
E	Declaración de conformidad	Manifestamos en la presente que el producto al que se refiere esta declaración está de acuerdo con las normas siguientes
F	Déclaration de conformité	Nous déclarons avec cela responsabilité que le produit, auquel se rapporte la présente déclaration, est conforme aux normes citées ci-après.
I	Dichiarazione di conformità	Dichiariamo con ciò che il prodotto al quale la presente dichiarazione si riferisce è conforme alle norme di seguito citate.

Digital Lightmeter: SO 200K

EU Directive	**Standards**
2004/108/EC	EN 61000-6-1: 2001; EN 61000-6-3: 2001+A11: 2004

Datum 07.04.2009
Date

Ort der Ausstellung 72336 Balingen
Place of issue

Signatur
Signature

Albert Sauter
SAUTER GmbH
Geschäftsführer
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