Sauter GmbH
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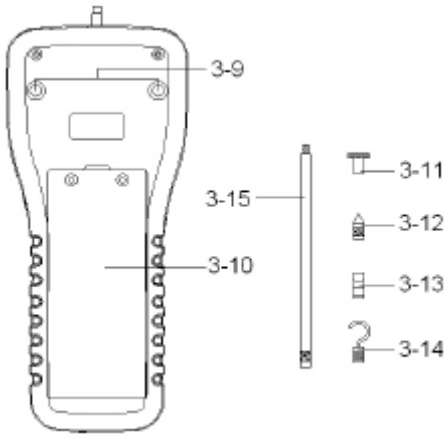
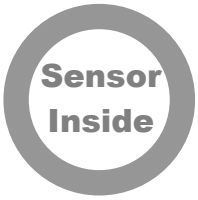
Instruction Manual
FT



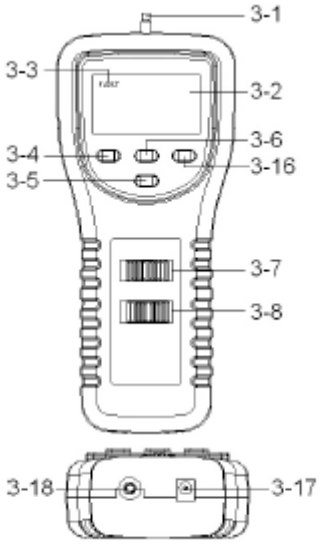
Thank you for buying a SAUTER force gauge. We hope you are pleased with your high quality force gauge with its big functional range. If you have any queries, wishes or helpful suggestions, do not hesitate to call our service number.

„Sensor Inside“ means the cell is inside the body.



1. Included in Delivery

- SAUTER FH
- Carrying Case
- Standard Attachments



3.1. Universal Sensing Head: M 5
3.2. LCD Display
3.3. FAST Indicator
3.4. FAST / SLOW Button
3.5. LCD Reverse Display Button
3.6. Zero Button
3.7. Unit switch (N, g, oz)
3.8. Power Off/On/Peak Hold
3.9. Mounting holes/fixing screws: M 5
3.10. Battery Cover/ Compartment
3.11. – 3.15. Standard Attachments
3.16. LCD Backlight Button
3.17. 9V DC Power Adapter Input Socket
3.18. RS 232 Output Terminal

2. Working Conditions

10°C to 30°C / 15% up to 80% humidity

3. Power Supply

6 x 1.5 V AA, UM-3 batteries

If batteries are low, display shows „Lo“

4. Zeroing & Measurement

Zeroing of Display

The tension and compression measuring function is executed automatically. Compression measuring shows „ – „ in front of measured result.

5. Normal Measurement

Slide Power Switch onto „I“

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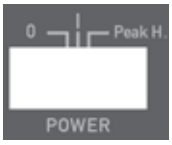


Choose unit and slide switch onto wanted unit

Put chosen attachment on

Zero adjusting by pushing Zero Button before all measurements

Activate display reverse if needed

Changes from FAST to SLOW:

- FAST: about 0,2 Sek.
- SLOW: about 0,6 Sek.

In case of overload display is showing „-----„

6. Peak- Hold Measurement

Power-Switch onto „Peak-H“

Same as „Normale Measurement“

7. Backlight


Keep pressing for about 2 seconds

Turning off automatically after approx. 15 Sec.

8. RS 232 PC Serial Interface

The instrument features an RS232 output via 3.5 mm terminal. The connector output is a 16 digit data stream which can be utilized to the user´s specific application. An RS232 lead with the following connection will be required to link the instrument with the PC serial input.

Meter (3.5 mm jack plug)	PC (9W 'D" Connector)

Center Pin.....Pin 2

Ground/shield.....Pin 5

16-digit-Signal:

D15	D14	D13	D12	D11	D10	D9	D8	D7	D6	D5	D4	D3	D2	D1	D0

Each digit indicate the following status :

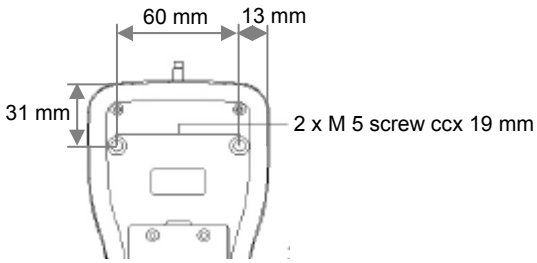
D0	End Word		
D1 & D8	Display reading, D1 = LSD, D8 = MSD *For example :* *If the display reading is 1234, then D8 to D1 is : 1234*		
D9	Decimal Point(DP), position from right to the left 0 = No DP, 1= 1 DP, 2 = 2 DP, 3 = 3 DP		
D10	Polarity 0 = Positive 1 = Negative		
D11 & D12	Anunuciator for Display		
	g = 57	Newton = 59	oz =58
	Kg = 55	LB = 56	
D13	1		
D14	4		
D15	Start Word		

RS232 setting

Baud rate	9600
Parity	No parity
Data bit no.	8 Data bits
Stop bit	1 Stop bit

9. Test Stand Mounting

This force gauge can be mounted to any test stands by two M 5 screws on the back side



General body dimensions:
L x B x H: 215 x 90 x H 43 mm

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10. Warning

10.1 Intended use

The instrument you have acquired serves to determine the measuring value of the material to be measured. It is intended to be used as a “non-automatic“ instrument, i.e. the material to be measured is manually and carefully attached at the instrument. The measured value can be read off after a stable measurement value has been obtained.

10.2 Inappropriate use

Do not use the instrument for dynamic measuring. In the event that small quantities are removed or added to the material to be measured, incorrect measuring results can be displayed due to the “stability compensation“ in the instrument. (Example: Slow draining off of liquid from a container suspended from the instrument). Do not attach a continuous load. This can damage the measuring unit as well as the parts, relevant to safety.

Prevent jolts, torsion and oscillation (e.g. by appending slopingly) of all kinds. Be sure to prevent overloading the instrument in excess of the stated maximum load (max.), minus any tare weight that may possibly exist. This could damage the instrument (risk of breakage).
Important:
• Always make sure that there are no people or materials below the load that could be injured or damaged!
• The instrument is not suitable for measuring people. Do not use as baby scales!
• The instrument does not comply with the medical product law (MPG).
Never operate the instrument in hazardous locations. The series design is not explosion-proof. Structural alterations may not be made to the instrument.
This can lead to incorrect measuring results, faults concerning safety regulations as well as to destruction of the instrument. The instrument may only be used in compliance with the described guidelines. Varying areas of application/ planned use must be approved by SAUTER in writing.

10.3 Guarantee

The guarantee is not valid following
• non-observation of our guidelines in the operating instructions

• use outside the described applications
• alteration to or opening of the device
• mechanical damage and damage caused by media, liquids
• natural wear and tear
• inappropriate erection or electric installation
• overloading of the measuring equipment

10.4 Monitoring the test substances

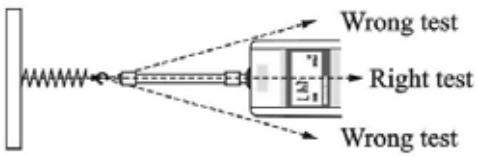
The metrology features of the instrument and any possible available adjusting weight must be checked at regular intervals within the scope of quality assurance. For this purpose, the answerable user must define a suitable interval as well as the nature and scope of this check. Information is available on
the home page (www.KERN-sohn.com) with regard to the monitoring of instrument test substances and the test weights required for this. Test weights and instruments can be adjusted quickly and at a reasonable price in KERN’s accredited DKD calibration laboratory (return to national normal).

10.5. Fundamental safety information

Do not use the hanging instrument to transport loads. Prevent jolts, torsion and oscillation (e.g. by appending slopingly) of all kinds.
Never use the hanging instrument over the maximum permitted weight (!!Danger of breakage!!).
Always make sure that there are no living beings or materials below the load that could be injured or damaged.
The hanging electronic instruments from the SAUTER instrument are only suitable for hand-held use or use in a test stand.
They are not suitable for hanging from a mechanical hook, e.g. a crane hook.

10.5.1 Observe the information in the operating instructions. Please read the operating instructions carefully before erecting and commissioning, even if you already have experience with SAUTER instruments.

10.5.2 Staff training
The device may only be operated and looked after by trained members of staff.



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11. 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

English	We hereby declare that the product to which this declaration refers conforms with the following standards.
Deutsch	Wir erklären hiermit, dass das Produkt, auf das sich diese Erklärung bezieht, mit den nachstehenden Normen übereinstimmt.
Français	Nous déclarons avec cela responsabilité que le produit, auquel se rapporte la présente déclaration, est conforme aux normes citées ci-après.
Español	Manifestamos en la presente que el producto al que se refiere esta declaración est ¨a de acuerdo con las normas siguientes
Italiano	Dichiariamo con ciò che il prodotto al quale la presente dichiarazione si riferisce è conforme alle norme di seguito citate.

Digital Push Pull Gauge: SAUTER FT

Mark applied	EU Directive	Standards
CE	2006 / 95 / EEC	EN 50081-1/EN 55022 (CISPR 22) EN 50082-1/IEC 801-2 (EN 61000-4-2) EN 50082-1/IEC801-3 (EN61000-4-3)

Date: 01.01.2008

Signature:

SAUTER GmbH
Management

SAUTER GmbH, Schumannstrasse 33, D-72458 Albstadt, Tel: +49 (0) 7431 938 666, Fax: +49 (0) 7431 938 292

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