

## Instruction Manual FK



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 measuring cell is inside the housing.

### Table of contents

1. Included in delivery
2. Working conditions
3. Electrical power supply
4. Technical data
5. Operation
6. Backside fixing on a test stand
7. Adjusting procedure
8. Declaration of conformity
9. Warning

### 1. Included in delivery

- SAUTER FK
- Power cable
- Standard attachments as shown below



### Terms:

1.Track Mode= continuous measurement

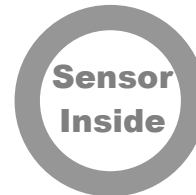
2. Peak Mode= Capture of the maximum value

In this mode, always the max value is captured during several consecutive measurements

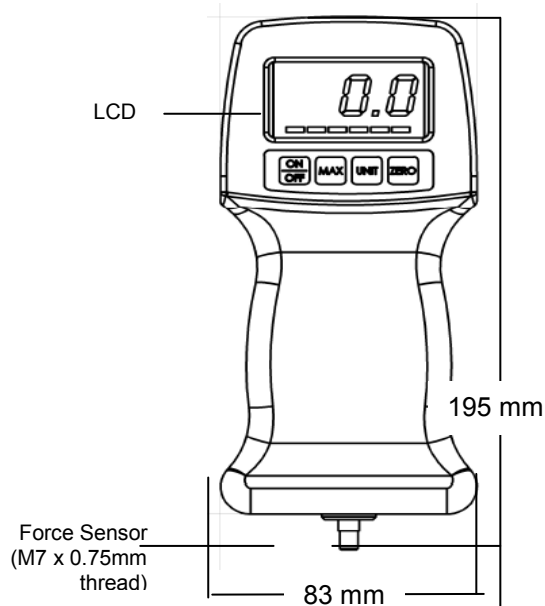
### 2. Working Conditions

Temperatures: 10°C up to 30°C

Humidity: 15% up to 80%



dimensions in mm



### 3. Electrical Power Supply

- Either by batteries (6 x AA batteries) not rechargeable! Batteries have to be changed if necessary.
- or current power supply

Power supply:

- Connection by power adapter cable

### 4. Technical Data

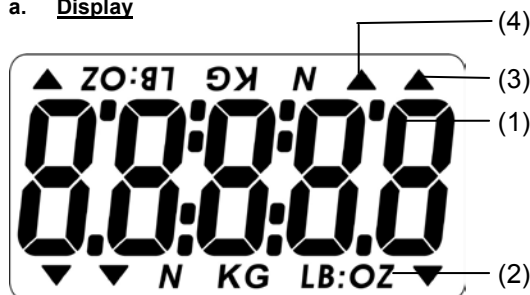
- Accuracy:  $\pm 0,5$  % of Capacity
- Data Sampling Rate: 1.000 Hz

Model	Capacity	Resolution
FK 10	10 N	0,005 N
FK 25	25 N	0,01 N
FK 50	50 N	0,02 N
FK 100	100 N	0,05 N
FK 250	250 N	0,1 N
FK 500	500 N	0,2 N
FK 1k	1 000 N	0,5 N

## Instruction Manual FK

### 5. Operation

#### a. Display



Measuring Result  
Measuring Units  
Measuring Direction  
Indication of PEAK Mode

#### b. Operating keys

ON / OFF:  
to switch on, ON has to be pressed for about 1s

MAX:  
Changes between Track and Peak mode (capture of maximum values)

UNIT:  
Press shortly to select desired unit:  
N, kg, lb, ou

ZERO:  
- Zeros the measuring result (Tara function)  
- Cleans the peak value (in Peak mode)

#### c. Display Return of 180°

When the instrument itself is turned so that the head faces down, the display returns automatically.

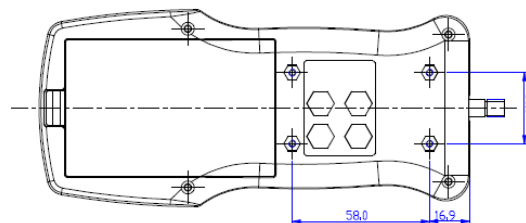
#### d. Measurement (Track Modus)

- Display (1) shows the continuous force in a defined direction (3)  
- To zero the display, press ZERO key:

#### e. Peak-Hold Function (Peak Mode)

Please press: MAX key

### 6. Backside Fixing to a test stand



Fixing by 4 x M3 screws.

### 7. Adjusting procedure

- Observe stable environmental conditions. A short warming up time of approx. 1 minute is recommended for stabilization.
- Switch on the unit by pressing the Unit-key and keep it pressed until in the display first appears shortly "CAL".
- After that there appears the fix size of the adjustment weight. Attach the adjustment weight; a short time later appears "F". Then the instrument returns automatically to the measuring mode.

In case of an adjustment error or incorrect adjusting weight the display will show "E"; repeat adjustment process.

### 8. CE Declaration of Conformity



SAUTER GmbH  
D-72458 Albstadt  
E-Mail: info@sauter.eu

Tel: 0049-(0)7431-938-666  
Fax: 0049-(0)7431-938-292  
Internet: www.sauter.eu

#### 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 está en 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 FK

Mark applied	EU Directive	Standards
CE	89/336/EEC EMC	EN 61326 : 1998 +A1:1998 +A2:2001

Date: 01.1.2008

Signature:  
SAUTER GmbH  
Management

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

## Instruction Manual FK

### 9. Warning

#### 9.1 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 measuring value can be read off after a stable measuring value has been obtained.

#### 9.2 Inappropriate use

Do not use the instrument for medical measurements. 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 at the instrument). Do not attach a continuous load. This can damage the measuring unit as well as the parts, relevant to safety.

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 a baby scale!
- \* 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.

#### 9.3 Guarantee

The guarantee is not valid under following circumstances:

- non- observance of our guidelines in the instruction manual
- use beyond the described applications
- alterations or opening of the device
- mechanical damage and damage caused by media, liquids
- natural wear and tear
- inappropriate assembling or electric installation
- overloading of the measuring equipment

#### 9.4 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](http://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 reasonably priced in KERN's accredited DKD calibration laboratory (return to national normal).

#### 9.5 Fundamental safety information

Do not use the hanging instrument to transport loads. Prevent jolts, torsion and oscillation (e.g. by suspending aslovely) of all kinds.

Be sure to prevent overloading the instrument (over the maximum permitted weight) in excess of the stated maximum load (max.), minus any tare weight that may possibly exist. This could damage the instrument (risk of breakage!!!).

Always make sure that there are no living beings or materials below the load that could be injured or damaged.

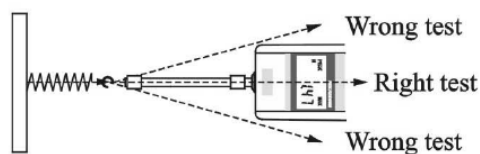
The hanging electronic instruments from the SAUTER series are only suitable for hand-held use or use together with a test stand.

They are not suitable being hung on a mechanical hook, e.g. a crane hook.

9.5.1 Observe the information in the operating instructions please read the instruction manual carefully before assembling and the initial operation, even if you already have gained experience with SAUTER instruments.

##### 9.5.2 Staff training

The device may only be operated and maintained by trained members of staff.



## Instruction Manual FK

### How to adjust an FK Force Measuring Device:

**1.** A short warming up time of approx. 1 minute is recommended for stabilisation.

Switch on the FK by pressing “ON/OFF” button while holding it in vertical position.



**5.** Hold position until “F” appears on display. In this case remove weight and adjusting is completed. In case of “E” showing up on display - repeat step 1. to 5. until “F” attests a successful adjustment

**2.** When display shows zero, simultaneously press “UNIT” and “ZERO” button until “CAL” appears on display.



**3.** Wait a few seconds and display will show the necessary **adjustment weight**, e.g. 5,000kg for FK 50 or 10,00kg for FK 100.



**4.** Put the corresponding weight at the loading hook. Avoid trembling and **keep still while holding the weight** (hint: hold device with both hands while shoring up your elbows on table or desk).