PROFESSIONAL MEASURING
SINCE 1844

KERN

Product brochure

30.10.2026

SAUTER FH 50 EXT

Universal digital force gauge for tensile and compressive force measurements with external load cell

ENGLISH



CONTACT

KERN & SOHN GmbH
Ziegelei 1
72336 Balingen
Germany

+49 7433 9933-0
info@kern-sohn.com
www.kern-sohn.com





ENGLISH

FEATURES

- Turnable display with backlight
- NEW: USB interface for data transfer and power supply as standard
- Data interface RS-232 as standard
- Selectable measuring units: N, kN, kgf, tf
- Peak-Hold function to capture the peak value or Track function for continuous display of measurement
- Measuring with tolerance range (limit-setting function): Upper and lower limit adjustable, in pull and push direction. The process is supported by an audible and visual signal
- Auto-Power-Off
- Internal memory for up to 10 measurement values
- Mini Statistics Kit: calculates the average result from up to 10 stored measured values, as well as min., max., n
- Tension loops and compression plates are included in delivery
- Delivered in a robust carrying case

TECHNICAL DATA

- Transfer rate to PC: approx. 25 measured values per second
- Measuring precision: 0,5% of [Max]
- Overload protection: 150% of [Max]
- Overall dimensions W×D×H 240×70×40 mm
- Rechargeable battery pack integrated, as standard, operating time up to 40 h without backlight, charging time approx. 120 min
- External mains adapter, for connection to the USB-C connector, standard
- Cable length approx. 2,5 m
- Net weight approx. 0,90 kg

MAIN SCOPE OF APPLICATIONS

- Test laboratories
- Research and development
- Automotive industry
- Maintenance and servicing
- Plastics technology

PICTOGRAMS

Standard



Option



ENGLISH

MODEL OVERVIEW

Model	Measuring range [Max]	Readability [d]
FH 50 EXT	50 N	0,01 N
FH 100 EXT	100 N	0,05 N
FH 200 EXT	200 N	0,1 N
FH 500 EXT	500 N	0,1 N

ACCESSORIES

Model	Description
AC 01	Screw tension clamp with jaws AC 01 (up to 500 N | width 20 mm, | clamping width 20 mm | 2 piece)
AC 01R	Screw tension clamp with jaws AC 01R (up to 500 N | width 20 mm, | clamping width 20 mm | 1 piece)
AC 02	Ball-shaped head SAUTER AC 02 (Ball radius: 5 mm / 8 mm | 2 pieces)
AC 02R	Accessory force measurement AC 02R
AC 03	Screw tension clamp with jaws AC 03 (up to 5 kN | width 50 mm, | clamping width 4,5 mm | 2 piece)
AC 03R	Screw tension clamp with jaws AC 03R (up to 5 kN | width 50 mm, | clamping width 4,5 mm | 1 piece)
AC 09	Screw tension clamp with jaws AC 09 (up to 500 N | width 6 mm, | clamping width 8 mm | 2 piece)
AC 09R	Screw tension clamp with jaws AC 09R (up to 500 N | width 6 mm, | clamping width 8 mm | 1 piece)
AC 11R	Roller Tension Clamp AC 11R (up to 5 kN | width 50 mm, | clamping width 4 mm | 1 piece)
AC 12	Screw tension clamp with jaws AC 12 (up to 5 kN | width 25 mm, | clamping width 5 mm | 2 piece)
AC 12R	Screw tension clamp with jaws AC 12R (up to 5 kN | width 25 mm, | clamping width 5 mm | 1 piece)

Model	Description
AC 14	Screw tension clamp with jaws AC 14 (up to 500 N | width 16 mm, | clamping width 4 mm | 2 piece)
AC 14R	Screw tension clamp with jaws AC 14R (up to 500 N | width 16 mm, | clamping width 4 mm | 1 piece)
AC 16R	Screw tension clamp with jaws AC 16R (up to 5 kN | width 20 mm, | clamping width 5 mm | 1 piece)
AC 17R	Screw tension clamp with jaws AC 17R (up to 500 N | width 8 mm, | clamping width 2,5 mm | 1 piece)
AC 22	Screw tension clamp with jaws AC 22 (up to 500 N | width 30 mm, | clamping width 3 mm | 2 piece)
AC 22R	Screw tension clamp with jaws AC 22R (up to 500 N | width 30 mm, | clamping width 3 mm | 1 piece)
AC 43	Standard attachments AC 43
AC 45	Concave force sensor AC 45 (to 1 kN | Threaded hole M6)
AC 46	Flat square-shaped sensor AC 46 (to 1 kN | Threaded hole M6)
AC 47	Round sensor AC 47 (to 1 kN | Threaded hole M6)
AD 9001	Screw tension clamp with jaws AD 9001 (up to 100 N | width 15 mm, | clamping width 8 mm | 1 piece)
AD 9005	Screw tension clamp with jaws AD 9005 (up to 400 N | width 25 mm, | clamping width 8 mm | 1 piece)
AD 9016	Screw tension clamp with jaws AD 9016 (up to 1 kN | width 30 mm, | clamping width 10 mm | 1 piece)
AE 01	Standard Clamp AE 01
AE 02	Standard Clamp AE 02
AE 03	Strip tension clamp AE 03 (up to 500 N | width 40 mm, | clamping width 2,5 mm | 1)
AE 04	Strip tension clamp AE 04 (up to 500 N | width 15 mm, | clamping width 6 mm | 1)
AE 05	Rope and thread tension clamp AE 05 (up to 500 N | width , | clamping width 2,5 mm | 1)
AE 06	Cable pull-off clamp AE 06
AE 07	Wedge Clamp with jaws AE 07 (up to 500 N | width 14 mm, | clamping width 6 mm | 1)
AE 08	Pressure plate AE 08 (Ø 47 mm | to 5 kN)
AE 08R	Accessory force measurement AE 08R
AE 500	Screw tension clamp with jaws AE 500
AFM 05	Adapter AFM 05 (External thread M10 | Threaded hole M6)
AFM 06	Adapter AFM 06 (Threaded hole M10 | Threaded hole M6)
AFM 07	Adapter AFM 07 (External thread M10 | Threaded hole M6)
AFM 12	Adapter AFM 12 (Threaded hole M6 | Threaded hole M6)
AFM 15	Adapter AFM 15 (Threaded hole M12 | Threaded hole M6)
FH-A04	RS232 interface cable FH-A04

Model	Description
FS-E07	Power supply unit EURO FS-E07
YKA-01	Schuko> UK Plug Power Adapters YKA-01
YKA-02	Travel adapter YKA-02
YKT-01	Needle printer YKT-01

SOFTWARE

Model	Description
AFH FAST	Data transfer software for force-time-measurements, AFH FAST
AFH LD	Data transfer software for force-displacement-measurements AFH LD

SERVICES

Model	Description
961-161	Factory calibration certificate 961-161 (tension | N)
961-261	Factory calibration certificate 961-261 (compression | N)
961-361	Factory calibration certificate 961-361 (tension, compression | N)
963-161	DAkkS calibration certificate 963-161 (force direction tension | measurement result unit N | calibration standard DKD-R 3-3 - sequence A)
963-261	DAkkS calibration certificate 963-261 (force direction compression | measurement result unit N | calibration standard DKD-R 3-3 - sequence A)
963-361	DAkkS calibration certificate 963-361 (force direction tension, compression | measurement result unit N | calibration standard DKD-R 3-3 - sequence A)
970-105	Warranty extension (+2 years) 970-105

KERN Pictogram Overview

	Peak hold function: capturing a peak value within a measuring process
	Push and Pull: the measuring device can capture tension and compression forces
	Memory: Device-internal memory capacity, e.g. for article data, measuring data, tare weights, PLU etc.
	Data interface RS-232: For connection to printers, PCs or other peripheral devices for data transfer over longer distances. Network in bus topology possible
	Data Interface USB: For connection to printers, PCs or other peripheral devices
	Statistics: using the saved values, the device calculates statistical data, such as average value, standard deviation etc.
	Measuring with tolerance range (checkweighing): Upper and lower limit values can be programmed, e.g. for sorting, portioning or for measuring coatings or material thicknesses. The process is supported by an acoustic and/or optical signal
	ZERO: Reset the display to 0
	Rechargeable battery pack: Rechargeable set
	Plug-in power supply: 230V/50Hz in standard version for EU, CH. On request GB, USA or AUS version available
	Package shipment by courier service: The duration of internal product provision is one day
	PC Software: to transfer the measurements from the device to a PC
	Factory calibration (ISO): Factory calibration takes 4 working days
	Accredited calibration (DKD): The duration of the accredited calibration is 3 working days

ENGLISH