PROFESSIONAL MEASURING
SINCE 1844

KERN

Product brochure

31.10.2026

SAUTER FM 1K

Universal digital force gauge with graphic-assisted display and integrated 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
- Peak-Hold function to capture the peak value or Track function for continuous display of measurement
- Can be mounted on all SAUTER test stands up to 5 kN
- Capacity display: A bar lights up to show how much of the measuring range is still available
- Measuring with tolerance range (limit-setting function): Upper and lower limit adjustable, in pull and push direction. The process is supported by a visual signal
- Internal memory for up to 500 measurement values
- USB-C and PS/2 data interfaces for flexible data transfer and device coupling
- Selectable measuring units: N, kN, kgf, lbf
- Standard attachments: as shown
- Delivered in a robust carrying case

TECHNICAL DATA

- Transfer rate to PC: approx. 25 measured values per second
- Measuring precision: 0,2% of [Max]
- Overload protection: 120% of [Max]
- Overall dimensions W×D×H 71×31×180 mm
- External thread M6
- Rechargeable battery pack integrated, as standard, operating time up to 10 h without backlight, charging time approx. 8 h
- External mains adapter, for connection to the USB-C connector, standard
- Net weight approx.

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]
FM 1K	1 kN	0,5 N
FM 5	5 N	0,002 N
FM 10	10 N	0,005 N
FM 20	20 N	0,01 N
FM 50	50 N	0,02 N
FM 100	100 N	0,05 N
FM 200	200 N	0,1 N
FM 500	500 N	0,2 N

ACCESSORIES

Model	Description
AC 02	Ball-shaped head SAUTER AC 02 (Ball radius: 5 mm / 8 mm | 2 pieces)
AC 02R	Accessory force measurement AC 02R
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 17	Screw tension clamp with jaws AC 17 (up to 500 N | width 8 mm, | clamping width 2,5 mm | 2 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)

Model	Description
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
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 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)
FL-A03	Rechargeable battery pack FL-A03
FL-A04	Cable FL-A04
FS-E07	Power supply unit EURO FS-E07
RFL-3001	LCD Display RFL-3001
RFL-4001	Display overlay RFL-4001
YKA-01	Schuko> UK Plug Power Adapters YKA-01
YKT-01	Needle printer YKT-01

SOFTWARE

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

Model	Description
AFH LD	Data transfer software for force-displacement-measurements AFH LD
Sauter Readout	Data transfer software Sauter Readout

SERVICES

Model	Description
961-162	Factory calibration certificate 961-162 (tension | N)
961-262	Factory calibration certificate 961-262 (compression | N)
961-362	Factory calibration certificate 961-362 (tension, compression | N)
963-162	DAkkS calibration certificate 963-162 (force direction tension | measurement result unit N | calibration standard DKD-R 3-3 - sequence A)
963-262	DAkkS calibration certificate 963-262 (force direction compression | measurement result unit N | calibration standard DKD-R 3-3 - sequence A)
963-362	DAkkS calibration certificate 963-362 (force direction tension, compression | measurement result unit N | calibration standard DKD-R 3-3 - sequence A)
970-101	Warranty extension (+2 years) 970-101
970-102	Warranty extension (+2 years) 970-102

KERN Pictogram Overview

	Peak hold function: capturing a peak value within a measuring process
	Memory: Device-internal memory capacity, e.g. for article data, measuring data, tare weights, PLU etc.
	Data Interface USB: For connection to printers, PCs or other peripheral devices
	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
	Accredited calibration (DKD): The duration of the accredited calibration is 3 working days
	Factory calibration (ISO): Factory calibration takes 4 working days

ENGLISH