

Digital force gauge SAUTER FH-M



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

Features

- Turnable display with backlight
- Data interface RS-232, standard
- Delivered in a robust carrying case
- Selectable measuring units: N, kN, kgf, tf
- Peak-Hold function to capture peaks (measurement result will be "frozen" for a short time) or Track function mode for a continuous measurement indication
- 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

Technical data

- Measuring frequency: 2000 Hz
- Transfer rate to PC: approx. 25 measured values per second
- Measuring precision: 0,5 % of [Max]
- Overload protection: 150 % of [Max]
- Dimensions housing W×D×H 66×36×230 mm
- Rechargeable battery pack integrated, standard, operating time up to 12 h without backlight, charging time approx. 4 h
- **1** Tension loops and compression plates are included in delivery
- Cable length approx 3 m

Accessories

- Data transfer software with graphic display of the measurement process, SAUTER AFH FAST
Force-displacement only in combination with SAUTER LD, SAUTER AFH LD
- Force-displacement only in combination with SAUTER LB, SAUTER AFH FD
- RS-232/PC connection cable to connect models from the SAUTER FH range to a PC or a printer, SAUTER FH-A01
- Matrix needle printer, KERN YKN-01
- Thermal printer, KERN YKB-01N
- Statistics thermal printer, KERN YKS-01
- Label printer, KERN YKE-01
- For further accessories see page 35 onwards or our website

STANDARD



OPTION



Model	Measuring range [Max] kN	Readout [d] N	Dimensions load cell W×D×H mm	Thread	Option DAkkS calibration certificate (≤ 5 kN) / Factory calibration certificates (> 5 kN)						
					Tensile force		Compressive force		Tensile/Compressive force		
					KERN		KERN		KERN		
SAUTER											
FH 1K	1	0,5	76,2×51×19	M12	963-162		963-262		963-362		
FH 2K	2	1	76,2×51×19	M12	963-162		963-262		963-362		
FH 5K	5	1	76,2×51×28,2	M12	963-163		963-263		963-363		
FH 10K	10	5	76,2×51×28,2	M12	961-164		961-264		961-364		
FH 20K	20	10	76,2×51×28,2	M12	961-164		961-264		961-364		
FH 50K	50	10	108×76,3×25,5	M18×1,5	961-165		961-265		961-365		
FH 100K	100	50	178×152,2×51,3	M30×2	961-166		961-266		961-366		

1 Further calibration options on request

Pictograms

 Adjusting program (CAL): For quick setting of the instrument's accuracy. External adjusting weight required	 WLAN data interface: To transfer data from the balance/measuring instrument to a printer, PC or other peripherals	 Protection against dust and water splashes IPxx: The type of protection is shown in the pictogram.
 Calibration block: Standard for adjusting or correcting the measuring device	 Data interface Infrared: To transfer data from the measuring instrument to a printer, PC or other peripheral devices	 ZERO: Resets the display to "0"
 Peak hold function: Capturing a peak value within a measuring process	 Control outputs (optocoupler, digital I/O): To connect relays, signal lamps, valves, etc.	 Battery operation: Ready for battery operation. The battery type is specified for each device
 Scan mode: Continuous capture and display of measurements	 Analogue interface: To connect a suitable peripheral device for analogue processing of the measurements	 Rechargeable battery pack: Rechargeable set
 Push and Pull: The measuring device can capture tension and compression forces	 Analog output: For output of an electrical signal depending on the load (e.g. voltage 0 V – 10 V or current 4 mA – 20 mA)	 Mains adapter: 230V/50Hz in standard version for EU. On request GB, AUS or USA version available
 Length measurement: Captures the geometric dimensions of a test object or the movement during a test process	 Statistics: Using the saved values, the device calculates statistical data, such as average value, standard deviation etc.	 Power supply: Integrated, 230V/50Hz in EU. More standards e.g. GB, AUS or USA on request
 Focus function: Increases the measuring accuracy of a device within a defined measuring range	 PC Software: To transfer the measurement data from the device to a PC	 Motorised drive: The mechanical movement is carried out by a electric motor
 Internal memory: To save measurements in the device memory	 Printer: A printer can be connected to the device to print out the measurement data	 Motorised drive: The mechanical movement is carried out by a synchronous motor (stepper)
 Data interface RS-232: Bidirectional, for connection of printer and PC	 Network interface: For connecting the scale/measuring instrument to an Ethernet network	 Fast-Move: The total length of travel can be covered by a single lever movement
 Profibus: For transmitting data, e.g. between scales, measuring cells, controllers and peripheral devices over long distances. Suitable for safe, fast, fault-tolerant data transmission. Less susceptible to magnetic interference.	 KERN Communication Protocol (KCP): It is a standardized interface command set for KERN balances and other instruments, which allows retrieving and controlling all relevant parameters and functions of the device. KERN devices featuring KCP are thus easily integrated with computers, industrial controllers and other digital systems	 Verification possible: The time required for verification is specified in the pictogram
 Profinet: Enables efficient data exchange between decentralised peripheral devices (balances, measuring cells, measuring instruments etc.) and a control unit (controller). Especially advantageous when exchanging complex measured values, device, diagnostic and process information. Savings potential through shorter commissioning times and device integration possible	 GLP/ISO record keeping: Of measurement data with date, time and serial number. Only with SAUTER printers	 DAKkS calibration possible: The time required for DAKkS calibration is shown in days in the pictogram
 Data interface USB: To connect the measuring instrument to a printer, PC or other peripheral devices	 Measuring units: Weighing units can be switched to e.g. non-metric at the touch of a key. Please refer to website for more details	 Factory calibration: The time required for factory calibration is specified in the pictogram
 Bluetooth* data interface: To transfer data from the balance/measuring instrument to a printer, PC or other peripherals	 Measuring with tolerance range (limit-setting function): Upper and lower limiting can be programmed individually. The process is supported by an audible or visual signal, see the relevant model	 Package shipment: The time required for internal shipping preparations is shown in days in the pictogram
		 Pallet shipment: The time required for internal shipping preparations is shown in days in the pictogram

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