

Digital force gauge SAUTER FL-S



Premium force measuring instrument with graphic-assisted display and integrated measuring cell

**Features**

- **Turnable display** with backlight
- **Peak-Hold function** to capture peaks (measurement result will be “frozen” for a short time) or **Track function** mode for a continuous measurement indication (period of time approx. 10 s)
- **Metal housing** for durable usage in harsh environmental conditions
- Can be mounted on all SAUTER test stands
- **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 limiting can be programmed individually, in pull and push direction. The process is supported by a visual signal.
- **Internal memory** for up to 500 measurement values
- **Continuous analogue output:** Linear voltage signal in dependence to the load (-2 to +2 V)

- 1 Standard attachments: as shown above
- **Selectable measuring units:** N, kN, kg, oz, lbf
- 2 **Delivered in a robust carrying case**

**Technical data**

- Internal measuring frequency: 1000 Hz
- Precision: 0,2 % of [Max]
- Overload protection: 120 % of [Max]
- Dimensions W×D×H 175×75×30 mm
- Thread: M6
- Rechargeable battery pack integrated, standard, operating time up to 10 h without backlight, charging time approx. 8 h
- Net weight approx. 0,5 kg

**Accessories**

- **Plug-In for data transfer of measuring data** from the measuring instrument and transfer to a PC, e.g. in Microsoft Excel®, SAUTER AFI-1.0
- **Force-displacement data transfer software** with graphical representation of the measuring process, only in combination with SAUTER LD, SAUTER AFH LD
- **Force-time data transfer software** for graphical representation on the PC and data transfer to Microsoft Excel®, SAUTER AFH FAST
- **Force-displacement data transfer software** with graphic display of the measurement process, only in combination with SAUTER LB, SAUTER AFH FD
- **USB cable**, SAUTER FL-A01
- **RS-232 adapter cable**, SAUTER FL-A04
- **Thermal printer**, KERN YKB-01N
- **Statistics thermal printer**, KERN YKS-01
- **Label printer**, KERN YKE-01
- Supports for fastening of objects as well as additional accessories, please see page 30 onwards or our website

STANDARD


























OPTION



Model	Measuring range	Readout	Option DAkkS calibration certificate							
			Tensile force		Compressive force		Tensile/Compressive force			
			DAkkS KERN		DAkkS KERN		DAkkS KERN			
SAUTER	[Max] N	[d] N								
FL 5	5	0,002	-		-		-			
FL 10	10	0,005	963-161		963-261		963-361			
FL 20	25	0,01	963-161		963-261		963-361			
FL 50	50	0,02	963-161		963-261		963-361			
FL 100	100	0,05	963-161		963-261		963-361			
FL 200	250	0,1	963-161		963-261		963-361			
FL 500	500	0,2	963-161		963-261		963-361			
FL 1K	1000	0,5	963-162		963-262		963-362			

## Pictograms

 <b>Adjusting program (CAL):</b> For quick setting of the instrument's accuracy. External adjusting weight required.	 <b>Control outputs (optocoupler, digital I/O):</b> to connect relays, signal lamps, valves, etc.	 <b>Battery operation:</b> Ready for battery operation. The battery type is specified for each device.
 <b>Calibration block:</b> standard for adjusting or correcting the measuring device.	 <b>Analogue interface:</b> to connect a suitable peripheral device for analogue processing of the measurements	 <b>Rechargeable battery pack:</b> rechargeable set.
 <b>Peak hold function:</b> capturing a peak value within a measuring process.	 <b>Statistics:</b> using the saved values, the device calculates statistical data, such as average value, standard deviation etc.	 <b>Mains adapter:</b> 230V/50Hz in standard version for EU. On request GB, AUS or USA version available.
 <b>Scan mode:</b> continuous capture and display of measurements.	 <b>PC Software:</b> to transfer the measurement data from the device to a PC.	 <b>Power supply:</b> Integrated, 230V/50Hz in EU. More standards e.g. GB, AUS or USA on request.
 <b>Push and Pull:</b> the measuring device can capture tension and compression forces.	 <b>Printer:</b> a printer can be connected to the device to print out the measurement data.	 <b>Motorised drive:</b> The mechanical movement is carried out by a electric motor.
 <b>Length measurement:</b> captures the geometric dimensions of a test object or the movement during a test process.	 <b>GLP/ISO record keeping:</b> of measurement data with date, time and serial number. Only with SAUTER printers	 <b>Motorised drive:</b> The mechanical movement is carried out by a synchronous motor (stepper).
 <b>Focus function:</b> increases the measuring accuracy of a device within a defined measuring range.	 <b>Measuring units:</b> Weighing units can be switched to e.g. non-metric at the touch of a key. Please refer to website for more details.	 <b>Fast-Move:</b> the total length of travel can be covered by a single lever movement.
 <b>Internal memory:</b> to save measurements in the device memory.	 <b>Measuring with tolerance range (limit-setting function):</b> Upper and lower limiting can be programmed individually. The process is supported by an audible or visual signal, see the relevant model	 <b>DAkkS calibration possible:</b> The time required for DAkkS calibration is shown in days in the pictogram.
 <b>Data interface RS-232:</b> bidirectional, for connection of printer and PC.		 <b>Factory calibration:</b> The time required for factory calibration is specified in the pictogram.
 <b>Data interface USB:</b> To connect the measuring instrument to a printer, PC or other peripheral devices.		 <b>Package shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram.
 <b>Data interface Infrared:</b> To transfer data from the measuring instrument to a printer, PC or other peripheral devices.	 <b>ZERO:</b> Resets the display to "0".	 <b>Pallet shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram.

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