

PREMIUM



Premium force gauge with integrated load cell (optional) and connection possibility for up to 4 external load cells

Use with integrated load cell

The SAUTER FS premium force gauge has an load measuring cell for tensile and compressive force applications. Either mobile for rapid testing or stationary integrated into a test stand or production line, the multifunction display allows all the values recorded to be read off at a glance in real time. Via the integrated interface, the data can be sent to a PC or laptop for further processing.

Use with external load cells

The SAUTER FS premium force gauge is compatible with all SAUTER strain gauge measuring cells, see *Measuring Cells*. Up to 4 external measuring cells can be connected simultaneously.



Measurement of forces in different tensile or compression directions possible with only one measuring device



Supplied in a high-quality and robust system case (systainer® T-LOC) including plug-in power supply and USB cable type C



Tip: Order the practical system case (systainer® T-LOC) for storing and transporting of accessories, clamps, sensors, etc. at the same time, SAUTER FS TKZ, see *Accessories*



Can be mounted on all SAUTER test stands, illustration shows optional accessories, as well as the SAUTER TVL-XS manual test stand



Simultaneous measurement on up to four channels. External sensors with sensor data memory, optionally available, see *Measuring Cells*



Compact force gauge with internal measuring cell (up to max. 500 N) for fast and mobile force measurements. Illustration shows optional accessories, SAUTER AE 500 screw tension clamp

Features

- 3,5" touchscreen
- Standard version with 2 or 4 measuring channels for external force sensors (subsequently expandable from 2 to 4)
- An internal load cell is possible (is deactivated if an external load cell is connected)
- Suitable for 4-wire and 6-wire sensors with strain gauges
- Two-point adjustment with weights or numerical adjustment possible
- The specific data of an external sensor are stored directly in the connector
- USB interface for data transfer and power supply as standard
- Internal device memory (16 GB)
- Adjustable SI units: kg, N, kN, mN, MN, Nm, kNm, mNm
- Tolerance function
- Track function for continuous measurement display
- Peak value measurement

Technical data

- Resolution: up to 10000 points per measurement channel
- Storage of measured values as well as their transmission to the interface with up to 1000 Hz per measuring channel
- Measurement accuracy:
 - with internal load cell: 0.1 % of [Max]
 - with external load cell: among other things from the load cells used
- Overload protection: 150 % of [Max] with internal measuring cell
- Thread on load receptor: M6 (outer)
- Rechargeable battery pack integrated, as standard, operating time up to 8 h without backlight, charging time approx. 8 h
- External mains adapter, for connection to the USB-C connector, standard
- Overall dimensions W×D×H 71×31×180 mm
- Net weight approx. 0,40 kg

Accessories

- For subsequent expansion to 4 measuring channels, A/D converter module, only for FS 2 and FS 2-xxx models, SAUTER FS 34
- Stainless steel handle bar with rubber grip, SAUTER AFK 02
- Transport case, e.g. for accessories, SAUTER FS TKZ
- Standard attachments, SAUTER AC 43
- Hook for tensile and fracture testing up to 500 N, thread: M6, 1 item, SAUTER AC 49
- Plug-In for data transfer of measuring data from the measuring instrument and transfer to a PC, e.g. in Microsoft Excel®, SAUTER AFI-2.0, see *internet*
- Suitable load cells see page 86 et seq.
- Holders for object fixation and other accessories, please see www.sauter.eu

Optional calibration, see page 101

Calibration is recommended for each measuring cell!

Assembly and adjustment of measuring cell, connector and sensors must be ordered separately, see table below, SAUTER FS 401 - FS 408

Order example SAUTER FS force gauge with 2 load cells:

1×	FS 2-500	2-channel force gauge with integrated load cell for tension/compression force measurements
1×	963-361	DAkkS calibration certificate tension/compression force up to 500 N
1×	CO 100-Y1	Miniature compression load cell up to 1 kN
1×	FS 403	Two-point adjustment up to 2 kN, incl. plug and memory for SAUTER FS
1×	963-262	DAkkS calibration certificate compression force up to 2 kN
1×	CS 500-3P2	Stainless steel "S" load cell for tension/compression force up to 5 kN
1×	963-363	DAkkS calibration certificate tension/compression force up to 5 kN
1×	FS 404	Two-point adjustment up to 5 kN, incl. connector and memory for SAUTER FS

STANDARD



OPTION



Service required for use with external sensors

Model	Measuring range internal load cell [Max] N	Readability internal load cell [d] N	Internal load cell	Number of measuring channels
SAUTER				
FS 2	-	-	-	2
FS 2-20	20	0,004	•	2
FS 2-50	50	0,01	•	2
FS 2-100	100	0,02	•	2
FS 2-200	200	0,04	•	2
FS 2-500	500	0,1	•	2
FS 4	-	-	-	4
FS 4-20	20	0,004	•	4
FS 4-50	50	0,01	•	4
FS 4-100	100	0,02	•	4
FS 4-200	200	0,04	•	4
FS 4-500	500	0,1	•	4

Model	Adjustment of optional, external sensors	Measuring range [Max] kN
SAUTER		
FS 401	Numeric*	-
FS 402		0,05
FS 403		2
FS 404		5
FS 405	Two-point	20
FS 406		50
FS 407		120
FS 408		250

*only for sensors > 250 kN