

Measuring system PHYSIMETER® 906 USB

high-tensile
aluminium housing

high-quality
attractive
design



testing equipment for quality management

ERICHSEN
since 1910

Technical Description

with integrated or
external force sensor

sampling rate 1 kHz

User-friendly display
instrument for
measuring mechanical
parameter "force" and
other physical values

Design

The Measuring System **PHYSIMETER® 906 USB** is used for the acquisition of mechanical parameters based on wire strain gauge sensors.

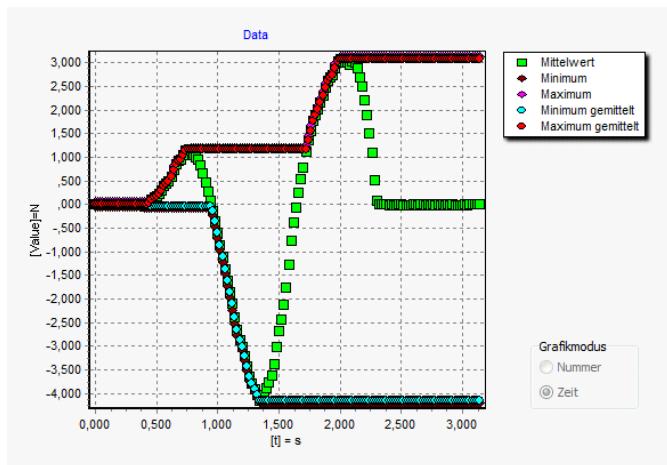
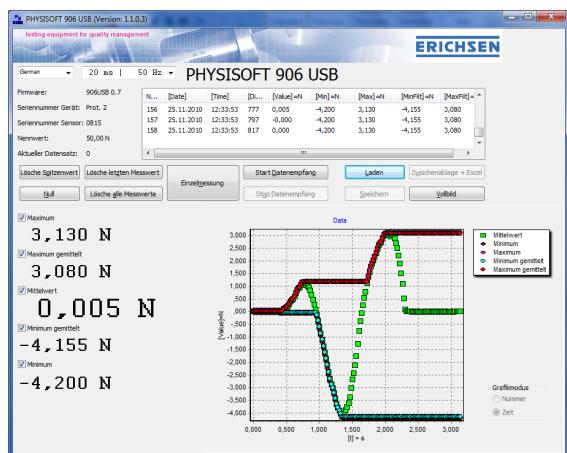
Two versions are available:

PHYSIMETER® 906 USB with an integrated force sensor and

PHYSIMETER® 906 USB to connect an external sensor.

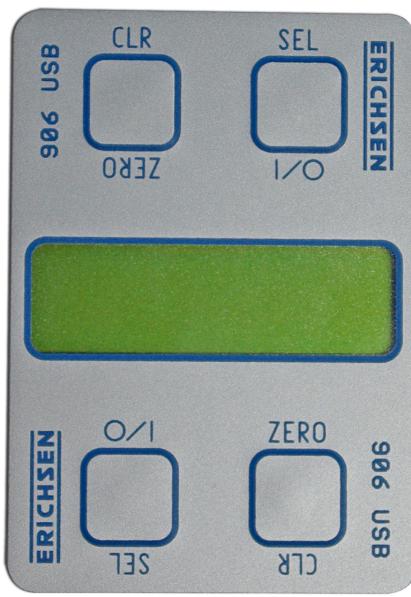
For the power supply three micro-batteries (type LR03) or alternatively a plug-in power pack is required.

The data transmission of **PHYSIMETER®** to PC is made via USB interface (USB cable included in scope of supply). The measuring and evaluation software **PHYSISOFT 906 USB** is available free of charge at <https://www.erichsen.de/en-gb/service/downloads>.



For easy handling the measuring system is provided with the functions on/off, zero setting and peak value indication (upper and lower peak value). Depending of whether the force to be measured is led into the instrument from the top or bottom, the display can show the measuring data also in an **inverted way** (i. e. turned by 180°). The **reading direction** of the display is determined by pressing the **upper or lower I/O key**.

CLR
(delete the peak value)



SEL
(selection for current measured value,
upper and lower peak value)

I/O
(ON/OFF)

ZERO
(zero setting)

The ergonomically designed housing made of anodised, high-strength aluminium, is provided with threaded bores at the front side so that an unproblematic connection to the **ERICHSEN testing machines** is guaranteed - as it was also the case with the preceding models of tensile and pressure measuring devices.

Reference Class

All versions of **Measuring System PHYSIMETER® 906 USB** with **integrated force sensor** are supplied with a **Manufacturer's Certificate M** in accordance with DIN 55 350-18.

As an option a calibration according to VDI/VDE 2624 sheet 2.1 - Measurement of mechanical quantities – Instructions for calibration of mobile force measurement systems – is available.

The **PHYSIMETER® 906 USB** will be delivered with the accessories (included in scope of supply) in a plastic case and is suitable for mobile and stationary applications.



For a variety of test purposes several **Sets** are available (to be ordered separately):

For External Force Transducers:



Set A / Handle

consisting of: handle, fixing plate, screws and hexagon-socket offset screw



Set B / Test Tool

consisting of: drawhook, extension piece flat thrust piece and conical thrust piece

Caution: max. load of the hook 1 kN

For External Displacement Transducers:



Set C (for 10 Nm, 20 Nm and 50 Nm)



Set D (20 - 500 Ncm)

Technical Data

Nominal force:	20 N/50 N/100 N/200 N/500 N/1 kN/2 kN (PHYSIMETER® <u>with integrated</u> force sensor)
	Depending on the measuring range of the external force transducer (PHYSIMETER® <u>with external</u> force sensor)
Overload capacity:	<10% of nominal force
Accuracy:	0.2 % of the final value
Peak memory:	max. and min. values
Sampling rate for peak value:	approx. 1 kHz
Display rate for mean value:	approx. 2 Hz
Interface:	USB
Battery operation: ¹⁾	alkaline battery type LR03; 3 pcs; 1400 mA approx. 8 h (sensor with measuring bridge of 1000 ohms) approx. 5 h (sensor with measuring bridge of 350 ohms)
Running amps:	approx. 130 mA (sensor with measuring bridge of 1000 ohms) approx. 150 mA (sensor with measuring bridge 350 ohms)
External supply:	plug-in power pack 115 V/230 V; 50/60 Hz, <u>alternatively</u> PC with USB cable
Reference temperature:	(21 ± 2) °C
Operating temperature:	+5 °C bis +35 °C
Display resolution:	≥1000 pieces (from 10% of measuring range)
Digit height:	10 mm
Dimensions (L x W x H):	150 x 69 x 33 mm (without load introduction pivot of the sensor)
Fixing bore in the housing:	2 x M6 (distance 35 mm)
Load introduction:	female thread M6
Weight:	approx. 500 g

¹⁾ If rechargeable batteries are used, please note that these must be charged using an external charging unit, because there is no charging function integrated in the PHYSIMETER®.

Ordering information		
	Ord.-No.	Product description
	02970131	Measuring System PHYSIMETER® 906 USB - 20 N with an integrated force transducer of 20 N and USB interface; incl.USB cable (1.5 m), power supply with 4 adapters, 1 set of batteries, plastic case, manual and Manufacturer's Test Certificate M.
	02970231	Measuring System PHYSIMETER® 906 USB - 50 N with an integrated force transducer of 50 N and USB interface; incl.USB cable (1.5 m), power supply with 4 adapters, 1 set of batteries, plastic case, manual and Manufacturer's Test Certificate M.
	02970331	Measuring System PHYSIMETER® 906 USB - 100 N with an integrated force transducer of 100 N and USB interface; incl.USB cable (1.5 m), power supply with 4 adapters, 1 set of batteries, plastic case, manual and Manufacturer's Test Certificate M.
	02970431	Measuring System PHYSIMETER® 906 USB - 200 N with an integrated force transducer of 200 N and USB interface; incl.USB cable (1.5 m), power supply with 4 adapters, 1 set of batteries, plastic case, manual and Manufacturer's Test Certificate M.
	02970531	Measuring System PHYSIMETER® 906 USB - 500 N with an integrated force transducer of 500 N and USB interface; incl.USB cable (1.5 m), power supply with 4 adapters, 1 set of batteries, plastic case, manual and Manufacturer's Test Certificate M.
	02970631	Measuring System PHYSIMETER® 906 USB - 1000 N with an integrated force transducer of 1000 N and USB interface; incl.USB cable (1.5 m), power supply with 4 adapters, 1 set of batteries, plastic case, manual and Manufacturer's Test Certificate M.
	02970631	Measuring System PHYSIMETER® 906 USB - 2000 N with an integrated force transducer of 2000 N and USB interface; incl.USB cable (1.5 m), power supply with 4 adapters, 1 set of batteries, plastic case, manual and Manufacturer's Test Certificate M.
	02910131	Measuring System PHYSIMETER® 906 USB for connection an external sensor based on wire strain gauge, with USB interface; incl. USB cable(1.5 m), power supply with 4 adapters, 1 set of batteries, plastic case and manual.

Ordering information		
	Ord.-No.	Product description
Necessary Accessories (at option) for Model 906 USB-external		
	08600132	External Force Transducer 906 USB-20 N incl. Manufacturer's Test Certificate M
	086000232	External Force Transducer 906 USB-50 N incl. Manufacturer's Test Certificate M
	08600332	External Force Transducer 906 USB-100 N incl. Manufacturer's Test Certificate M
	08600432	External Force Transducer 906 USB-200 N incl. Manufacturer's Test Certificate M
	08600532	External Force Transducer 906 USB-500 N incl. Manufacturer's Test Certificate M
	08600632	External Force Transducer 906 USB-1000 N incl. Manufacturer's Test Certificate M
	08600732	External Force Transducer 906 USB-2000 N incl. Manufacturer's Test Certificate M
	07280132	Set A / Six-part Handle consisting of: handle, fixing plate, screws and hexagon-socket offset screw
	07290132	Set B / Four-part Tool consisting of: drawhook, extension piece flat thrust piece and conical thrust piece
 Fig. similar	08630132	External Torque Transducer 906 USB-20 Ncm incl. Manufacturer's Test Certificate M
	08630232	External Torque Transducer 906 USB-50 Ncm incl. Manufacturer's Test Certificate M
	08630232	External Torque Transducer 906 USB-100 Ncm incl. Manufacturer's Test Certificate M
	08630432	External Torque Transducer 906 USB-200 Ncm incl. Manufacturer's Test Certificate M
	08630532	External Torque Transducer 906 USB-500 Ncm incl. Manufacturer's Test Certificate M

Ordering information		
	Ord.-No.	Product description
 Fig. similar	08630632	External Torque Transducer 906 USB-10 Nm incl. Manufacturer's Test Certificate M
	08630732	External Torque Transducer 906 USB-20 Nm incl. Manufacturer's Test Certificate M
	08630832	External Torque Transducer 906 USB-50 Nm incl. Manufacturer's Test Certificate M
	06820132	Test tool set C (4 pcs.), for 10 Nm, 20 Nm and 50 Nm
	06830132	Test tool set D (3 pcs.), for 20 - 500 Ncm
	08650132	External Displacement Transducer 906 USB - 5 mm incl. Manufacturer's Test Certificate M
	08650232	External Displacement Transducer 906 USB - 10 mm incl. Manufacturer's Test Certificate M
	08650332	External Displacement Transducer 906 USB - 25 mm incl. Manufacturer's Test Certificate M
	08650432	External Displacement Transducer 906 USB - 50 mm incl. Manufacturer's Test Certificate M
	08650532	External Displacement Transducer 906 USB – 100 mm incl. Manufacturer's Test Certificate M
	06910132	Clamping device for displacement transducer (Ord.-No. 0865.01.32 up to Ord.-No. 0865.04.32)
	06910232	Clamping device for displacement transducer (Ord.-No. 0865.05.32)

Ordering information		
	Ord.-No.	Product description
	08640132	External Pressure Transducer 906 USB (10 bar) Electronic pressure transducer (instead of pressure gauge), incl. Manufacturer's Test Certificate M
	08640232	External Pressure Transducer 906 USB (20 bar) Electronic pressure transducer (instead of pressure gauge), incl. Manufacturer's Test Certificate M
	08640332	External Pressure Transducer 906 USB (50 bar) Electronic pressure transducer (instead of pressure gauge), incl. Manufacturer's Test Certificate M
	08640432	External Pressure Transducer 906 USB (100 bar) Electronic pressure transducer (instead of pressure gauge), incl. Manufacturer's Test Certificate M
	08640532	External Pressure Transducer 906 USB (200 bar) Electronic pressure transducer (instead of pressure gauge), incl. Manufacturer's Test Certificate M
	08640632	External Pressure Transducer 906 USB (500 bar) Electronic pressure transducer (instead of pressure gauge), incl. Manufacturer's Test Certificate M

The right of technical modifications is reserved.
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