External Transducers for Measuring System PHYSIMETER® 906 USB

testing equipment for quality management

ERICHSEN
since 1910

Technical Description and Instruction Manual

Connecting a transducer to the PHYSIMETER® 906 USB

- Ensure that the **PHYSIMETER®** is switched off.
- Connect plug of the **transducer** into the appropriate jack of the **PHYSIMETER®** and tighten screws.
- Switch on **PHYSIMETER®** .
- Before applying force, pressure, displacement or torque, tare the measured value of the **PHYSIMETER®** to zero with the corresponding transducer in the position of use.

Using the force transducers 906 USB

The **force transducers** can be operated either with the fitted handle or by way of a fixed connection to a user-specific device.
In order to obtain correct measuring values the following should be observed:

- Tensile and pressure forces should only be applied in the direction of axis.
- Transverse forces and torques should be avoided, if necessary use a device instead of the handle.

Warning!

- The maximum screw depth for the M6 screws in the 906 measuring heads is 6 mm.
- The force transducers should be connected to **PHYSIMETER® 906 USB** instruments only.
- The connection of the transducer to other equipment is only possible in agreement with ERICHSEN.
- Any manipulation to the transducer will destroy the instrument. The calibration is no longer valid!

Using the torque transducers 906 USB

- The **torque transducers** are equipped with a 1/4" square adapter (20 to 500 Ncm) or a 3/8" square adapter (10, 20 and 50 Nm) for attaching standard tools which are available from any dealer.
- Only turning moments should be conducted to the rotational axis of the square adapter.
- Transverse forces and bending moments should be avoided.
- For high precision measurements in clean environments the axial gasket of the torque introduction axis should be removed.

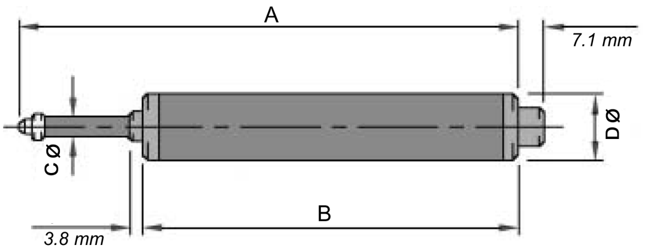
Warning!

- The **torque transducers** should be protected from overloading. Excessive stressing may cause severe damage.
- The **torque transducers** should be connected to **PHYSIMETER® 906 USB** instruments only.
- The connection of the **transducer** to other equipment is only possible in agreement with ERICHSEN.
- Any manipulation to the transducer will destroy the instrument. The calibration is no longer valid!

Using the displacement transducers 906 USB

The **displacement transducers** can be operated either with the fitted handle or by way of a fixed connection to a user-specific device.
Within the measuring process please pay attention to the following:

- Move probe tip only in direction of axis.
- Avoid transverse forces and torques on the probe tip.
- The **displacement transducers** should be connected only to **PHYSIMETER® 906 USB** instruments.
- The connection of the transducer to other equipment is only possible in agreement with ERICHSEN.
- Any manipulation to the transducer will destroy the instrument. The calibration is no longer valid!



Model	5 mm	10 mm	25 mm	50 mm	100 mm
A	104,2	109,2	138,2	215,4	380,2
B	88,6	88,6	103,6	155,2	266,0
C Ø	4,8	4,8	4,8	4,8	6,0
D Ø	17,4	17,4	17,4	17,4	25,4

Clamping devices for displacement transducer

Using the pressure transducers 906 USB

The **pressure transducers** are equipped with an M16x2 adaptive threading for direct connection to the measuring coupling, as shown at (A) above. The metering points must be adapted accordingly, e.g. by using the SMK 20-G1/4-PC measuring coupling made by Walter Stauffenberg GmbH & Co. KG. Other manufacturers of measuring couplings available on request.

Warning!

- The **pressure transducers** should be protected from overloading. Excessive stressing may cause severe damage to the transducer.
- The **pressure transducers** should be connected to **PHYSIMETER® 906 USB** instruments only.
- The connection of the transducer to other equipment is only possible in agreement with ERICHSEN.
- Any manipulation to the transducer will destroy the instrument. The calibration is no longer valid!

Order Information	
Ord.-No.	**Product-Description**
	For PHYSIMETER® 906 USB
08600132	Force transducer 906 USB - 20 N
08600232	Force transducer 906 USB - 50 N
08600332	Force transducer 906 USB - 100 N
08600432	Force transducer 906 USB - 200 N
08600532	Force transducer 906 USB - 500 N
08600632	Force transducer 906 USB - 1000 N
08600732	Force transducer 906 USB - 2000 N (Attention: max. load for 1000 N hook)
08630132	Torque transducer 906 - 20 Ncm
08630232	Torque transducer 906 - 50 Ncm
08630332	Torque transducer 906 - 100 Ncm
08630432	Torque transducer 906 - 200 Ncm
08630532	Torque transducer 906 - 500 Ncm
08630632	Torque transducer 906 - 10 Nm
08630732	Torque transducer 906 - 20 Nm
08630832	Torque transducer 906 - 50 Nm
08650232	Displacement transducer 906 - 10 mm
08650332	Displacement transducer 906 - 25 mm
08650432	Displacement transducer 906 - 50 mm
08650532	Displacement transducer 906 - 100 mm
08640132	Pressure transducer 906 - 10 bar
08640132	Pressure transducer 906 - 20 bar
08640132	Pressure transducer 906 - 50 bar
08640132	Pressure transducer 906 - 100 bar
08640132	Pressure transducer 906 - 200 bar
08640132	Pressure transducer 906 - 500 bar

Technical Data Force Transducer

Accuracy (tractive force):	+/- 0.2% of end value incl. PHYSIMETER®
Overload protection:	100 % of the final value
Length of measuring line:	1.5 m (not prolongable with coupler plug), special length on request
Reference temperature:	21 °C ± 2 °C
Operating temperature:	0 °C to +40 °C
Stocking temperature:	-30 °C to +85 °C
Protection type:	IP 30 (DIN VDE 0530)

Technical Data Torque Transducer

Accuracy:	+/- 0.5% of end value incl. PHYSIMETER®
Dimensions of torque transducers 20 to 500 Ncm:	(L x W x H)
Transducer without grip	180 x 30 x 34 mm
Transducer with grip	180 x 160 x 34 mm
Dimensions of torque transducers 10, 20 and 50 Nm:	(L x W x H)
Transducer without grips	210 x 46 x 53 mm
Transducer with grips	210 x 230 x 34 mm
Reference temperature:	21 °C ± 1 °C
Stocking temperature:	-30 °C to +85 °C
Operating temperature:	0 °C to +40 °C
Protection type:	IP 30 (DIN VDE 0530)

Technical Data Displacement Transducer

Accuracy: incl. PHYSIMETER®	± 0.2% v.E.
Cable length:	2 m
Referencetemperature:	21 °C ± 2 °C
Operating temperature:	-10 °C to +40 °C
Stocking temperature:	-30 °C to +80 °C

Technical Data Pressure Transducer

Accuracy:	+/- 0.5% of end value incl. PHYSIMETER®
Dimensions	(L x width of wrench)
Transducer with connector:	115 x 27 mm
Transducer without connector:	105 x 27 mm
Reference temperature:	21 °C ± 2 °C
Operating temperature:	0 °C to +40 °C
Stocking temperature:	-30 °C to +85 °C
Protection type plug:	IP 30 (DIN VDE 0530)
Protection type transducer:	IP 65 (DIN VDE 0530)

TBE Transducer – IV/2025

CERTIFIED ISO 9001