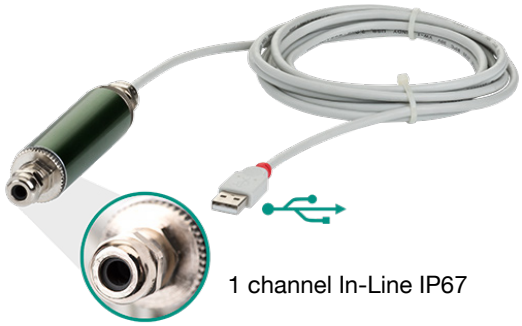
USB Sensor Interface

For strain gauge, potentiometric, DC/DC and Pt100 sensors

Model 9206

Code:	9206 EN
Delivery:	ex stock/1 week
Warranty:	24 months



1 channel In-Line IP67

1 channel In-Line round connector

USB multi sensor interface in housing

- **Inexpensive "Plug & Measure" design**
- **Simple connection via PC USB port**
- **Measurement accuracy < 0.05 % F.S., optional 0.01 % F.S. incl. DAkkS**
- **24 bit resolution**
- **6 wire technology for the highest precision**
- **High-speed measurement of up to 1200 readings/sec.**
- **Convenient configuration and analysis software DigiVision for max. 32 measurement channels**
- **Pt100 as option**
- **LabVIEW, DASYLab and DLL drivers free of charge**

Application

In the field there is a frequent need to measure sensor readings rapidly and easily right at the sensor and to transfer them directly to a PC without additional amplifiers or converters. The 9206 USB sensor interface can satisfy this requirement admirably, thanks to its „plug & measure“ design. The USB connection means installation could not be simpler.

Typical applications:

- ► Mobile test measurements via laptop
- ► Laboratory test set-ups
- ► Instrumentation and control
- ► Diagnostic measurements in the chemical industry
- ► PC-based recording of expansion figures in bio engineering

Description

“Plug & Measure” is the concept of the USB sensor interface 9206. Whether as a 1 channel In-Line version or as a multi-channel solution in a desktop housing, the 9206 provides high-performance and cost-effective measured value acquisition for analog sensors such as full-bridge strain gages and potentiometric sensors , DC/DC transmitter and Pt100 sensor.

With the DigiVision measurement software included in the scope of delivery, the USB sensor interface can be flexibly parameterized for your measurement task. The software offers extensive functions for recording, displaying and logging measurement data.

With the LabVIEW and DLL driver packages available free of charge, the USB sensor interface can be flexibly integrated into your own programs. Whether in the laboratory as a table-top device or in a harsh environment as a 1 channel In-Line IP67 version, the USB sensor interface can be used in many ways. The 9206 in a desktop case with an increased measuring accuracy of 0.01 % F.S. is suitable for precision applications with DAkkS certificate.

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Technical Data

Connectable sensors

Strain gauge

Bridge resistance:	350 Ω ... 5 kΩ
Connection system:	6 wire
Sensitivity:	0 ... 50 mV/V
Sensor excitation:	2.5 V / 5 V
Excitation current:	max. 45 mA
Measurement:	± 0.05 % F.S.

Potentiometer

Connection system:	3 wire
Resistance:	1 kΩ ... 5 kΩ
Measurement signal:	5 V
Sensor excitation:	5 V
Excitation current:	max. 45 mA
Measurement error:	± 0.05 % F.S.

Transmitter and DC/DC sensors

Sensor excitation:	12 V
Excitation current:	80 mA
Measurement signal:	± 10 V
Measurement error:	± 0.05 % F.S.

Temperature Pt100

Sensors:	Pt100
Range:	- 200 ... + 600 °C
Accuracy:	0.1 K
Measuring rate:	max. 2 measurements/s

General amplifier data

Resolution:	24 bit
Measuring rate ecxept Pt100: up to 1200 measurements per second only with software 9206-P100 or 9206-P200 up to 200 measurements per second and 1 measuring channel with 9206-P001	
Input resistance:	> 1 GΩ
Temperature coefficient:	20 ppm/K
Environmental temperature range:	0 ... + 60 °C
Storage temperature:	- 40 ... + 70 °C
Zero drift:	< 0.1 µV/K

In-Line housing

Material:	Aluminium
Dimensions:	115 x 25 [mm]
Weight:	200 g
Protection class:	IP67 (PG) / IP40 (12 pin socket)
Mounting method:	screw clamp
Power supply:	via USB-plug 4 V ... 6 V
Cable length from sensor to 9206:	max. 3 m
Sensor connection:	PG 7 / 12 pin socket (mating connector 9941)
USB connection:	Type A, cable length 2.8 m

Desktop housing

Material:	Aluminium
Dimensions:	210 x 150 x 90 mm
Protection class:	IP20
Power supply:	90 ... 230 VAC / 11 ... 30 VDC
USB connection:	slaveport (Type B)
Sensor connection:	9 pole Sub min D
Isolation:	yes / rated voltage 50 V
Display:	status LED
Energy input:	max. 30 VA

Software DigiVision

System requirement:	Windows 7, 8.1, 10

Order Code

USB-Sensor-Interface 9206-V X 0 0 X

IP67 - In-Line	0
IP40 - In-Line with 12 pin connector for sensors	2
Strain gauge, Poti, DC/DC	1
Pt100	2

including measurement and analysis software 9206-P001

USB multi sensor interface - in housing

9206-V3 Sensor1 Sensor2 Sensor3 Sensor4 – ☐

unoccupied	0
Strain gauge, Poti, DC/DC	1
Pt100	2

Option increased measurement accuracy for strain gauge input only 0.01 % F.S. incl. DAkkS certificate	– H

9206-V3xxxx including measurement and analysis software 9206-P100

Order Information

An example for ordering a desktop case version

Desktop case version with 2 USB sensor interfaces for strain gauge sensors and 2 USB sensor interfaces for Pt100 sensors.
The software DigiVision 9206-P100 is included **Model 9206-V31122**

Adjustment of a measurement chain

Consisting of sensor and
USB sensor interface incl. test certificate **92ABG**

Accessories

Configuration and evaluation software DigiVision for 1 channel measurement and 200 measurements/sec.
(included in scope of delivery) **Model 9206-P001**

Configuration and evaluation software DigiVision for multi-channel measurement. The software can display up to 16 USB Sensor Interfaces parallely. Up to 1200 meas./sec. are possible, no mathematic functions or calculation **Model 9206-P100**

Configuration and evaluation software DigiVision for multi-channel (displays up to 32 measurement curves at the same time) and measurement, up to 1200 meas./sec. possible. Measurement results can be offset against each other via freely programmable mathematic measuring channels. **Model 9206-P200**

Connecting cable, 12 pin female connector
one end open for 9206-V0001 **Model 99540-000A-0150002**

Connecting cable, 9 pin Sub-D female connector
one end open for 9206-V0001 **Model 99609-000E-0150002**

DAkkS certificate for the DMS measurement range of the 9206-V03xxxx-H, for 1 measuring channel, for the option of the accuracy of 0.01% F.S. **Model 92DKD-9206-V3H**

12 pin connector for In-Line **Model 9941**

9 pin connector for desktop unit **Model 9900-V209**

Multichannel mount for instrumentation amplifier
Model 9236-V0xx and Model 9206-V0xxx **Model 9236-Z001**

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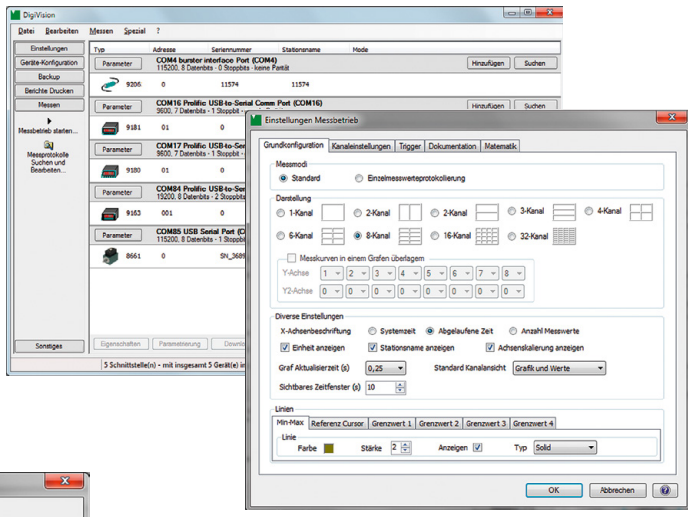
DigiVision Configuration and Analysis Software

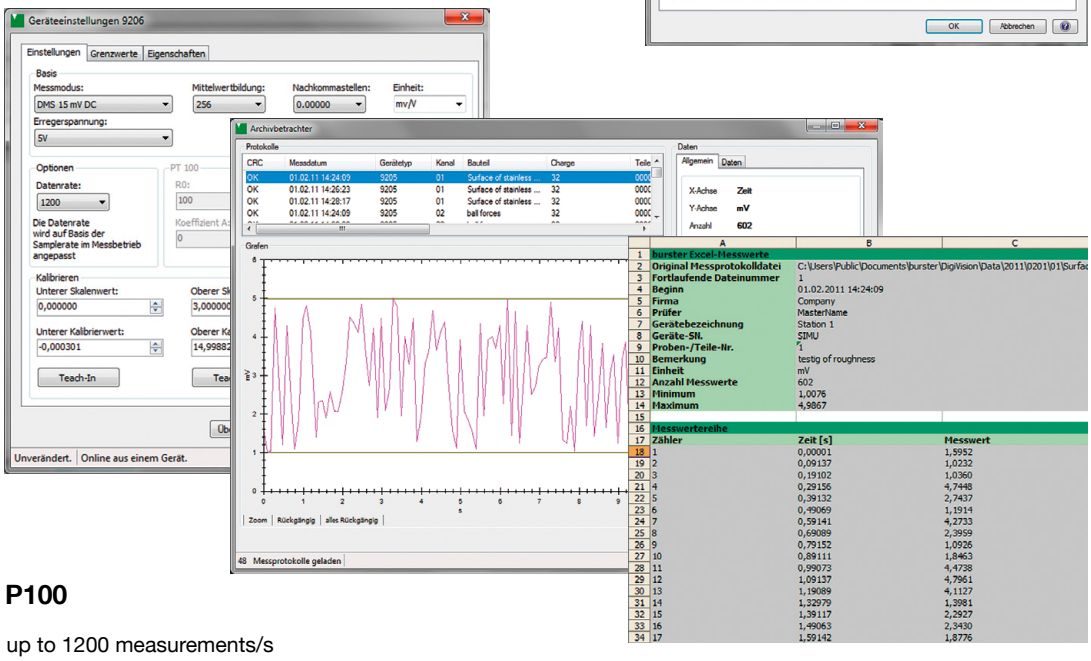
General Software Data

- Convenient device finder
- Instrument parameterization
- Instrument data adopted automatically, e.g. scaling, limit settings
- Back-up function for instrument data
- Simultaneous display of up to 16 measurement channels
- Different measurement rates can be combined
- Different triggers can be set: global or channel-specific
- Creation of instrument groups
- Report finder for locating group reports and individual reports
- Documenting individual measurement curves with various options e.g. serial number, batch counter, day counter
- Functions like tare and reset min/max values switchable in measuring mode
- Export function to Excel
- Communication with a controller unit (PLC etc.) via RS232 or Ethernet



Software DigiVision P001

- 1 interface with up to 200 measurements/s



Software DigiVision P100

- max. 16 channels with up to 1200 measurements/s

9206 EN

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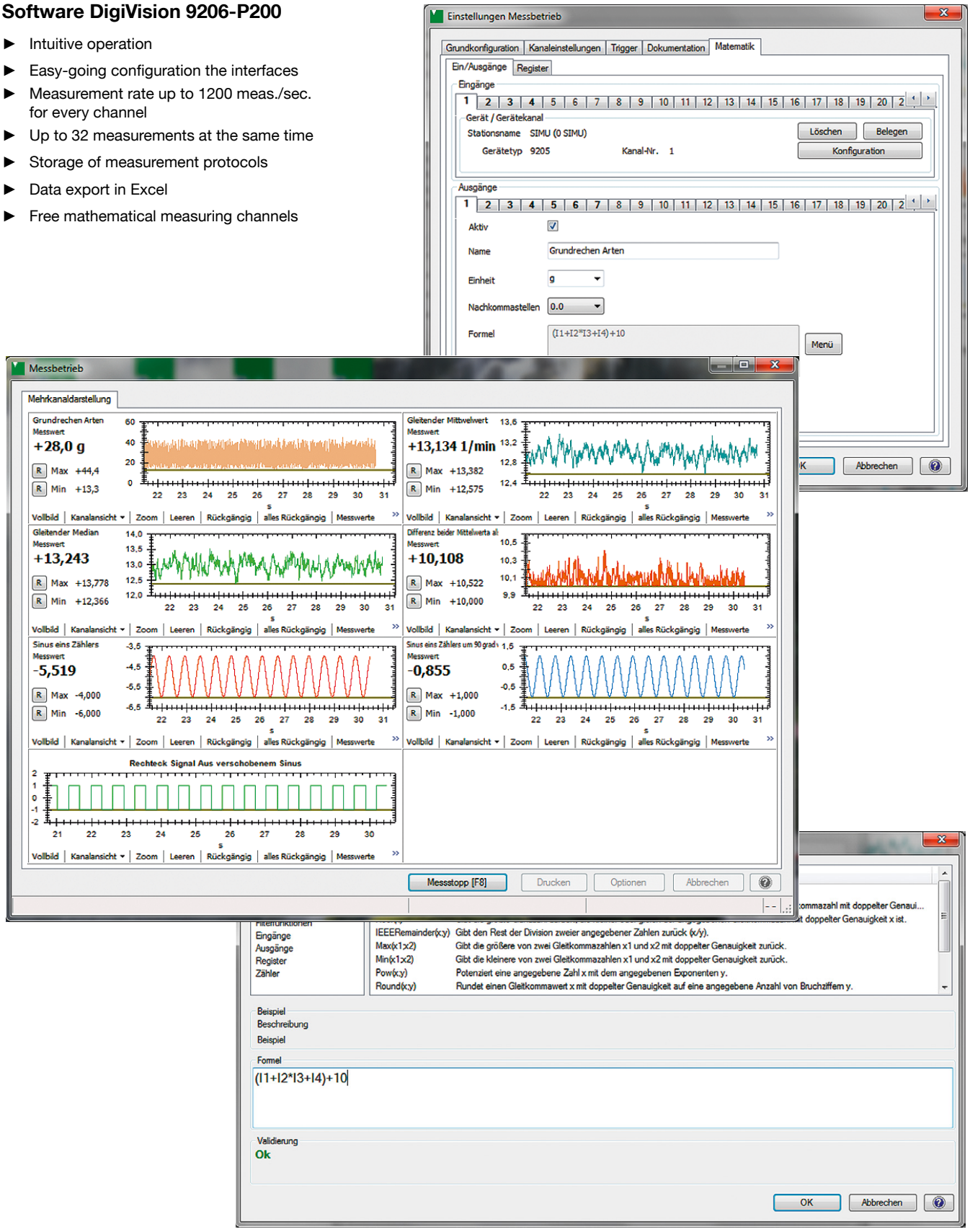
Software DigiVision 9206-P200

- Intuitive operation
- Easy-going configuration the interfaces
- Measurement rate up to 1200 meas./sec. for every channel
- Up to 32 measurements at the same time
- Storage of measurement protocols
- Data export in Excel
- Free mathematical measuring channels



Typical Applications

- Differential measurements
- Averaging of the measurement results
- Determination of efficiency in engine test
- Determine mass moment of inertia
- Determine the frictional force
- Comparison of different measurement readings

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