

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





USB multi sensor interface in housing

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



- 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

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.

Technical Data

Excitation current:

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

Measurement error:
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	
	or 9206-P200
up to 200 measurements per second and 1 mea	
	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]

Bimenelene.		
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 ser	nsor 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:

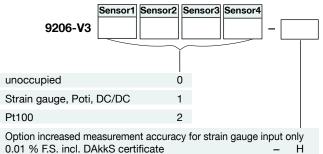
Order Code

max. 45 mA

± 0.05 % F.S.

USB-Sensor-Interface 9206-V	X O O 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 so	ftware 9206-P001

USB multi sensor interface - in housing



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 Model 99540-000A-0150002 one end open for 9206-V0001 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

9 pin connector for desktop unit

Model 9900-V209

© 2-Kanal ____ © 3-Kanal ____ © 4-Kanal ____

© 6-Kanal 💮 🛞 8-Kanal 💮 💿 16-Kanal 💮 💿 32-Kanal

1,19089 1,32979 1,39117

inem Grafen üt

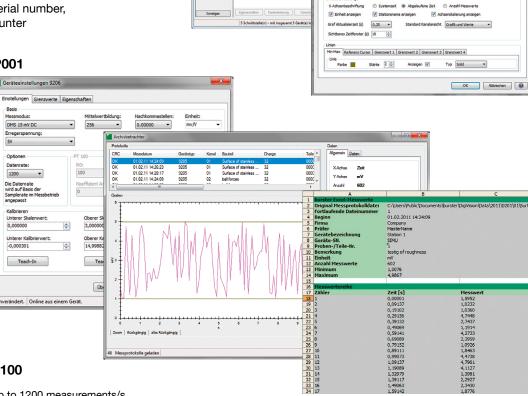
DigiVision Configuration and Analysis Software

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

Software DigiVision P001

1 interface with up to 200 measurements/s



Functions like tare and reset

Export function to Excel

Typ Adresse Parameter COM4 115200 A 9205

Peremeter 9500

9181

Parameter

Parameter

6 9163 COM85 U 115200, 8 D

8661 0

Parameter

9100

0

►

►

Be

.

Messprotokole Suchen und Resetueten

min/max values switchable in measuring mode

Communication with a controller unit

11574

Part (COM10

inundkonfiguration

Messmodi Standard

1-Kanal

Me

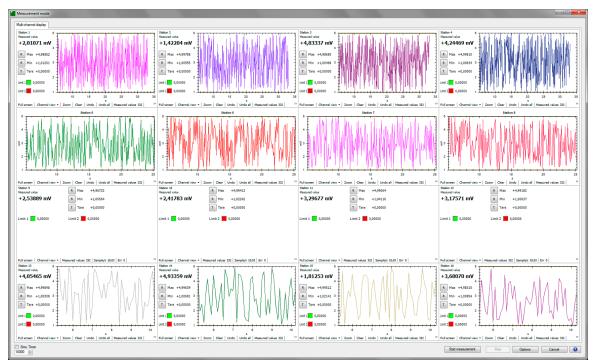
(PLC etc.) via RS232 or Ethernet

11574

ial Port (

Software DigiVision P100

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



Technical changes reserved. All data sheets at www.burster.com

burster praezisionsmesstechnik gmbh & co kg Germany Talstr. 1-5 · Gernsbach 76593 · Phone +49-7224-6450

Software DigiVision 9206-P200	Einstellungen Messbetrieb
Intuitive operation	Grundkonfiguration Kanaleinstellungen Trigger Dokumentation Matematik
 Easy-going configuration the interfaces 	En/Ausgänge Register
Measurement rate up to 1200 meas./sec.	Engânge 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 2
for every channelUp to 32 measurements at the same time	Gerät / Gerätekanal Stationsname SIMU (0 SIMU) Löschen Belegen
	Gerätetyp 9205 Kanal-Wr. 1 Konfiguration
Storage of measurement protocols	Ausgänge
 Data export in Excel 	Pussange 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 2 4 >
 Free mathematical measuring channels 	Aktiv 😨
	Name Grundrechen Arten
	Einheit 9 💌
	Nachkommastellen 0.0
	Formel ([1+12*13+14)+10
Messbetrieb	
Mehrkanaldarstellung	
Grundrechen Arten 60 grundrechen 60	ander Mittwelwart 13,6 group recommendation and r
Messwert +28,0 g 40 tradeliteriteriteriteriteriteriteriteriteriter	ment 3,134 1/min ^{13,2} , λ. / Mul Mak MA 1 / Mul Mul A Mul Mul A Mul
R Max +44,4 20 sector to the dependence of the d	Max +13,382
R Min +13,3 0 3+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1	Min +12,575 12.4 ++++++++++++++++++++++++++++++++++++
	ild Kanalansicht • Zoom Leeren Rückgängig alles Rückgängig Messwerte
Messwert 13.5	
	Max +10,522 10.1
	Min +10,000 22 23 24 25 26 27 28 29 30 31
	id Kanalansicht + Zoom Leeren Rückgängig alles Rückgängig Messwerte
-5.5 ¥V Y Y V V V Y V V V V V V V I] _ `	
	Max +1,000 -1,5 -1,1 -1,1 -1,1 -1,1 -1,1 -1,1 -1,1
22 23 24 25 20 27 26 29 30 31	22 23 24 25 26 27 28 29 30 31 s ild Kanalansicht ▼ Zoom Leeren Rückgängig alles Rückgängig Messwerte →>
Rechteck Signal Aus verschobenem Sinus	
21 22 23 24 25 26 27 28 29 30 s	
Volibiu Kanaansicht V 200m Leeren Kuckgangig alles kuckgangig messiverte	
	Messstopp [F8] Drucken Optionen Abbrechen @
Piteronkuonen IEFERemaind	.::) ommazani mr doppeter Genau t doppeter Genauigket x ist.
Ausgänge Max(x1x2)	Gibt die größere von zwei Gleitkommazahlen x1 und x2 mit doppelter Genauigkeit zurück.
Register Min(x1x2) Zähler Pow(x1x)	Gibt die kleinere von zwei Gleitkommazahlen x1 und x2 mit doppetter Genauigkeit zurück. Potenziert eine angegebene Zahl x mit dem angegebenen Exponenten y.
Round(x;y)	Rundet einen Gleitkommawert x mit doppelter Genauigkeit auf eine angegebene Anzahi von Bruchziffem y.
Beispiel Beschreibung	
Beispiel	
(11+12*13+14)+10	
Validierung	
Ok	

Typical Applications

9206 EN - 4

- 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