

USB Sensor Interface

For strain gauge, potentiometric and DC/DC sensors

Model 9205

Code:	9205 EN
Delivery:	ex stock/1 week
Warranty:	24 months

CAD data 2D/3D for this device:
Download directly at www.traceparts.com
Info: refer to data sheet 80-CAD-EN



1 channel In-Line IP65



USB multi sensor interface in housing

- New inexpensive "plug & measure" design
- Simple connection via PC USB port
- Up to 16 bit resolution
- High-speed measurement of up to 2500 readings/sec.
- Convenient configuration and analysis software DigiVision
- LabVIEW Drivers
- Pt100 as option

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 9205 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

The USB sensor interface takes its supply from the connected PC via the USB port, and uses it to generate the 4 V supply voltage for the sensors. The initial settings and sensor settings are made by burster in-house and saved in the USB sensor interface. These can then be fine-tuned by the customer.

Software provides display and archiving functions. But a license key enables an open-end expansion. 8 interface output curves may be displayed at the same time. One USB Sensor interface can be connected as standard. Each sensor can be tared individually, and measurement curves can be displayed jointly or separately in a graph. We can configure the interface to suit a specific sensor, although customer-specific parameters can be changed using the free analysis software supplied.

The connection to LabVIEW or the integration into customer's software programs is enabled by a free driver package.

Technical Data

Connectable sensors

Strain gauge

Bridge resistance:	350 Ω ... 5 kΩ
Connection system:	4 wire
Sensitivity:	0 ... ± 3 mV/V
Sensor excitation:	4 V
Excitation current:	max. 20 mA
Input resistance:	200 GΩ
Measurement:	< ± 0.05 % F.S.
Temperature coefficient:	10 ppm/ K
Resolution:	16 bit

Potentiometer

Connection system:	3 wire
Resistance:	1 kΩ ... 5 kΩ
Measurement signal:	± 5 V
Sensor excitation:	4 V
Excitation current:	max. 20 mA
Input resistance:	1.3 GΩ
Measurement error:	< ± 0.05 % F.S.
Temperature coefficient:	10 ppm/K
Resolution:	16 bit

Transmitter

Sensor excitation:	4 V / 12 V
Excitation current:	max. 20 / 80 mA
Measurement signal:	± 5 V
Measurement error:	< ± 0.05 % F.S.
Temperature coefficient:	10 ppm/ K
Resolution:	16 bit

Temperature*

Sensors:	Pt 100
Range:	0 ... 300 °C
Dimensions (W x H x D):	70 X 60 X 35 [mm]
Output:	0 ... 5 V
Accuracy:	0.1 K

*on request

Signal process

A/D transformation:	up to 16 bit
Measuring rate:	up to 2500 readings per seconds only with software 9205-P100

In-Line housing

Material:	Aluminium
Dimensions:	115 x 25 [mm]
Weight:	200 g
Protection class:	IP65
Mounting method:	screw clamp
Power supply:	via USB-plug 4 V ... 6 V
Cable length from sensor to 9205:	max. 3 m
Cable length from PC to 9205:	2 m
Sensor connection:	PG 7 connection
USB connection on 9205:	PG 7 connection

Desktop housing

Material:	Plastic
Dimensions:	290 x 210 x 80 [mm]
Protection class:	IP20
Power supply:	5 V with external power supply unit
Cable length from PC to 9205:	1 m
Sensor connection:	9 pole Sub min D

Software

System requirement: Windows 2000, XP, Vista

Order Information

In-Line Version

USB sensor interface for strain gauge sensors, including DigiVision 9205-P001 (max. 200 measurements per second) and 2 m cable to PC **Model 9205-V001**

In-Line Version

USB sensor interface for potentiometric or DC/DC sensors, including DigiVision 9205-P001 (max. 200 measurements per second) and 2 m cable to PC **Model 9205-V002**

Order Code

Sensor for tension and compression load, range 1 KN with USB sensor interface **Model 8435-6001**
Model 9205-V001

When ordering, you have to specify the sensor separately.

Adjustment from the sensor to 9205 **Model 9205-ABG**

Order Information

Desktop version **Model 9205-V3xxxx**
9205 in desktop case version, for every channel is possible to use 9205-V003 or 9205-V004. The maximum is 4 channels.

USB sensor interface for strain gauge sensors

Additional board for desktop case version **Model 9205-V003**

USB sensor interface for potentiometric or transmitter sensors

Additional board for desktop case version **Model 9205-V004**

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 potentiometric and DC/DC sensors.

The software DigiVision 9205-P100 is included. **Model 9205-V33344**

Adjustment of a measurement chain

Consisting of sensor and USB sensor interface **Model 9205-ABG**

Accessories

Configuration and evaluation software DigiVision for 1 channel measurement and 200 measurements/sec. (included in scope of delivery) **Model 9205-P001**

Configuration and evaluation software DigiVision for multi-channel (displays up to 8 measurement curves at the same time) and measurement, up to 2500 meas./sec. possible **Model 9205-P100**

Connecting cable, 12 pin female connector one end open **Model 99540-000C-0090005**

Connecting cable, 9 pin Sub-D female connector **Model 99609-000C-0090005**

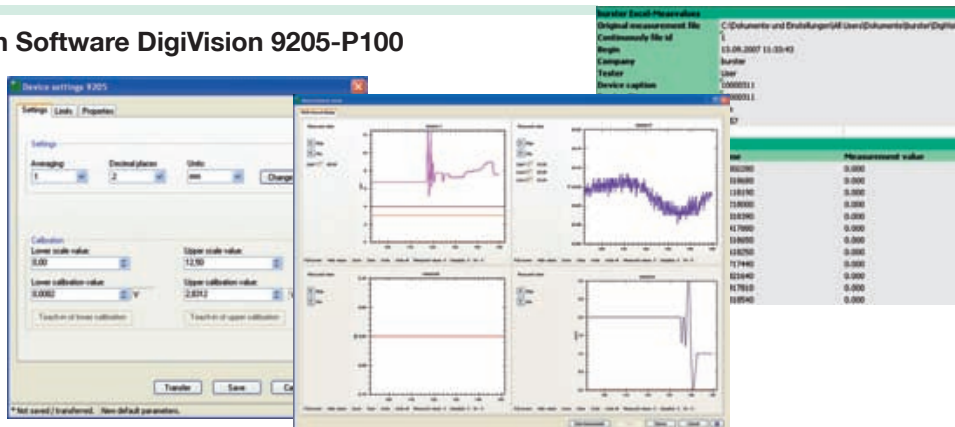
We recommend the following USB hub for cross linking several USB sensor interface **Hama 78483**

The CAD drawing (3D/2D) for this device can be imported online directly into your CAD system.

Download via www.burster.com or directly at www.traceparts.com. For further information about the burster traceparts cooperation refer to data sheet 80-CAD-EN.

Configuration and Evaluation Software DigiVision 9205-P100

- ▶ Intuitive operation
- ▶ Easy-go-configuration the interfaces
- ▶ Measurement rate up to 2500 meas./sec. (with 9205-P100) for every channel
- ▶ Up to 8 measurements at the same time
- ▶ Storage of measurement protocols
- ▶ Data export in Excel



DigiVision - One for All

One PC Software for the acquisition of measuring data supports following instrument series

NEW

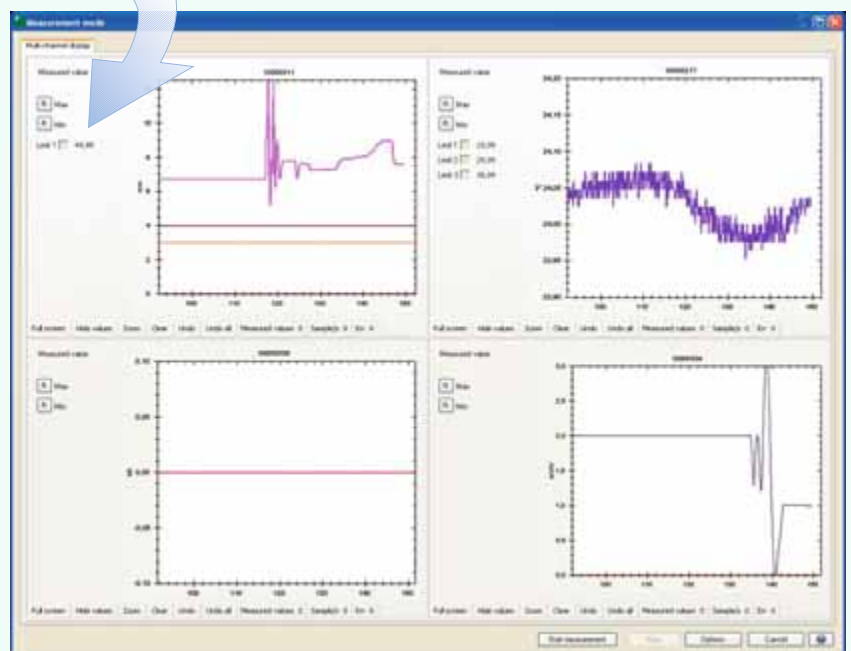
- ▶ **Sensor Master 9163**
- ▶ **DIGIMASTER 9181**
- ▶ **Digital Indicator 9180**
- ▶ **USB Sensor Interface 9205**



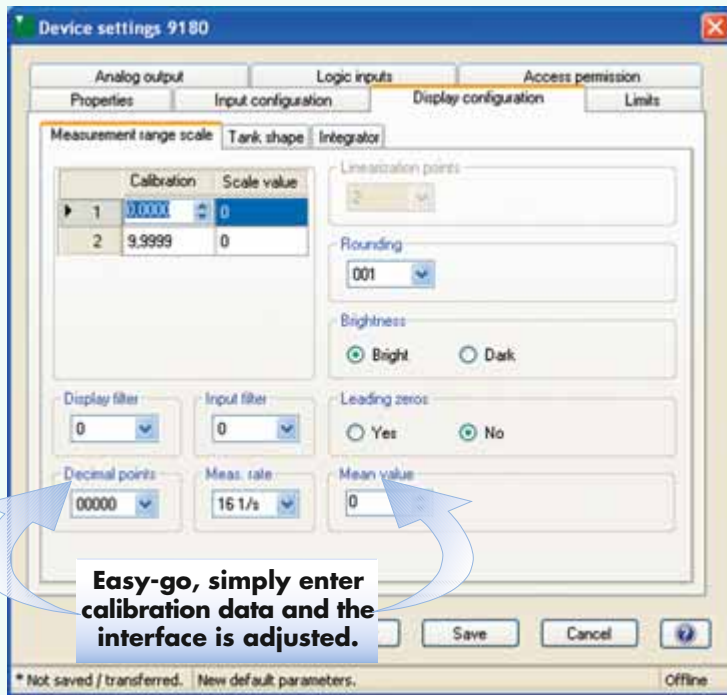
- Easy-to-handle instrument recognition
- Intuitive handling through evident and clearly structured operator interface
- Parameter setting without license code
- Automatic take-over of instrument parameters

Show whatever you want !

- Up to 8 simultaneous measurements
- Innovative visualization tools for process parameters
- Outline of manifold process and test information



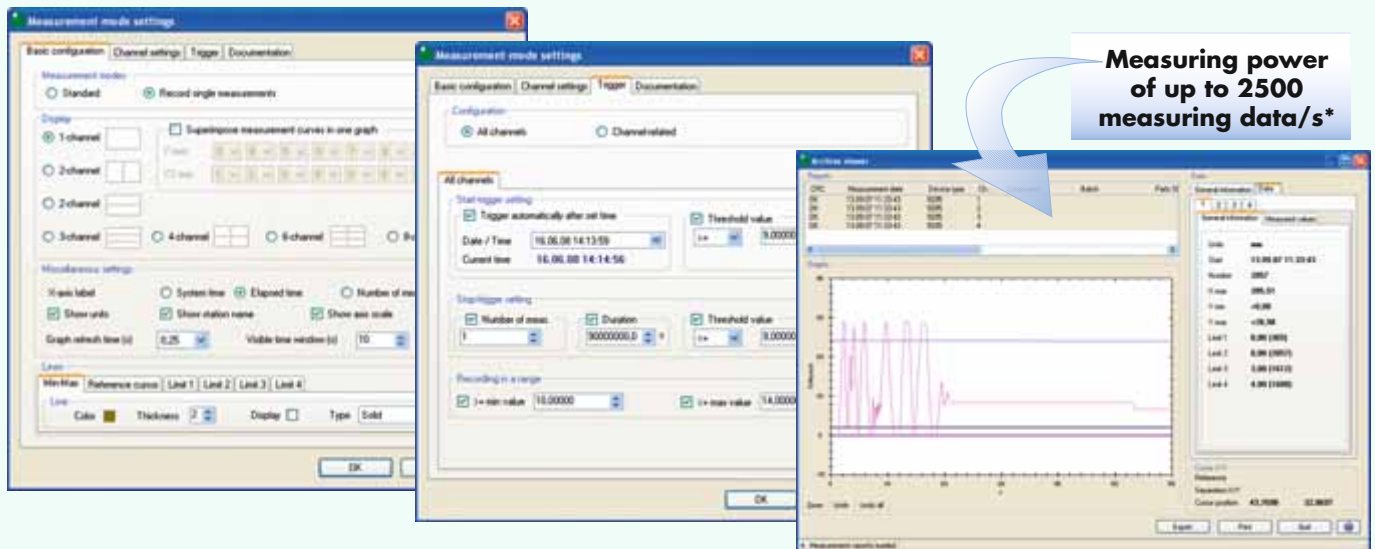
Input mask for configuration towards the affiliated sensor



Compilation of a device specific back-up file

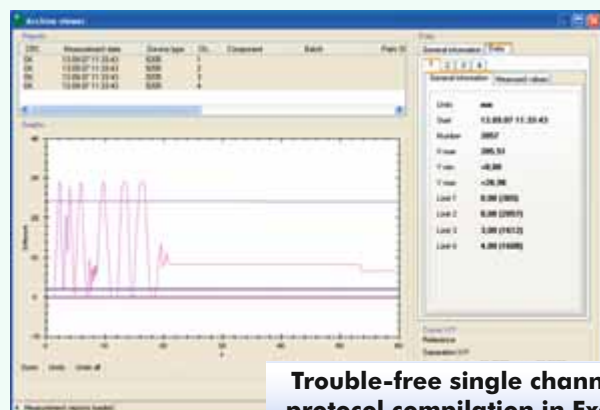
Simple parameter setting of the logic inputs (or interlinking)

Adjustment of different options, as start/stop trigger, measuring rate; storage of the measuring data and access rights



Measuring power of up to 2500 measuring data/s*

Export to Excel file



Trouble-free single channel protocol compilation in Excel

* 200 measurements/s for 9205-P001
2500 measurements/s for 9205-P100

burster Excel Messwertexport		
Original measurement file		
Continuously file id		
Begin	13.09.2007 11:23:43	
Company	burster	
Tester	User	
Device caption	10000311	
Device-SPN	10000311	
Unit	mm	
Number of values	2057	
Counter	Time	Measurement value
1	0.002280	0.000
2	0.015680	0.000
3	0.118190	0.000
4	0.218000	0.000
5	0.318390	0.000
6	0.417980	0.000
7	0.518650	0.000
8	0.618250	0.000
9	0.717440	0.000
10	0.821640	0.000
11	0.917810	0.000
12	1.018540	0.000