

burster

THE MEASUREMENT SOLUTION

YOUR INDIVIDUAL PRODUCT INFORMATION





THE MEASUREMENT SOLUTION

HIGH-TECH FROM A STRONG SOURCE

burster specializes in the development, production and sale of measuring and test devices, sensors and measurement systems as well as calibration services. Since 1961, burster has set standards for precision, quality and flexibility. This has made the German medium-sized enterprise one of the world's foremost suppliers of sensor signal processing and process monitoring systems.

Globally, burster is in contact with more than 140,000 people in industry and R&D. We are partners for mechanical and plant engineering and automation, the automotive industry and its suppliers, electrical and electronic engineering, the chemicals industry, e-mobility as well as many other sectors and future or niche markets such as medical engineering, biotechnology and robotics.



SENSOR ELECTRONICS

AMPLIFIER AND TRANSMITTER MODULES

TYP9250



Universal Instrumentation Amplifier

- Non-linearity: < 0.005 % F.S.
- Type of sensor: Strain gauge; Potentiometer; DC/DC; incremental sensors
- burster TEDS
- Increased sampling rate up to 14400 Meas./s; Digital I/O

TYP9251



Fieldbus Controller

- Communication interfaces: PROFINET, EtherCAT, EtherNet/IP
- Multi-channel capability: Up to 8 model 9250 instrumentation

TYP9206



USB multisensor interface

- Measurement error: up to 0.01 % F.S.
- Type of sensor: Strain gauge; Potentiometer; DC/DC; Pt100
- Sample rate: 1200/s
- In-Line IP67 housing / desktop housing

TYP9235



IN-LINE amplifier for strain gauge sensors

- Measurement error: 0.1 % F.S.
- Type of Sensor: Strain gauge
- Space saving and lightweight

TYP9236



Multichannel amplifier for strain gauge sensors

- Measurement error: 0.1 % F.S.
- Type of Sensor: Strain gauge
- Up to 4 channels
- Top-hat rail mounting / IP67 housing

TYP9243



Amplifier module

- Measurement error: < 0.05 % F.S.
- Type of sensor: Strain gauge; Potentiometer; DC/DC; Transmitter;
- Cut-off frequency: 1 kHz, optional 4 kHz
- Top-hat rail mounting / IP65 housing

TYP9221

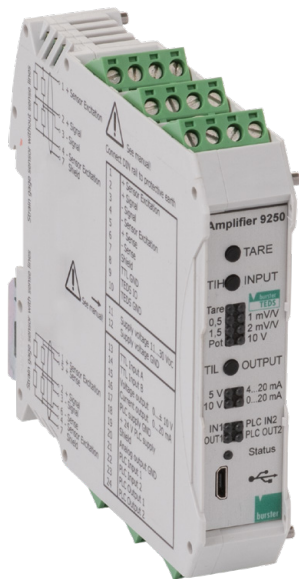


Sensor PROFIBUS module

- Measurement accuracy: < 0.03 % F.S.
- Sample rate: 1 kHz
- Type of sensor: Strain gauge; potentiometer; analog standard
- ...

Universal Instrumentation Amplifier for strain gage, potentiometric, DC/DC and incremental sensors

MODEL 9250



Highlights

- Ultra-fast pushbutton configuration
- Non-linearity < 0,005 % F.S.
- Outputs ± 10 V, ± 5 V and 0 (4) - 20 mA
- 6 wire technique
- Automatic sensor recognition due to burster TEDS
- Adjustable cut-off frequencies
- Versatile configuration using DigiVision PC software via USB port

Options

- Digital I/O to the PLC
- Increased sampling rate up to 14400 Meas./s.
- Interface for the connection to fieldbus controller 9251
- TTL input for incremental sensors

Applications

- All areas of mechanical engineering
- Assembly and joining equipment
- Hydraulic presses
- Measurement of cable strengths

Product description

The new 9250/9251 amplifier generation unites all the features that make modern measurement data acquisition actually possible for the first time. Network-compatible, high-precision, user-friendly, smart and versatile: the combined system of amplifier module and fieldbus controller can be integrated into any existing setup. The amplifier 9250 takes signals exactly to the point where they can be combined, monitored and linked efficiently to other data. The fieldbus interfaces give you flexibility, speed and perfect connections, and save you time, money and other resources when integrating your measurement setup with existing systems. Automatic sensor recognition due to burster TEDS lets you play absolutely safe, protecting you from setting incorrect parameters.

The broad supply voltage range permits operation on standard power supplies used in switch gear cabinets. A highly accurate precision amplifier performs the amplification of the sensor signal being applied. The latest microprocessor technology made a 24 bit AD conversion with high accuracy possible. The sensor excitation is performed by the amplifier module itself so that no additional voltage source is required. It can also be set in steps of 2.5 V, 5 V, 10 V using configuration software DigiVision. The maximum feed current of 40 mA permits parallel connection of several strain gages sensors, e.g. for the addition of measurement variables. Measurement errors brought about by varying line lengths or due to temperature fluctuations effecting the sensor cable are avoided by having probe lines measuring the actual feed voltage directly on site at the sensor itself (6 wire technology). The cut-off frequency of the amplifier can be switched between 10 Hz and 1 kHz.



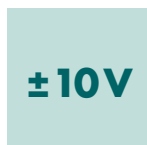
Instrumentation amplifier 9250 with bus interface for 9251



Fieldbus controller 9251



Fieldbus controller 9251 with up to 8 instrumentation amplifiers 9250



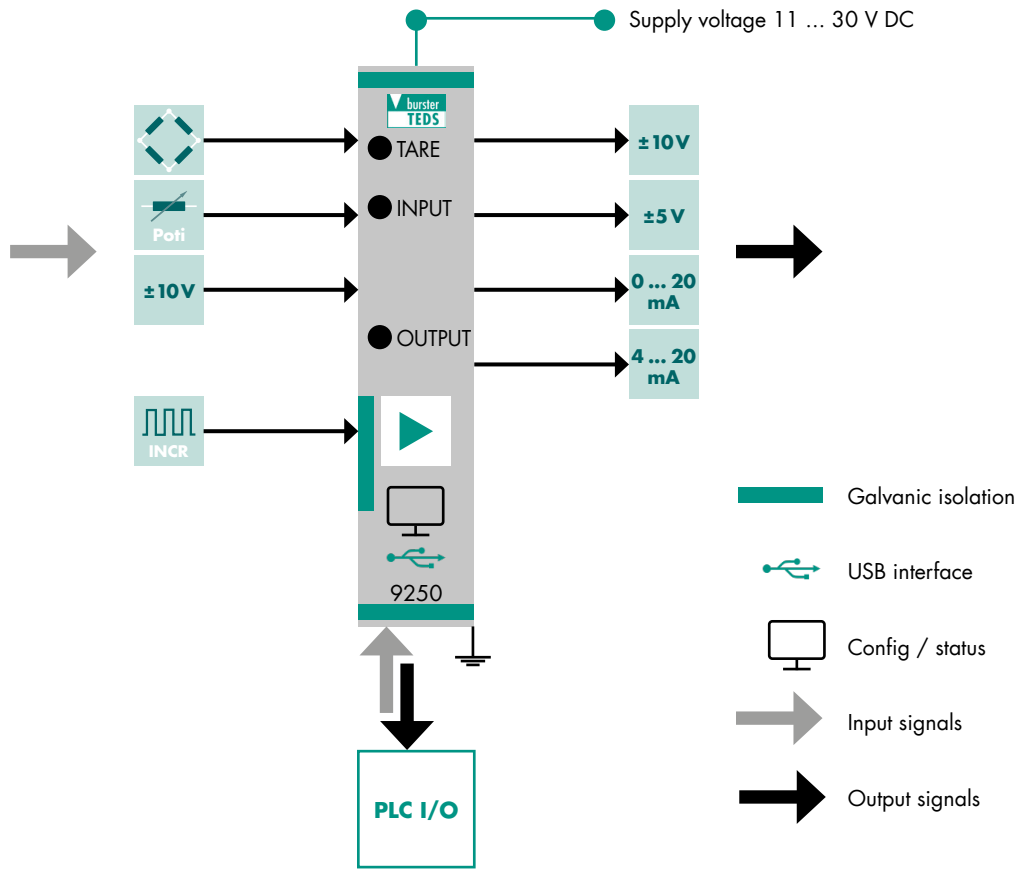
Technical Data

Connectable sensors		
Strain gage full bridge		
Excitation voltage		2.5 / 5 / 10 V, configurable, short-circuit proof
Connection technology		4 or 6 wire, automatic recognition
Excitation current		approx. 40 mA
Input impedance		1 GOhm
Measuring ranges		±15 mV, ±30 mV, ±300 mV
Potentiometer		
Excitation voltage		5 V
Excitation current		max. 40 mA
Resistance		> 200 Ohm
Input impedance		1 GOhm
Voltage metering		
Measuring range		±10 V
Input impedance		1 GOhm
TTL inputs		
Level		TTL, 5V, approx. 3 mA, galvanically isolated from amplifier
Counter depth		32-bit, 4 counter increments
Cut-off frequency		2 MHz
Analog outputs		
Voltage outputs		±5 V or ±10 V
Internal resistance		100 Ohm
Current output		0 ... 20 mA or 4 ... 20 mA, Load 50 up to 500 Ohm
Filter		without, opt. 4 Hz - 700 Hz in steps active at a measuring speed of 7200 meas./s.
PLC IO		
Two inputs		PLC level DIN 61131
Function		Tare, peak-value buffer reset, limits reset, HOLD, counter reset
Response time		20 ms
Two outputs		PLC level DIN 61131, p-switched, max. 500 mA, 24 V external supply necessary, Inputs and outputs galvanically isolated from amplifier, Function configurable via USB
Function		Above limit, below limit, window modus
Response time		< 0.5 ms
Internal communication bus to the fieldbus controller 9251		
Transmission speed		3.6 kHz
Housing		
Material		polyamides, metal housing inside
Dimensions		115 x 110 x 22.5 mm (D x H x W)
Weight		approx. 210 g
Protection class		IP20
Connections		Screw clamps, up to 2.5 mm ²

Technical Data

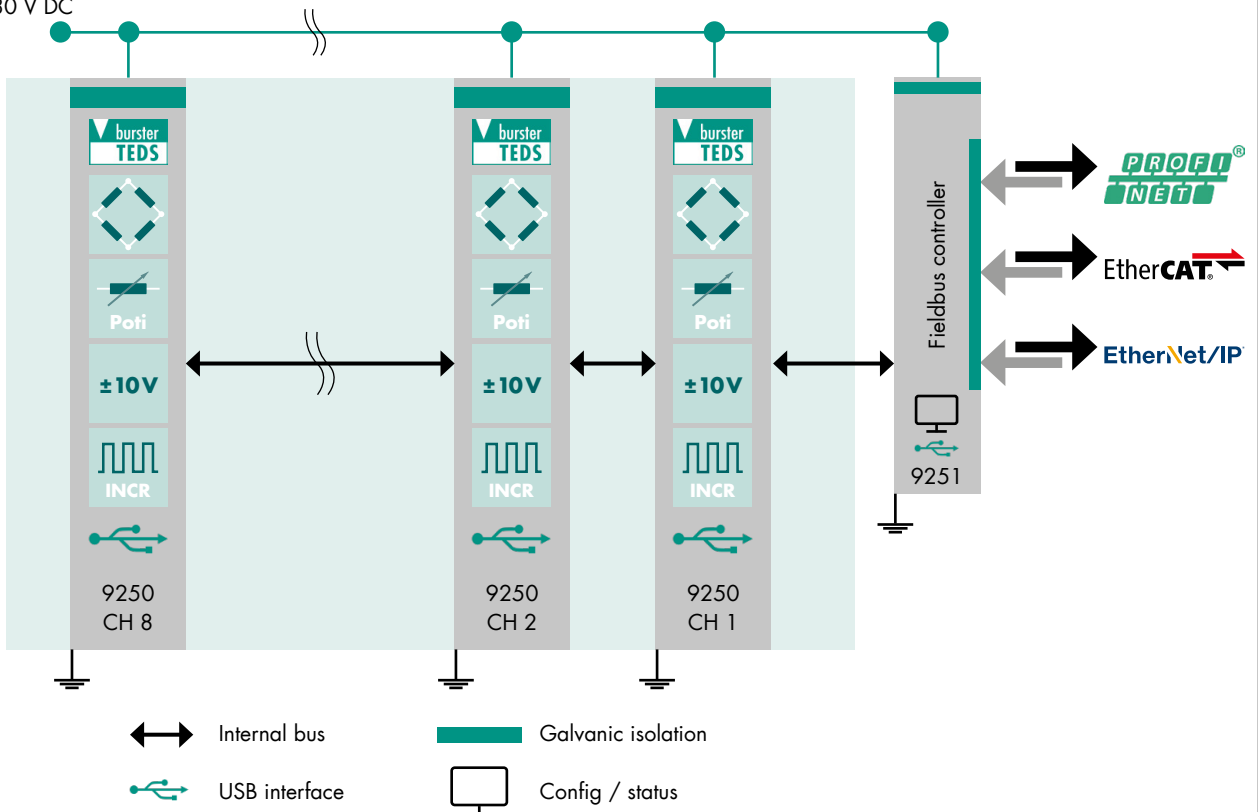
General data	
Supply voltage	11 ... 30 V DC, Galvanic separation, overvoltage and pole protection
Power consumption	approx. 3 W
Sensor recognition	burster TEDS
Operating temperature range	0 ... +50 °C
Storage temperature range	-25 °C ... +70 °C
Humidity	0 ... 70 % non condensing
Cut-off frequency	500 Hz at 1200 Meas./s. (standard), signal running time 1,9 ms 3000 Hz at 14400 Meas./s. (option), signal running time 0,4 ms
Installation	grounded mounting rail 35 mm to DIN EN 50022
Electrical isolation	Instrumentation amplifier, TTL inputs, PLC IO, supply voltage
Error limit	±0.03 % F.S.
AD conversion	24-Bit
DA conversion	16-Bit
Max. measuring rate	14400 (option), 1200 standard Meas./s.
Non-linearity	< 0.005 % F.S.
Temperature coefficient Gain	< 15 ppm/K Rd
Input zero drift	< 0.1 µV/K
Common mode rejection (CMRR)	140 dB (Bei DC)
Interfaces	Micro USB for configuration
Ripple & Noise at voltage output	approx. 5 mVss at 1200 meas./s
Other	Teach-in via button, tare function via button, I/O configuration via button or USB

Block diagram – **9250-VXXXXX0X**

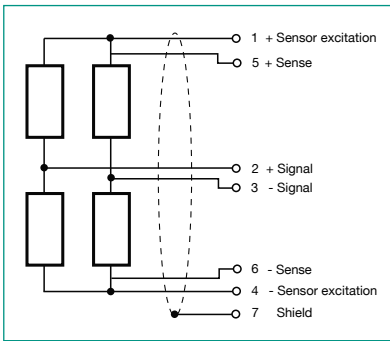


Block diagram – **9250-VXXXX1X (bus compatible)**

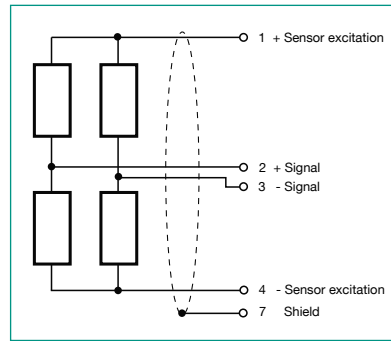
Supply voltage
11 ... 30 V DC



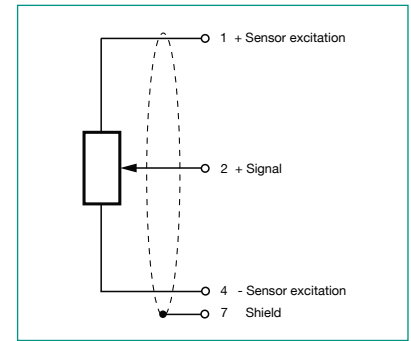
Pin assignment



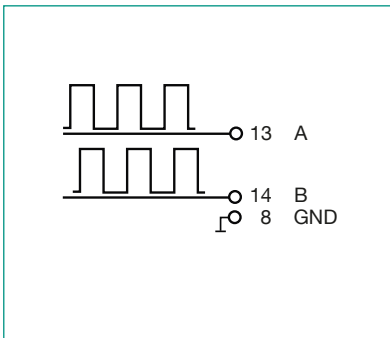
Strain gage 6 wire



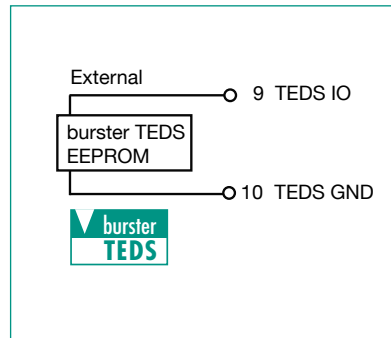
Strain gage 4 wire



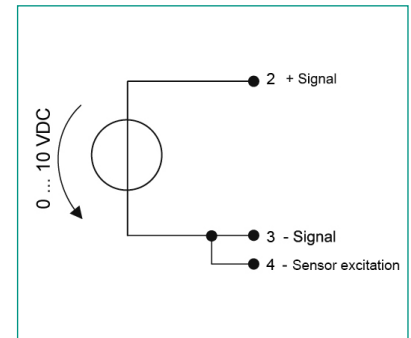
Poti



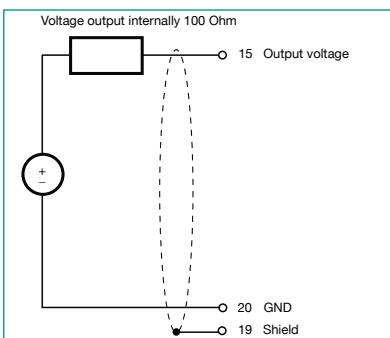
Counter



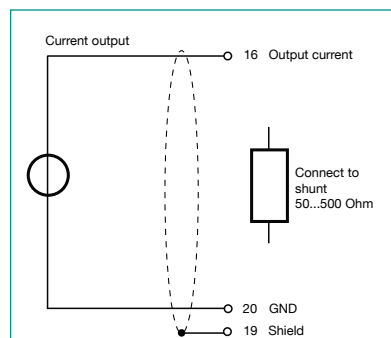
TEDS



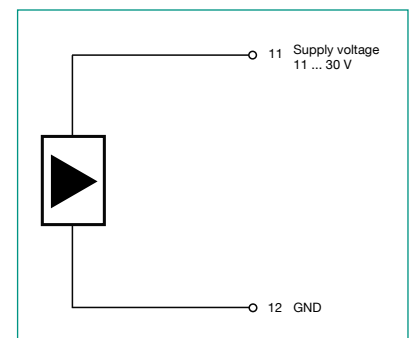
Transmitter connection



Output Voltage



Output current

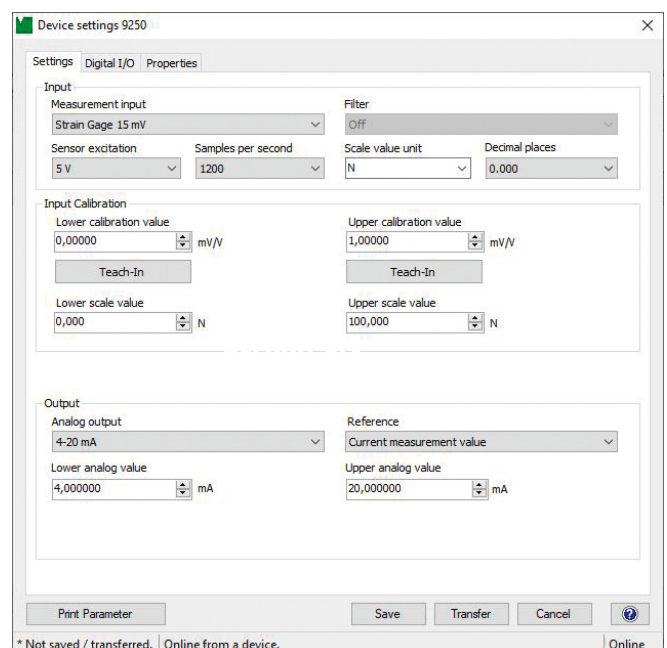


Supply voltage

DigiVision PC Software

The amplifier module model 9250 is used wherever measurement signals from strain gage, potentiometric, DC/DC or incremental sensors have to be converted into standard signals. Simply by mounting on conventional DIN-mount rails, it is possible to position the amplifier module on location, in the proximity of the sensor.

- Convenient device configuration via front-panel USB port
- Automatic recognition of amplifier modules in DigiVision
- Manage a range of parameter sets
- Backup facility for storing settings
- Choice of output parameter (current or voltage)
- Manual configuration of calibration data in the module
- Simplified measuring operation for service purposes
- Easy parameterization of the measurement input
- Scale value parameterization for connection to fieldbus controller 9251



Ultra-fast pushbutton configuration

- ▶ Select input
- ▶ Select output
- ▶ Get started

Accessories

Order Code	
9900-K358	USB cable for configuration
9250-Z001	1 set of terminals (included in scope of delivery)

Adjustment for measurement chains

Adjustment	
92ABG	Compensation of measurement chain in preferential direction of the sensor of output 10 V
92ABG-S	Compensation of measurement chain according to customer request
92ABG-2 (at TEDS)	Compensation of measurement chain with TEDS sensors of output 10 V

Calibration certificate with accreditation symbol

Calibration certificate with accreditation symbol for Instrumentation amplifier 9250. The calibration is based on the accreditation of the calibration laboratory D-K-15141-01-00 for the scope of accreditation listed in the annex. The traceability to national standards as well as wide international recognition (DAkkS as a signatory of the multilateral agreements of EA, ILAC and IAF) are guaranteed.



Calibration certificates for instrumentation amplifiers

Standard factory calibration certificate for instrumentation amplifiers (WKS)	
On request	Calibration is performed by electrical simulation of the input variables.
Calibration certificate with accreditation symbol for instrumentation amplifiers (DKD)	
On request	Our ISO 17025 accredited calibration laboratory (DAkkS) offers accredited calibration certificates according to its scope of services. Calibration is performed by electrical simulation of the input variables.

Calibration certificates for measurement chains

Standard factory calibration certificate for measurement chains (WKS)	
Optional available	Normally, our standard factory calibration certificate contains measuring points which are recorded starting from zero in 5 steps (distributed as evenly as possible over the measuring range) until the nominal sensor value is reached. In this process, the change of the physical input variable takes place with increasing and decreasing signal with unchanged installation position of the sensor. Calibration is performed in conjunction with a transducer (sensor) for physical quantities and is based on the procedure specified in the sensor data sheet.
Special factory calibration certificate for measurement chains (WKS)	
On request	We are happy to calibrate sensors and measurement chains to the customer's specification.
Calibration certificate with accreditation symbol for measurement chains (DKD)	
Optional available	Our ISO 17025 accredited calibration laboratory (DAkkS) offers accredited calibration certificates according to its scope of services. The applied calibration procedures can also be taken from the data sheet of the used transducer (sensor). Calibration is performed in conjunction with a transducer (sensor) for physical quantities.

Order Code

						Standard					
						0	0	0	0	0	0
9	2	5	0	-	V						
Housing version											
■ IP20 mounting rail housing						0					
Input signal											
■ Strain gage, poti and normalized signal						0					
■ Strain gage, poti, normalized signal and TTL						1					
Output signal											
■ Analog output ± 10 V and 0 (4) ... 20 mA							0				
PLC interface											
■ without								0			
■ Digital I/O (2 inputs and 2 outputs)								1			
Multi-channel operation with fieldbus controller											
■ without bus interface									0		
■ with bus interface for fieldbus controller									1		
Sampling rate											
■ Sampling up to 1200 Meas./s.										0	
■ Sampling up to max. 14400 Meas./s.										1	

Fieldbus Controller for the 9250 Instrumentation Amplifier series

MODEL 9251



NEW
9251 with integrated
measuring input

Highlights

- PROFINET, EtherCAT and EtherNet/IP
- High measurement speed
- Up to 8 model 9250 instrumentation amplifiers can be modularly connected
- Automatic measurement channel detection
- Option: singlechannel variant with integrated measuring amplifier

Options

- Measuring input: Strain gage, Potentiometer, ± 10 V
- burster TEDS

Applications

- Automation technology
- Production
- Research and development
- Mechanical engineering
- Test-bench equipment



Product description

The new 9250/9251 amplifier generation unites all the features that make modern measurement data acquisition actually possible for the first time. Network-compatible, high-precision, user-friendly, smart and versatile: the combined system of amplifier module and Fieldbus controller can be integrated into any existing setup.

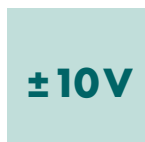
The model 9250 instrumentation amplifier together with the model 9251 Fieldbus controller delivers all signals exactly where they are needed, to be combined, checked and linked. With the available Fieldbus interfaces, you are flexible, perfectly connected and you save time, costs and other resources when linking to and integrating into existing systems.

Up to 8 bus-compatible model 9250 instrumentation amplifiers can be cascaded on the model 9251 Fieldbus controller. Automatic detection and addressing of the instrumentation amplifier modules allows easy expansion. By means of an optional measuring input, the fieldbus controller can be operated as a stand-alone device. Alternatively, up to 8 instrumentation amplifiers model 9250 can be cascaded for multi-channel measuring tasks.

Some applications require large amounts of measurement data to be acquired and transmitted within a very short time. Very fast PLC communication with high update rates is needed. To optimize data throughput, the model 9251 Fieldbus controller can transmit a whole data array with the last 32 measured values per channel. The scaled measured values are read simultaneously in the real-time data of the Fieldbus link.



Fieldbus controller 9251 with up to 8 instrumentation amplifiers 9250

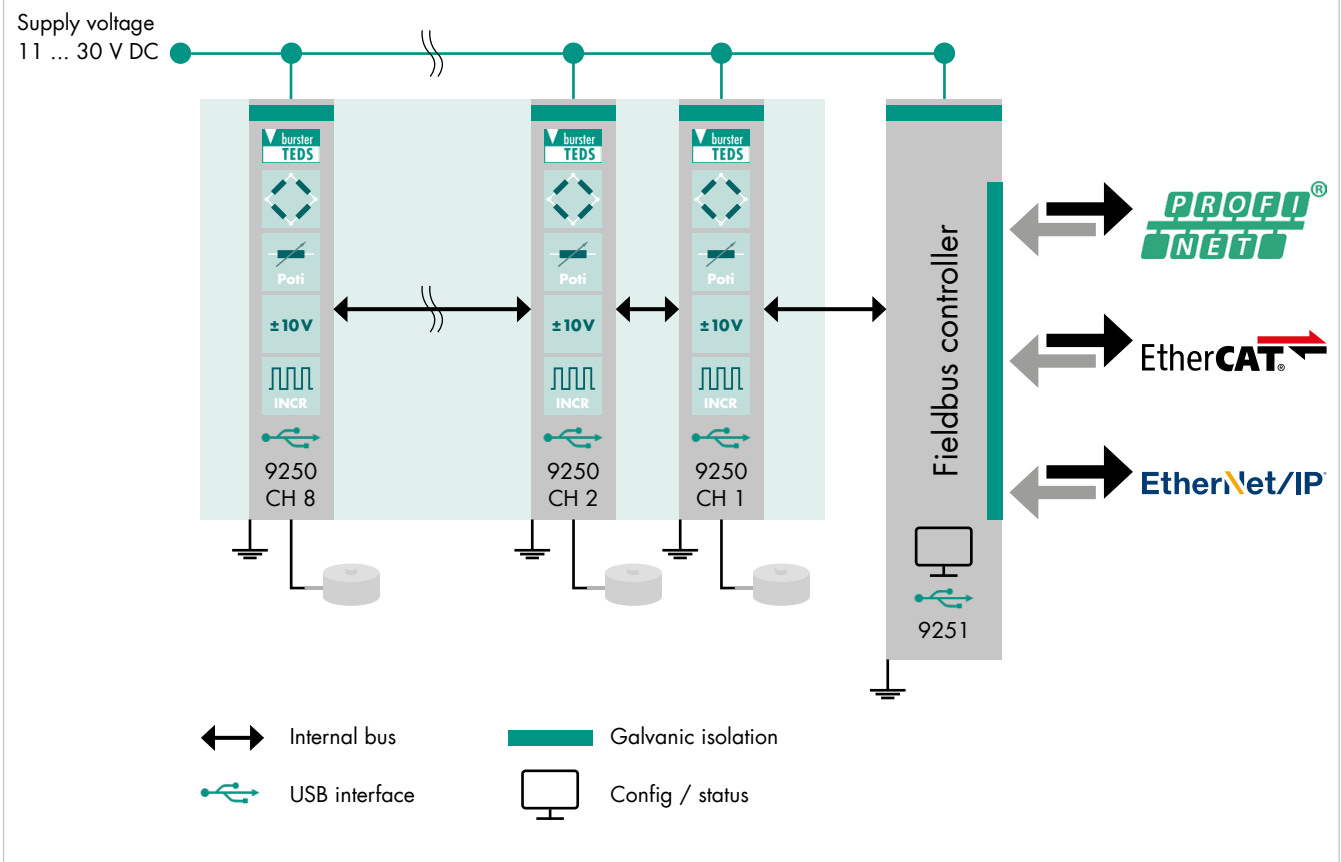


Technical data

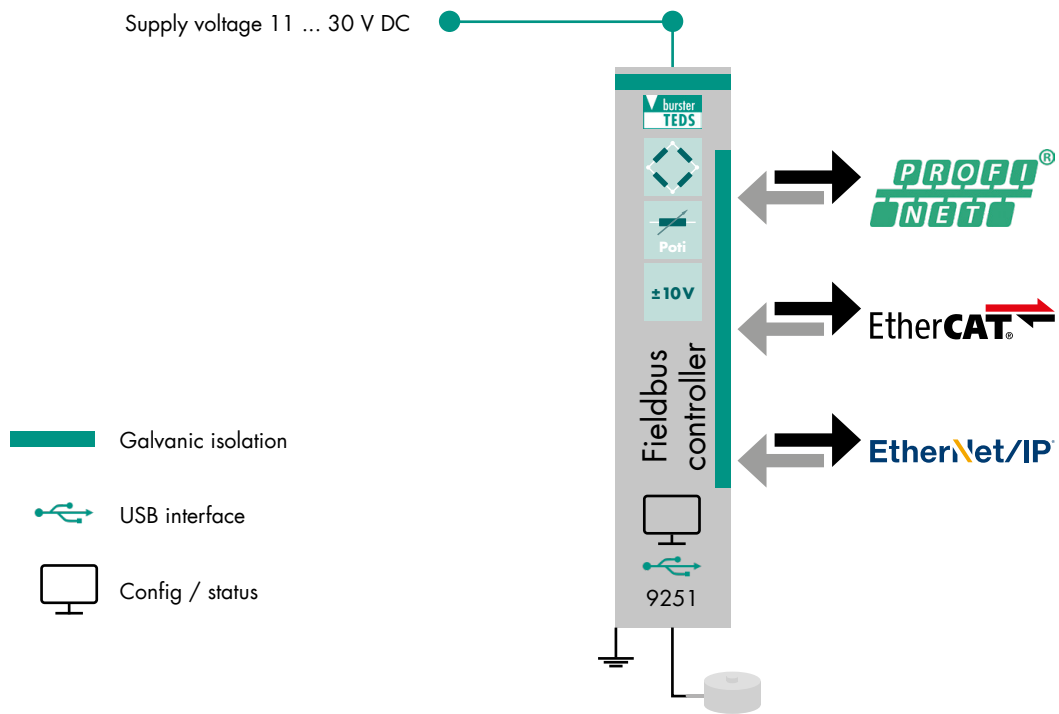
Interfaces		
PROFINET		
Connection		2 x RJ45, 10/100 Mbit/s
Communication		RT communication Cyclical real-time process data <i>Short mode:</i> Transmission of each individual measured value for slow measurements or very fast PLC communication <i>Extended mode:</i> Simultaneous transmission of 32 measured values for high measurement speed Acyclical parameter data
EtherCAT		
Connection		2 x RJ45, 10/100 Mbit/s
Communication		PDO – Process Data Objects Transmission of each individual measured value for slow measurements or very fast PLC communication Simultaneous transmission of 32 measured values for high measurement speed SDO – Service Data Objects
EtherNet/IP		
Connection		2 x RJ45, 10/100 Mbit/s
Communication		cyclical data transmission (implicit messaging) acyclical data transmission (explicit messaging)
Internal communication bus to the 9250 modules		
Transmission speed		3.6 kHz per channel
Number of devices (model 9250)		Up to 8
Compatible sensors / provisional data		
Strain gage full bridge		
Excitation voltage		2.5 / 5 / 10 V, configurable, short-circuit proof
Connection technology		4 or 6 wire, automatic recognition
Excitation current		approx. 40 mA
Input impedance		1 GOhm
Measuring ranges		±15 mV, ±30 mV, ±300 mV
Potentiometer		
Excitation voltage		5 V
Excitation current		max. 40 mA
Resistance		> 200 Ohm
Input impedance		1 GOhm
Voltage metering		
Measuring range		±10 V
Input impedance		1 GOhm

Housing	
Material	Polyamide
Dimensions (WxHxD)	22.5 x 110 x 115 mm
Weight	Approx. 210 g
Protection class	IP20 to EN 60529
Connections	Screw clamps, up to 2.5 mm, RJ45, USB
General data	
Supply voltage	11 ... 30 V DC, galvanic isolation, inverse polarity protection, overvoltage protection
Power consumption	Approx. 3 W
Operating temperature range	0 °C ... +50 °C
Storage temperature range	-25 °C ... +70 °C
Sampling rate	10000/s (in standalone mode) 1000/s (per channel when cascading of 1 to 8 model 9250 instrumentation amplifiers)
AD conversion	24 bit
Humidity	0 ... 70 % non-condensing
Installation	Grounded mounting rail 35 mm to DIN EN 50022
Interfaces	2 x RJ45, Micro-USB for configuration, USB Type-A master port (function in preparation), internal bus interface for cascading up to 8 bus-compatible model 9250 instrumentation amplifiers
Display	1 x status LED, 3 x fieldbus-specific LEDs, option: 1 x TARA LED

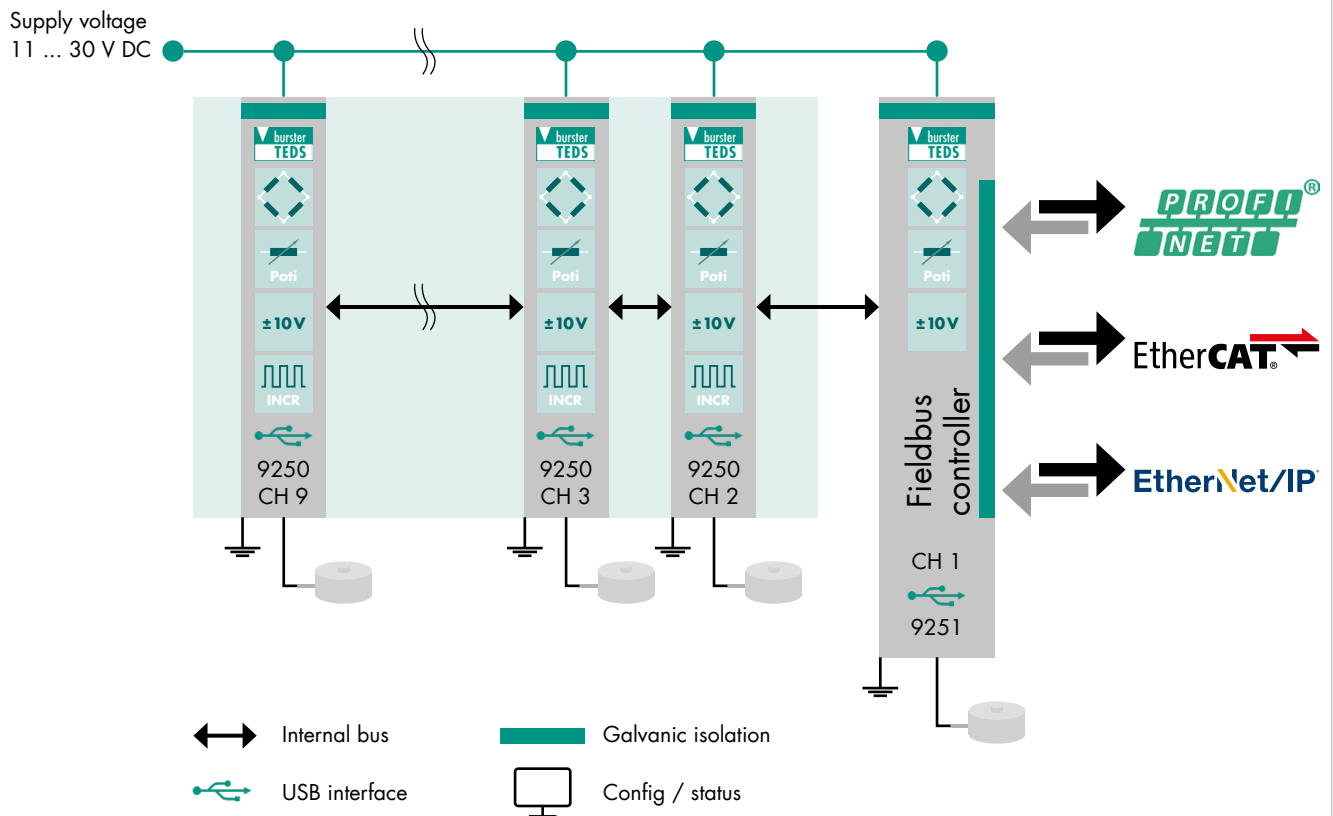
Block diagram – multichannel application with universal instrumentation amplifier, fieldbus controller and load cell



Block diagram – singlechannel application, fieldbus controller with measuring input and load cell

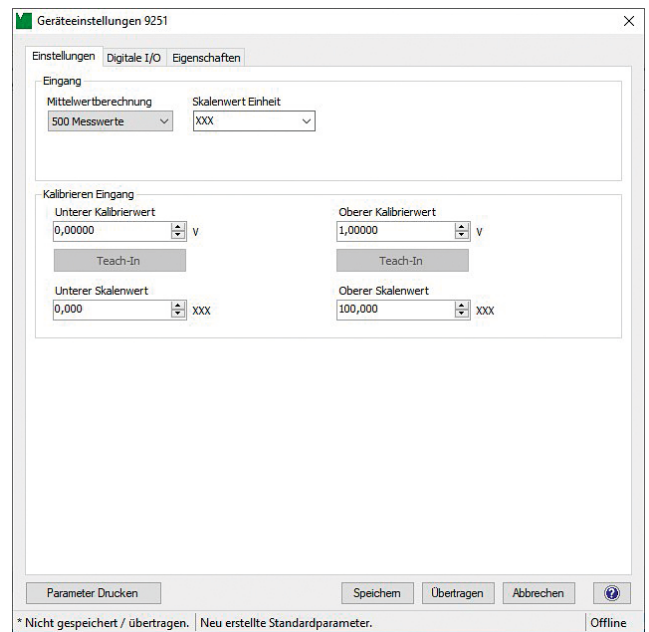


Block diagram – multichannel application with universal instrumentation amplifier, fieldbus controller with measuring input and load cells



DigiVision PC software

- Free of charge at www.burster.com
- Convenient device configuration via front-panel USB port
- Automatic recognition of amplifier modules in DigiVision
- Backup facility for storing settings
- Analog output configuration
- Scaling of output values
- Configuration of PLC I/O outputs
- Device information



Accessories

Order code	
9900-K358	USB cable for configuration
9250-Z001	1 set of terminals (supplied with device)

Calibration of the measuring chain

Calibration of measuring chain	
92ABG	Calibration of the measuring chain in sensor's reference direction
92ABG-S	Calibration of the measuring chain according to customer request

Calibration certificate with accreditation symbol

Calibration certificate with accreditation symbol for Feldbus-Controller 9251 with measuring input. The calibration is based on the accreditation of the calibration laboratory D-K-15141-01-00 for the scope of accreditation listed in the annex. The traceability to national standards as well as wide international recognition (DAkKS as a signatory of the multilateral agreements of EA, ILAC and IAF) are guaranteed.



Calibration certificates for instrumentation amplifiers

Standard factory calibration certificate for instrumentation amplifiers (WKS)	
On request	Calibration is performed by electrical simulation of the input variables.
Calibration certificate with accreditation symbol for instrumentation amplifiers (DKD)	
On request	Our ISO 17025 accredited calibration laboratory (DAkKS) offers accredited calibration certificates according to its scope of services. Calibration is performed by electrical simulation of the input variables.

Calibration certificates for measurement chains

Standard factory calibration certificate for measurement chains (WKS)	
Optional available	<p>Normally, our standard factory calibration certificate contains measuring points which are recorded starting from zero in 5 steps (distributed as evenly as possible over the measuring range) until the nominal sensor value is reached. In this process, the change of the physical input variable takes place with increasing and decreasing signal with unchanged installation position of the sensor.</p> <p>Calibration is performed in conjunction with a transducer (sensor) for physical quantities and is based on the procedure specified in the sensor data sheet.</p>
Special factory calibration certificate for measurement chains (WKS)	
On request	We are happy to calibrate sensors and measurement chains to the customer's specification.
Calibration certificate with accreditation symbol for measurement chains (DKD)	
Optional available	<p>Our ISO 17025 accredited calibration laboratory (DAkkS) offers accredited calibration certificates according to its scope of services. The applied calibration procedures can also be taken from the data sheet of the used transducer (sensor).</p> <p>Calibration is performed in conjunction with a transducer (sensor) for physical quantities.</p>

Example order

PROFINET 4-channel instrumentation amplifiers with compression load cells			
4 x		Miniature compression load cell	Model 8402-6005-N000S000
1 x		Fieldbus controller	Model 9251-V3000
4 x		Universal instrumentation amplifier	Model 9250-V000010
4 x		Compensation of measurement chain	92ABG
EtherCAT 1-channel fieldbus controller with tension and compression load cell			
1 x		Precision miniature tension and compression load cell	Model 8431-5500-T000S000
1 x		Fieldbus controller with strain gage input	Model 9251-V1100
1 x		Compensation of measurement chain with TEDS sensors	92ABG-2

Order Code

9	2	5	1	-	V			0	0
Fieldbuses									
■ EtherCAT						1			
■ PROFINET						3			
■ EtherNet/IP						4			
Analog input signals									
■ None						0			
■ Measuring input: Strain gage, Potentiometer, ±10 V *						1			

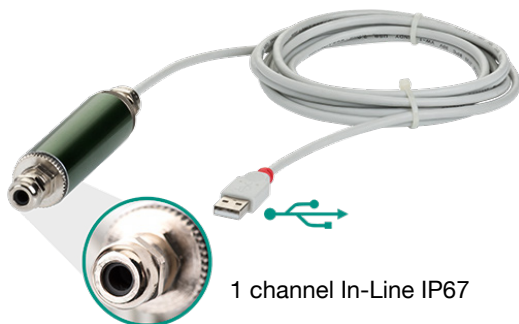
* coming soon

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

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 except 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 parallelly. 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

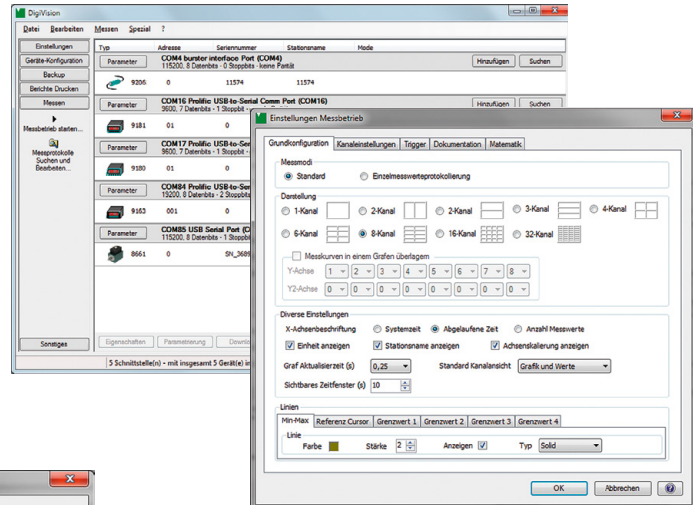
Model 9236-Z001

DigiVision Configuration and Analysis Software

General Software Data

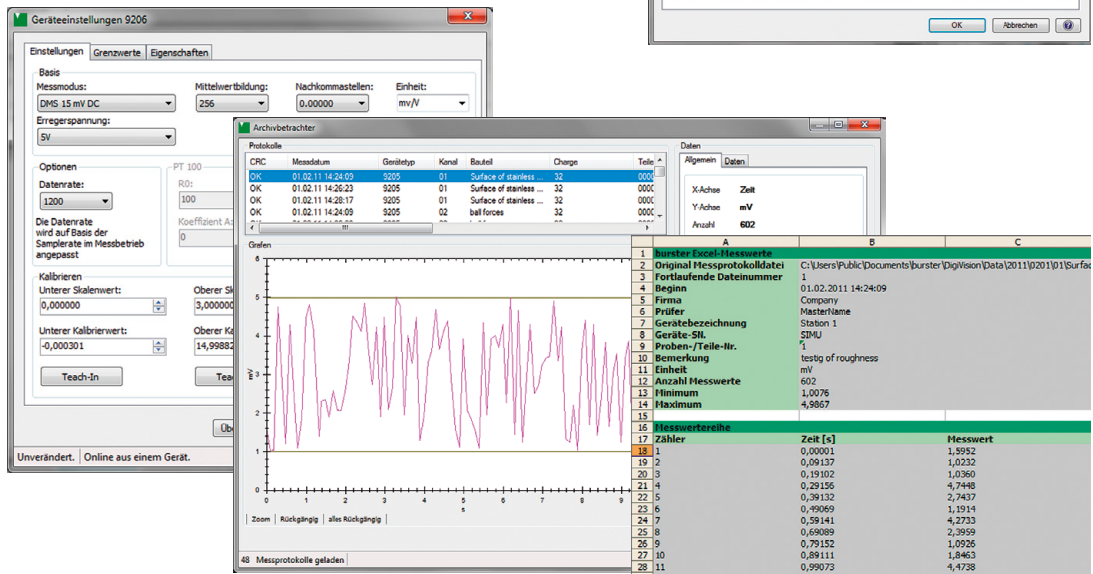
- ▶ Convenient device finder
- ▶ Instrument parameterization
- ▶ Instrument data adopted automatically, e.g. scaling, limit settings
- ▶ Back-up function for instrument data
- ▶ Simultaneous display of up to 16 measurement channels
- ▶ Different measurement rates can be combined
- ▶ Different triggers 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



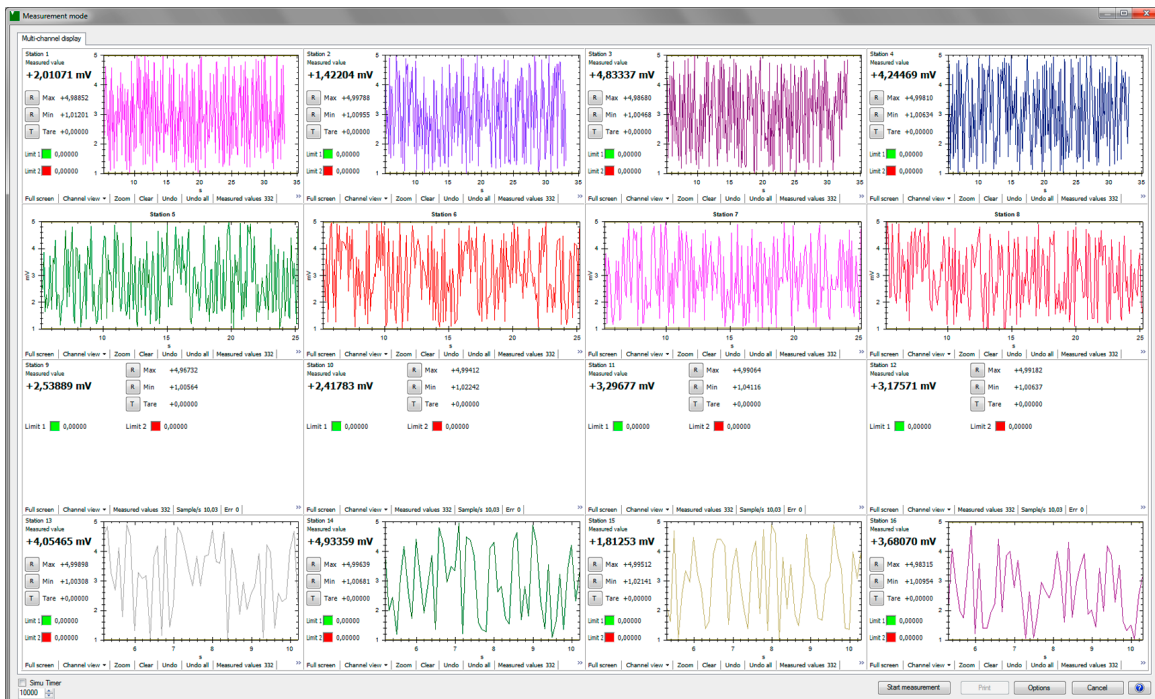
Software DigiVision P001

- ▶ 1 interface with up to 200 measurements/s



Software DigiVision P100

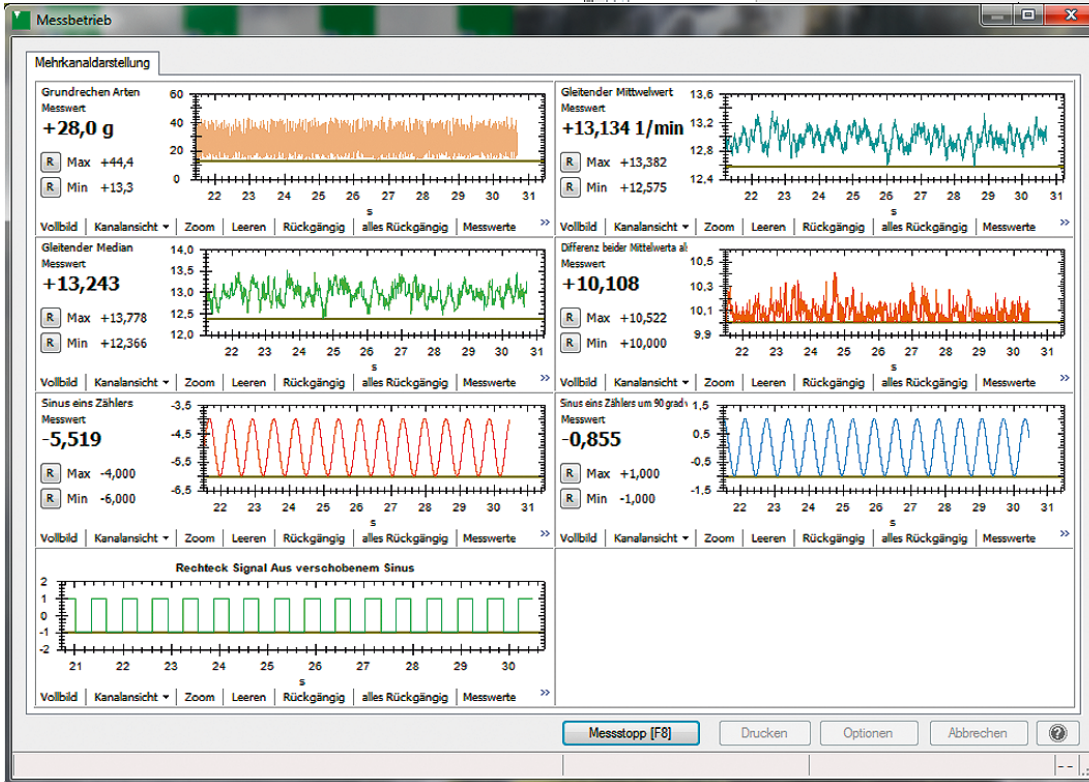
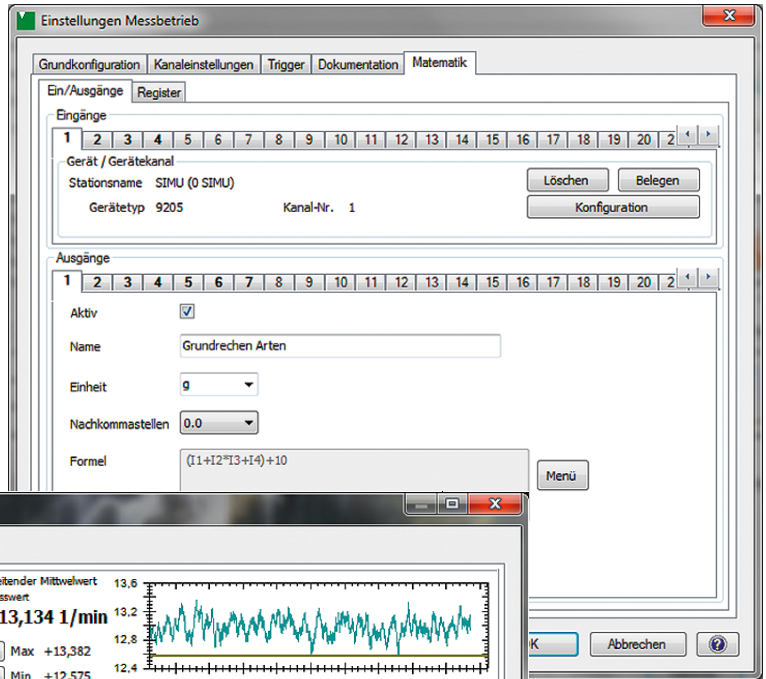
- ▶ max. 16 channels with up to 1200 measurements/s



9206 EN

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



Filterfunktionen	IEEERemainder(x,y)	Gibt den Rest der Division zweier angegebener Zahlen zurück (x/y).
Eingänge	Max(x1x2)	Gibt die größere von zwei Gleitkommazahlen x1 und x2 mit doppelter Genauigkeit zurück.
Ausgänge	Min(x1x2)	Gibt die kleinere von zwei Gleitkommazahlen x1 und x2 mit doppelter Genauigkeit zurück.
Register	Pow(x,y)	Potenziiert eine angegebene Zahl x mit dem angegebenen Exponenten y.
Zähler	Round(x,y)	Rundet einen Gleitkommawert x mit doppelter Genauigkeit auf eine angegebene Anzahl von Bruchziffern y.

Beispiel

Beschreibung

Beispiel

Formel

$(I1+I2*I3+I4)+10$

Validierung

Ok

OK Abbrechen

Typical Applications

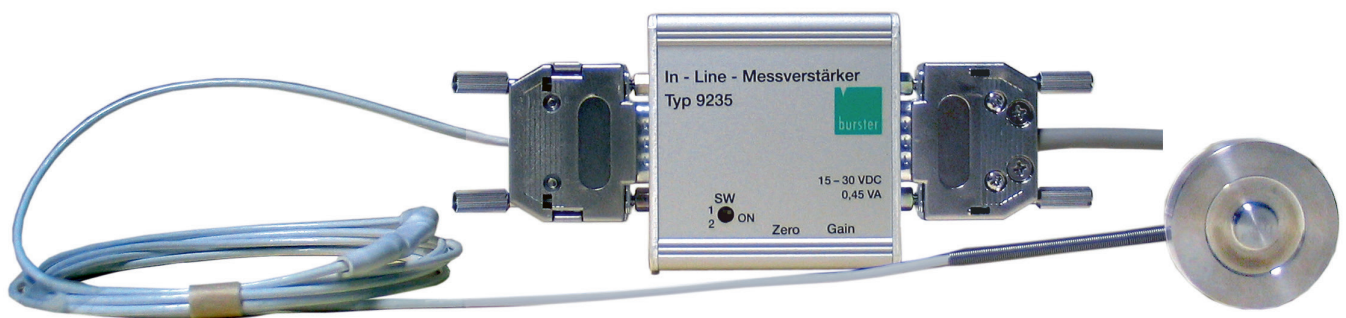
- ▶ Differential measurements
- ▶ Averaging of the measurement results
- ▶ Determination of efficiency in engine test
- ▶ Determine mass moment of inertia
- ▶ Determine the frictional force
- ▶ Comparison of different measurement readings

In-Line Amplifier

For strain gauge sensors

Model 9235

Code:	9235 EN
Delivery:	ex stock
Warranty:	24 months



- Particularly space-saving and lightweight
- Voltage output $0 \dots \pm 10 \text{ V}$
- Designed as in-line measuring amplifier
- Non-interchangeable and short circuit-proof

Application

In practice the requirement often arises to convert the measurement signals of a sensor into a standard signal in the simplest possible manner in the immediate proximity of the sensor. This permits trouble-free, low-loss transmission of measured values over longer distances to an instrument board or plant controls.

Ideally suited for this purpose is the in-line measuring amplifier, which is inserted in between in the connection cable by means of plug contacts. Owing to its compact, robust design and low weight, it finds use in almost any application. Even movable locations subject to forces of acceleration, for example manipulators, present no problems. It is intended mainly for use of control cabinets in just about any location and is matched to a specific sensor. The aluminium housing is extremely sturdy and affords the greatest possible protection even in harsh environments.

Description

The in-line amplifier module itself is operated at voltages between 15 V and 30 V, from which it generates a stable excitation voltage to supply the sensor with power. The measurement signals of the sensor, normally ranging between $0 \dots 5 \text{ mV}$ and $0 \dots 10 \text{ mV}$ for bridge-connected strain gauges, are amplified to analog $0 \dots 10 \text{ V}$.

The sensor characteristics are first roughly preset by means of DIP switches, through an opening in the housing. The fine-tuning of the instrument zero and amplification settings is performed by means of a multiple trimmer, accessible by screwdriver through holes drilled in the side of the housing. The amplifier connections are realized with sub-D plug and socket; short circuit-proof sensor power excitation and polarity reversal protection for the amplifier power excitation afford additional safety for installation. If the amplifier has to be mounted to its environment, this is done by clamping the housing or affixing it with an adhesive. The amplifier's cut-off frequency is $> 1 \text{ kHz}$, its weight is $< 65 \text{ g}$.

Technical Data

Connectable sensors

Strain gauges

Bridge resistance (full bridge):	350 Ω ... 5 kΩ
Connection technology:	4 wire
Sensor excitation voltage:	2.5 V
Excitation current:	10 mA max.
Power consumption:	approx 0.3 VA
Adjustable input:	0.8 mV/V ... 2.5 mV/V

Analog output

Voltage output:	0 ... ± 10 V
Output impedance:	470 Ω

General amplifier characteristics

Accuracy:	< 0,1 %
Temperature coefficient:	< 100 ppm/K
Power supply:	15 ... 30 V DC
Frequency response:	1 kHz
Operating temperature:	0 ... 60 °C

Plug connection model 9235

"Excitation and output" plug	pin 2 + excitation voltage
	pin 3 shield
	pin 5 - excitation voltage
	pin 7 ± output voltage
	pin 9 output ground

"Sensor" socket	pin 1 + sensor excitation
	pin 3 shield
	pin 5 - sensor excitation
	pin 6 + signal input
	pin 9 - signal input

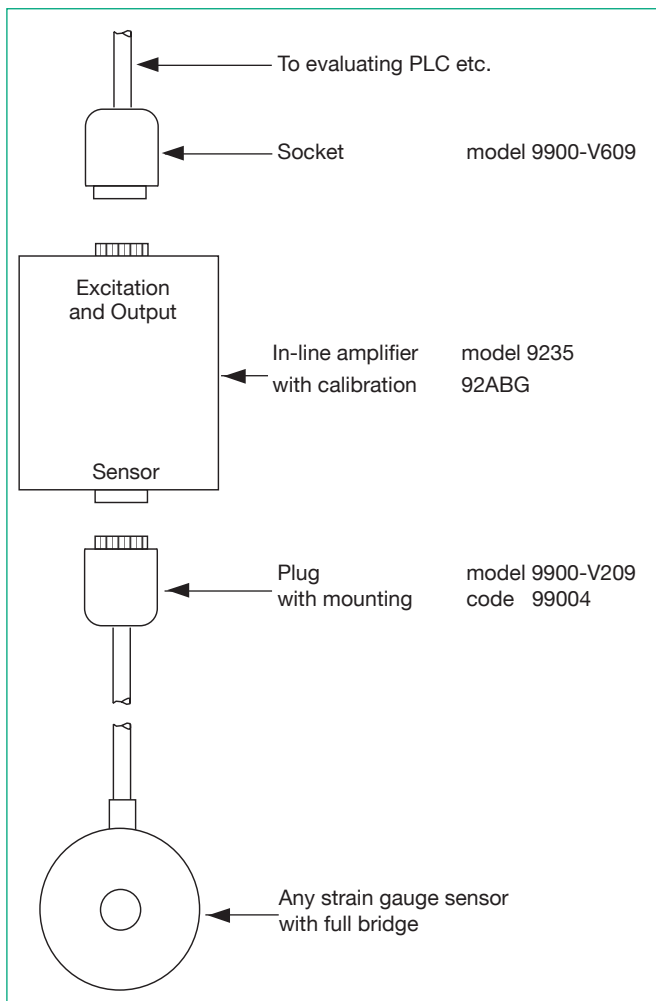
Housing

Connections:	Sub-D plug / mating connector
Dimensions (W x H x D):	62 x 55 x 16 [mm]
Material:	Aluminium
Mounting:	clamp or stick on
Protection class:	IP40
Weight:	< 65 g
Humidity:	10 ... 80 %, not dewing

Default setting

Sensor output:	1.5 mV/V
----------------	----------

Example of a measuring chain



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.

Order Information

In-line amplifier with housing including cable tie bracket **Model 9235**

Calibration of entire measuring chain

Consisting of sensor and amplifier model 9235 **92ABG**

A sensor specific standard adjustment will be done, if no customer specific adjustment data are supplied.

Accessories

Connectors socket **Model 9900-V609**
 plug **Model 9900-V209**

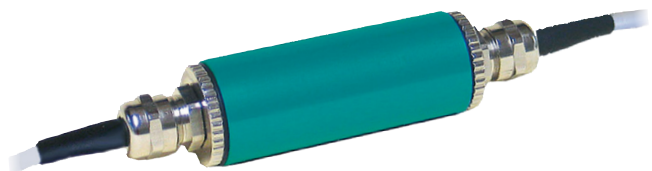
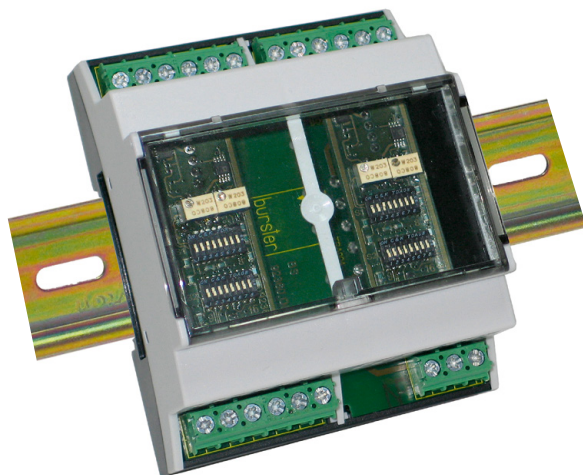
not part of scope of delivery

Multichannel Amplifier

For strain gauge sensors

Model 9236

Code:	9236 EN
Delivery:	ex stock
Warranty:	24 months



- Operates with up to 4 measuring channels
- Voltage output 0 to ± 5 V / 0 to ± 10 V
- Protected against reverse connection and short-circuit
- Also available as circuit board without housing
- Simple configuration using DIP switch
- High degree of protection up to IP67

Applications

Situations often occur in practice in which it is necessary to place a measuring amplifier immediately in the neighborhood of the sensor in order to be able to access a standard signal there. In this way, long distances to the evaluating electronics can be covered.

This task can ideally be performed by the 9236 in-line measuring amplifier. With its high degree of protection (IP67) its single-channel version can be integrated into the application even in the tough environment outside the switch gear cabinet.

In the multichannel version, up to four measuring channels can be implemented in one housing for the DIN carrier rail. This means that it can be located either in the switch gear cabinet, or in the immediate neighborhood of the sensor.

Users who want to put the amplifier onto an existing circuit board or who wish to construct their own housing can also obtain the amplifier as an open circuit board. It can be integrated by means of screw terminals.

The 9236 measuring amplifier finds applications wherever the output signal from sensors based on wire strain gauges, such as force, pressure or torque sensors, must be converted into a voltage signal, e.g.

- ▶ Automatic production machinery
- ▶ Laboratory measurements
- ▶ Integration into customer's circuit boards
- ▶ Field measurements

Description

The measuring amplifier itself is powered by voltages between 15 V and 30 V. Internally, the highly accurate, short-circuit protected sensor excitation voltage is generated and used to supply the sensor's measuring bridge. The input range of the amplifier is appropriate for sensitivities between 0.5 and 30 mV/V and is also suitable for semiconductor strain gauge.

The analog output voltage can be set to a range from 0 to ± 5 V or 0 to ± 10 V. DIP switches are used to set the input range. Fine adjustments and zero point setting are performed by means of multi-turn potentiometers that are mounted on the circuit board. The sensors are connected, and the auxiliary power supplied, through user-friendly screw terminals.

The amplifier in the IP67 version can, if in fact necessary, be achieved by clamping, gluing, or with the aid of a cable tie. The open circuit board has mounting holes for easy assembly. The amplifier's limit frequency is 1 kHz.

Technical Data

Connectable sensors

Strain gauges

Bridge resistance:	350 Ω ... 5 kΩ
Connection technology:	4 wire
Excitation:	2.5 V
Excitation current:	10 mA
Power consumption:	approx. 0.3 VA
Configurable characteristic:	0,5 mV/V ... 30 mV/V
Default setting:	1.5 mV/V

Analog output

Output voltage selectable:	0 ... ± 5 V / 0 ... ± 10 V (standard) selectable
Output resistance:	440 Ω

General amplifier values

Measurement error:	0.1 % F.S.
Zero point: 25 % / 5 % (standard) of measurement range selectable	
Temperature coefficient:	< 100 ppm/K
Zero drift:	< 0.4 μV/K
Auxiliary power:	15 ... 30 V DC
Current consumption:	20 mA / 1 channel
Cut-off frequency:	1 kHz
Range of operating temperature:	0 ... 60 °C
Humidity:	10 ... 80 %, no condensation

Housing IP67

Kind of housing:	tube housing
Connection:	via PG7 at screw terminal
Dimensions (L x W):	120 x 25 [mm]
Material:	aluminium
Protection class:	IP67
Weight:	150 g

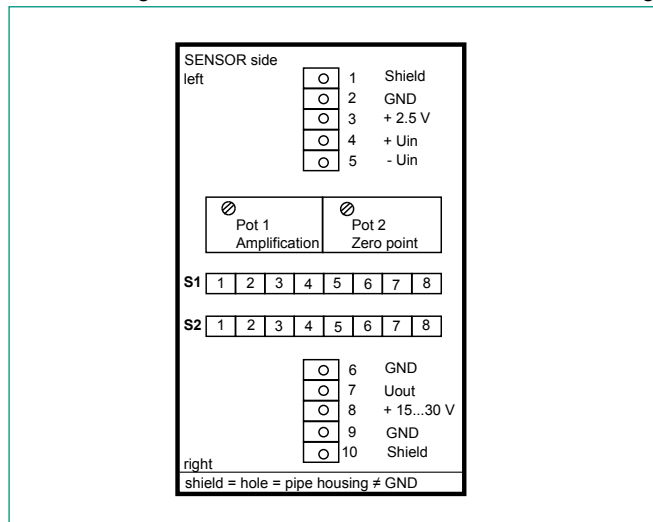
Housing IP20 2-4 channel

Kind of housing:	mounting rail housing
Connection:	at screw terminal
Dimensions (L x W x D):	3 - 4 channels 108 x 90 x 63 [mm] 2 channels 72 x 90 x 63 [mm]
Material:	plastic
Protection class:	IP20
Weight:	150 g

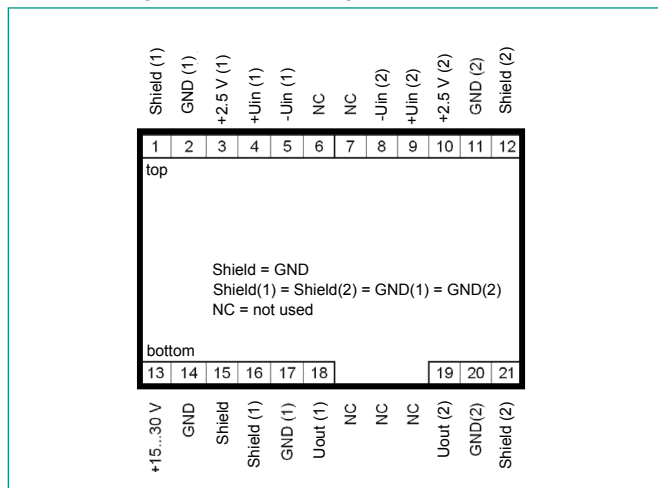
Open circuit board

Connection:	on screw terminal
Dimensions (L x W):	59 x 19 [mm]
Mounting:	4 holes for screws 2.5 in grid 14.6 x 53.6 [mm]
Weight:	50 g

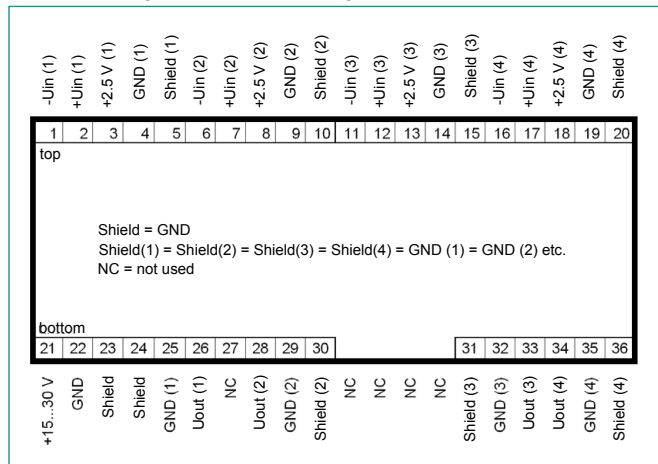
Terminal assignment for circuit board and version in tube housing



Terminal assignment for mounting rail version, 2 channel



Terminal assignment for mounting rail version, 3 or 4 channel



Order Code

Amplifier	9236 - V	X	0	0
IP67	_____	0		
Open circuit board	_____	1		
2 channel	_____	2		
3 channel	_____	3		
4 channel	_____	4		

Order Information

3 channel version in mounting rail housing **Model 9236-V300**

Calibration of a complete measuring chain

consisting of sensor and measuring amplifier 9236, per measuring channel, to the customer's trimming data. Otherwise, to standard settings typical for the sensor. **92ABG**

Accessory

Strain gauge simulator

For an easy calibration of amplifiers to strain gauge sensors (please refer to data sheet 76-9405) **Model 9405**

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

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.

Amplifier

Module for strain gauge and potentiometric sensors

Model 9243

Code:	9243 EN
Delivery:	ex stock
Warranty:	24 months



Rail mounting module



IP65 version

- Accuracy < 0.05 %
- Outputs $\pm 5\text{ V}$, $\pm 10\text{ V}$ and 0 (4) - 20 mA
- 6 wire technique
- Isolation between signal and power supply
- Cut-off frequency 1 kHz, optional 4 kHz
- Configuration via DIP switches
- Easy installation on DIN mounting rail

Application

The amplifier module model 9243 is used wherever measurement signals from strain gauges, potentiometric sensors or DC/DC sensors have to be converted into standard signals. Simply by mounting on conventional DIN-mount rails, it is possible to position the amplifier module on location, in the proximity of the sensor. Especially for rough environments a IP65 version is available.

The broad auxiliary power range and the choice between AC or DC permits operation on standard power supplies used in switch gear cabinets. A highly precise reference voltage source is built-in for calibration purposes. A calibrating shunt can also be connected via two separate terminals. This permits deliberate detuning of a strain gauge sensor for calibration or merely to check the measuring chain.

Description

A highly accurate precision amplifier performs the amplification of the sensor signal being applied. The necessary gain factor is adjusted coarsely with DIP switches while fine-tuning is carried out by using a potentiometer. Current and voltage outputs are available simultaneously. The sensor excitation is performed by the amplifier module itself so that no additional voltage source is required. It can also be set in steps of 2.5 V, 5 V, 10 V using DIP switches. The maximum feed current of 35 mA permits parallel connection of several strain gages, e.g. for the addition of measurement variables. Measurement errors brought about by varying line lengths or due to temperature fluctuations effecting the sensor cable are avoided by having probe lines measuring the actual feed voltage directly on site at the sensor itself (6 wire technology). Fluctuations are immediately corrected electronically. The cut-off frequency of the amplifier can be switched between 10 Hz and 1 kHz. The DIP switches for configuring the entire device are found easily accessible, under a cover.

Technical Data

Connectable sensors

Strain gauges

Bridge resistances:	350 ... 1000 Ω
Connection technology:	4 or 6 wire
Sensitivity:	from 0.1 mV/V
Excitation voltage:	2.5 V, 5 V, 10 V
Excitation current:	max. 35 mA

Potentiometer

Resistance:	1 k Ω ... 5 k Ω
Connection technology:	3 wire
Measurement signal:	0 V ... 5 V
Excitation voltage:	5 V
Excitation current:	max. 35 mA
Zero shift:	selectable via DIP switches

Transmitter i.e. DC/DC

Measurement signal:	2.5 mV ... 10 V
Excitation voltage:	2.5 V / 5 V / 10 V
Excitation current:	max. 35 mA

Sensor excitation

Voltage:	2.5 V, 5 V, 10 V via DIP switches
Current:	max. 35 mA

Analog output

Voltage output:	max. 11.5 V at open terminals	± 10 V
Current output:	0 ... 20 mA	or 4 ... 20 mA
Load:	200 ... 500 Ω	
Input impedance:		1 G Ω
Output impedance:	with 10 V output:	470 Ω
	with monitor output:	10 k Ω

General amplifier data

Gain:	0.5 ... 50 000 (via DIP switches + potentiometer)
Shift zero point:	up to 100 % possible
Accuracy:	< 0.05%
Temperature coefficient:	< 50 ppm / K
Frequency response:	0 -10 Hz or 0 -1000 Hz (via DIP switches)
Electrical isolation:	input and output with respect to power supply
	50 V continuous
	500 V test voltage
Power supply:	20 - 36 V DC
	14 - 26 V AC
	< 3 VA
Operating temperature:	0 ... 60 $^{\circ}$ C
Stocking temperature:	- 25 $^{\circ}$ C ... 70 $^{\circ}$ C

Rail mounting module

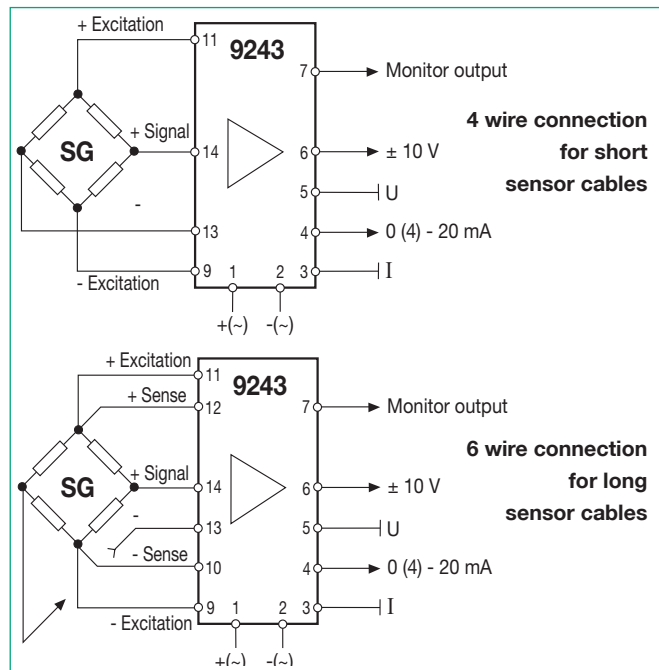
Connections:	terminal connector, 2 x 8 terminals
Dimensions [W x H x D]:	45 x 75 x 108 [mm]
Material:	polyamide 6.6, color: green
Assembly:	on DIN EN 50 022 mount rails
Protection class:	IP20
Weight:	approx. 250 g

IP65 version

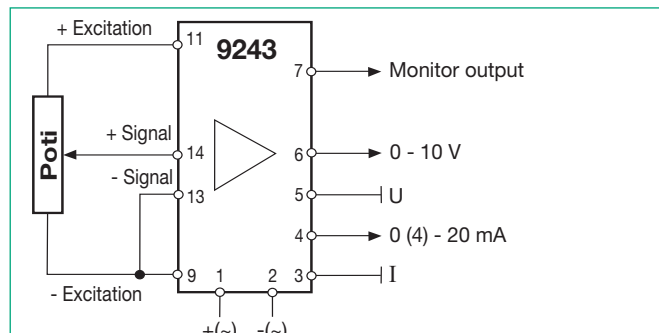
Connection:	terminal connector, 2 x 8 terminals
Dimensions [W x H x D]:	160 x 100 x 65 [mm]
Material:	cast-aluminium
Assembly:	screw mounting
Protection class:	IP65
Weight:	approx. 880 g
Screen distance:	143 x 63 [mm]
	shaft screw \varnothing 4.7 mm; screw \varnothing 8.5 mm

Connection Schematic

► for strain gauge sensors, e.g. force, pressure or torque sensors



► for potentiometric sensors, e.g. displacement or angle sensors



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.

Manufacturers default settings

Excitation:	5 V
Filter:	1 kHz
Gain (roughly):	1320 \triangleq 1.5 mV/V
Integrated analog output:	10 V
Current output:	0 ... 20 mA

Order Code

Amplifier module (rail mounting version)	Model 9243
Amplifier module (IP65 housing)	Model 9243-IP 65
Amplifier module (cut-off frequency 4 kHz)	Model 9243-V001

Calibration of entire measuring chain

Consisting of sensor and amplifier model 9243 **92ABG**

Please specify the adjustment data
e.g. 0 N \triangleq 0 V; 500 N \triangleq 10 V; cut-off frequency 1 kHz

Accessories

Rail mounting transformer 230 V AC (115 V AC) / 24 V AC 12 VA for the power supply max. 4 amplifier modules Dimensions (W x H x D): 60 x 50 x 50 mm	
in 230 V version	Model 9243-Z001
in 115 V version	Model 9243-Z002
Plug-in socket; 8 pins	Model 9900-V106

DMS Simulator

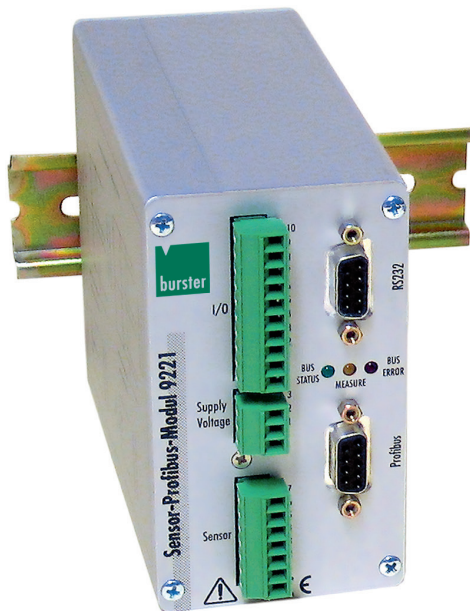
for an easy adjustment of the amplifier to SG sensors
(refer to data sheet 76-9405) **Model 76-9405**

Sensor Profibus Module

For strain gauge and potentiometric sensors and analog standard signals

Model 9221

Code:	9221 EN
Delivery:	on request
Warranty:	24 months



- For force, pressure or torque measurement with strain gauge sensors, potentiometric displacement and angle sensors or standard signals $\pm 10\text{ V}$
- Resolution 16 bit, sample rate up to 1 kHz
- 2 free configurable inputs e.g. reset, tare, etc.
- Simple configuration via RS232 interface
- Networking via Profibus DP up to 12 MBaud
- Mean value, MIN/MAX memory, set point values, zero compensation via Profibus
- DPV1 mode for parameterizing and backup via Profibus
- Potential-free input via differential amplifier

Application

The newly developed sensor Profibus module model 9221 is predestined for the integration of various analog sensor output signals into complex, net worked and peripheral automation structures. This module finds its fields of application in the industrial automation technology as well as the test rig technology based on its secure and reliable transfer mode, the fast transfer speed and its simple construction.

The inputs (e.g. PLC signal gauge) and outputs in addition to the external control allow a zero compensation by trigger via proximity switch or fast alerting on passing of set point values. Industrial type connection and mounting techniques enable the user the adaption and integration in the existing mechanical and electrical environment.

The excellent quality of measurement together with the high grade capture of mean values also enable the application in research and development.

The use of standardized Profibus protocols makes the connection an easy task for the programmer.

Specific applications are found e.g. in:

- ▶ Complex gear and engine test rigs
- ▶ Weight definition in high-rack facilities
- ▶ Automotive industry
- ▶ Special equipment construction
- ▶ Packing industry
- ▶ Manufacturing technology
- ▶ Capture of various mechanical and physical values in test rigs

Description

The universal sensor Profibus module is well-suited for measurement of mechanical values such as e.g. force, torque, pressure, acceleration, displacement and angle. Strain gauge, potentiometric and standard signals may be captured and processed without problems. A powerful 16 bit A/D converter ensures a precise and fast processing of analog sensor signals.

The module itself features a stable and precise sensor excitation voltage. The calibration and configuration data are memorized on an EEPROM, protected against zero voltage.

The user friendly configuration software makes a simple conditioning of input signals and the setup of parameters on the module with regards to the PLC and Profibus parameters possible. The version DPV1 enables the parameterization and backup function via Profibus. Functions such as the arithmetical calculation of mean values, input signal filtering, zero adjustment, MIN/MAX memory and limits setpoint values can be realized with a speed of up to 12 MBaud via Profibus.

Two potential-free and freely configurable digital inputs are available for the external PLC control (e.g. erase MIN/MAX memory, tare function). Two digital outputs can be defined as local limits switches for alerting functions.

The bus-sided control of the sensor lines on fractures or short-circuits and the galvanic separation between the Profibus-ASIC and the Profibus connector belong to the standard features.

The visualization of operating conditions such as bus connection, sensor-sided errors or active state of module are realized by three LEDs.

The DIN standard mounting rail enables an easy installation into the control cabinet.

Technical Data

Connectable sensors

Strain gauge

Bridge resistance:	120 Ω - 5 kΩ
Connection system:	6 wire
Configurable characteristic, infinitely variable:	< 1 mV/V ... 3 mV/V
Semiconductor strain gauge sensitivity:	1 mV/V ... 4 000 mV/V
Excitation voltage:	2.5 V / 5 V / 10 V
Excitation current:	max. 50 mA
Input impedance:	> approx. 1 GΩ

Voltage metering

Standard signal:	0 V ... ± 10 V
Input impedance:	> approx. 1 GΩ

Potentiometer

Resistance:	100 Ω - 100 kΩ
Excitation voltage:	2.5 V / 5 V / 10 V
Excitation current:	max. 50 mA

General amplifier data

Power excitation:	20 - 36 VDC or 14 - 26 VAC
Accuracy:	< 0.03 % F.S.
Temperature coefficient:	< 50 ppm/K
Capacity:	max. 6 VA
Frequency response:	approx. 2 kHz (- 3 dB)
Internal fuses:	Integrated reversible overload, overvoltage and pole protection

Galvanic separation to Profibus:	500 V
Operating temperature:	0 ... + 60 °C
Stocking temperature:	- 30 ... + 85 °C
Electromagnetic compatibility:	acc. to EMV guideline 89/336/EWG

Housing (IP20)

Material:	Aluminium
Dimensions [W x H x D]:	60 x 105 x 120 [mm]
Weight:	approx. 0.5 kg
Protection class:	IP20
Mounting method:	snap-on attachment
Mount rail:	35 mm acc. DIN EN 50022
Cable diameter:	max. 1.5 mm ² (AWG 16), fine wire

Connections (IP20)

A/D transformation:	plugged screw clamps
Sensor connection:	plugged screw clamps
Input / Output:	plugged screw clamps
Configuration by serial interface:	Sub Min D 9 pin
Profibus:	Sub Min D 9 pin

Housing (IP65)

Material:	cast aluminium
Dimensions [W x H x D]:	160 x 120 x 80 [mm]
Weight:	approx. 1 kg
Protection class:	IP65
Mounting method:	screw mounting

Connections (IP65)

Supply voltage:	PG 7 connection
Sensor connection:	PG 7 connection
Input / Output:	PG 7/PG 9 connection
Configuration by serial:	Sub Min D 9 pin
Profibus:	M 12 connector 5 pin

Signal process

A/D transformation:	16 Bit
Measuring rate:	>1 kHz

Profibus

Baud rate:	automatic selection 9.6 kBaud ... 12 MBaud
Number of devices at the Profibus:	up to 32 participants without repeater up to 127 participants with repeater

Potential: potential-free

Functions: average value, filtering, tara, MIN/MAX memory, limit values, evaluation status, sensor test

Checking of the electrical measuring by shunt calibration:

59, 80, 100 kΩ - calibration

Analog output

Function:	process status
Monitor output:	approx. + 8 V

Digital outputs

Set point: 3 outputs, Open-E.p. switched, 24 VDC, potential-free, output up to $I_{max} = 200$ mA

Digital inputs

Input: 2 freely configurable inputs, potential-free
Logic: SPS level DIN EN 61131-2, n-switched, p-switched

Filter adjustments

Adjustable frequency response: 0; 5; 10; 25; 50; 100; 200; 400 Hz
No filter: 1 kHz

Display

LED green: Bus connection correct
LED yellow signaling: sensor Profibus module active
LED red / red signaling: Bus error / sensor-line-break indication

Order Information

Sensor Profibus module **Model 9221**
inclusive GSD file and configuration software

Sensor Profibus module **Model 9221-IP65**
in IP65 protection class

Calibration of entire measuring chain **92ABG**
This service contains the alignment of the sensor Profibus module to the sensor ordered with the module or to customer sensor data (e.g. characteristic, excitation voltage, or sensor test certificate, Profibus Baud rate).

Accessories

Connecting plug **Model 9900-V181**
for connection to PLC, 9 pin, Min-D

Connecting plug **Model 9900-V225**
for connection to PLC for IP65 version, 5 pin, M 12

Mating connector **Model 9900-V525**
socket for connection of several modules to the PLC for IP65 version, 5 pin, M 12

Mount rail fixing kit for IP65 version **Model 9221-Z001**

Configurations software **Model 9221-P001**
in scope of delivery contained

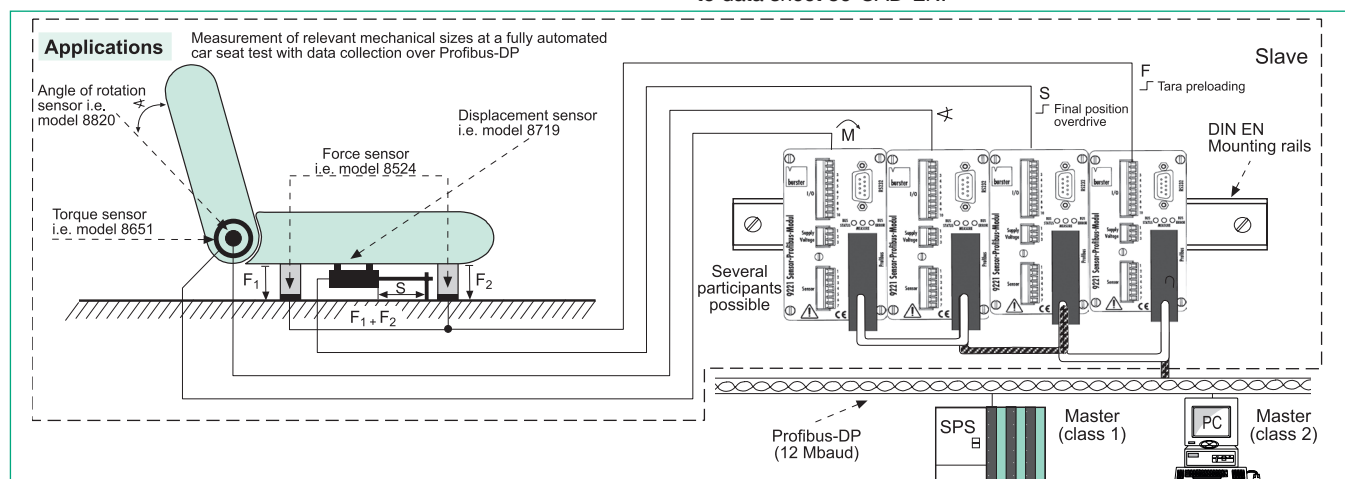
DMS simulator (see data sheet 76-9405) **Model 9405**

Module mains adapter **Model 9244-Z001**
230 VAC / 24 VDC 250 mA

Data cable **Model 9900-K333**
for the connection of sensor Profibus module 9221 and PC

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.





COMPREHENSIVE CUSTOMER SERVICE

OVER 60 YEARS OF EXPERIENCE AND EXPERTISE – AT YOUR SERVICE

As manufacturers of complete measurement solutions and sensor signal processing systems, we aim to offer a comprehensive service to our customers.

Our services. Your advantage. From the start. At every stage.

Our services for you:

Accredited calibration

DAkkS ISO 17025 accredited laboratory for maximum reliability, accuracy, smallest measurement uncertainties and international recognition. Important component of test equipment management under IATF 16949.

FACTORY CALIBRATION CERTIFICATE (WKS)

Compliance with requirements of the automotive, medical technology and aerospace industries for monitoring test and measurement equipment.

TEST AND CALIBRATION CERTIFICATE

For cost-effective, fast and traceable calibration.

SENSOR-AMPLIFIER CALIBRATION

Configuration of measurement systems.

THINK GLOBAL – ACT LOCAL

Service competence at your site, supported by experts at burster HQ.

PHONE SERVICE / VIDEO CALL

Our service team is always happy to help you.

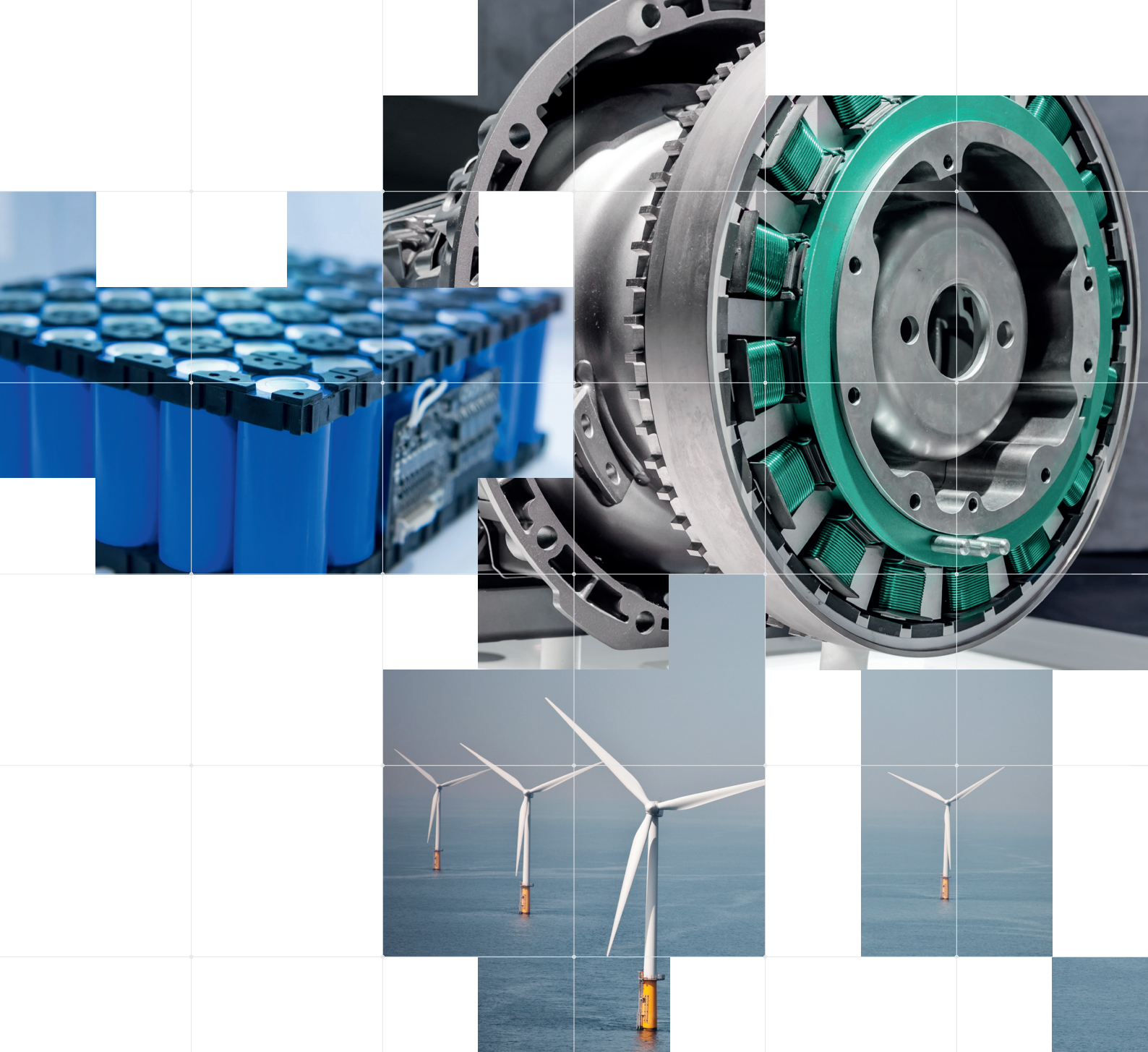
DOWNLOAD SERVICE

All documents available online 24/7.

VIDEO TUTORIALS

You can find lots of helpful tutorials on our YouTube channel.





burster praezisionsmesstechnik gmbh & co kg

Talstraße 1-5
76593 Gernsbach, GERMANY
Phone: +49-7224-645-0
Email: info@burster.com

www.burster.com