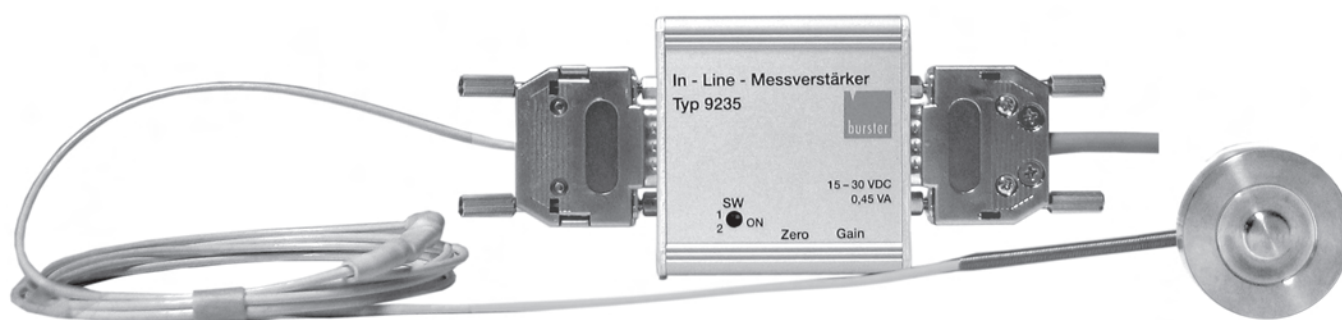


In-Line Amplifier for Strain Gauge Sensors

Model 9235

Code:	9235-E
Manufacturer:	burster
Delivery:	ex stock
Warranty:	12 months



- Particularly space-saving and lightweight
- Voltage output 0 ... ± 10 V
- Designed as in-line measuring amplifier
- Non-interchangeable and short circuit-proof
- Also available as printed circuit board without housing

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 outside control cubicles 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.

Users who wish to integrate the amplifier in an existing circuit board or in a housing of their own can have it supplied as an open-type component with terminals instead of plug contacts.

Description

The in-line amplifier module itself is operated at voltages between 15 V and 30 V, from which it generates a stable feed voltage to supply the sensor with power. The measurement signals of the sensor, normally ranging between 0 ... 5 mV and 0 ... 10 mV for bridge-connected strain gauges, are amplified to analogue 0 ... 10 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 feed and polarity reversal protection for the amplifier power supply afford additional safety for installation. If the amplifier has to be secured to its environment, this is done by clamping the housing or affixing it with an adhesive. The open-type circuit board has mounting holes for screw size M 2,5. The amplifier's cut-off frequency is > 1 kHz, its weight is < 65 g.

Technical Data

Connectable sensors

Strain gauges

Bridge resistance (4 arm bridge):	350 Ω ... 5 kΩ
Connection technology:	4-wire
Sensor excitation voltage:	2.5 V, ± 0.075 %
Excitation current:	20 mA max.
Power consumption:	0.3 VA
Adjustable input:	0.75 mV/V ... 2.5 mV/V

Analog output

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

General amplifier characteristics

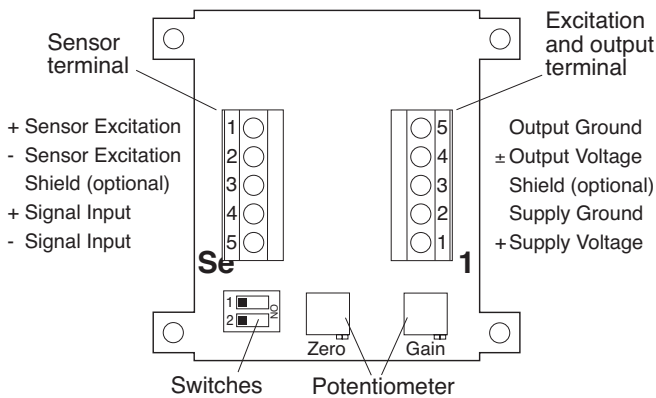
Accuracy:	< 0.01 %
Temperature coefficient:	< 100 ppm / K
Power supply:	15 ... 30 V DC
Frequency response:	1 kHz
Operating temperature:	0 ... 60 °C

Wiring code model 9235

"Excitation and Output"	plug	Pin 2 + power supply Pin 3 shield (optional) Pin 5 - power supply Pin 7 ± output voltage Pin 9 output ground
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"Sensor"	mating connector	Pin 1 + sensor excitation Pin 3 shield Pin 5 - sensor excitation Pin 6 + signal input Pin 9 - signal input
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Wiring code model 9235-V001



Housing

Connections:	Sub-D plug / mating connector
Dimensions:	(WxHxD) 62 x 55 x 16 [mm]
Material:	Aluminium
Mounting:	clamp or stick on
Protection class:	IP 40
Weight:	< 65 g
Humidity:	10 ... 80 %, not dewing

Open version as printed circuit

Connections:	terminal connector, 2 x 5 terminals
Dimensions (WxHxD):	44 x 35 (45) x 14 [mm]
Mounting:	4 holes for screws M 2.5 screen distance 40 x 37 [mm]
Weight:	< 20 g

Default setting

Sensor output:	1.5 mV/V
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Order Information

In-Line Amplifier with housing	Model 9235
In-Line Amplifier without housing	Model 9235-V001

Calibration of entire measuring chain
Consisting of sensor
and amplifier model 9235

Code 9235-ABG

Accessories

Connectors	mating connector	Model 9900-V609
	plug	Model 9900-V209
not part of scope of delivery		

Example of a measuring chain

