



## ISOLATION AMPLIFIER for mA / V Signals with 2-wire Transmitter Supply

### MAIN FEATURES

**DA561 is specially designed for signal isolation and load amplification in the process industry.**

**A 2-wire transmitter can be connected to and supplied from the isolation amplifier.**

**DA561 maintains a high isolation level (1,5 kV) between input and output.**

**Current and voltage can be chosen independently as input and output signals.**

#### Applications

- Voltage feed for a 2-wire transmitter, and galvanic isolation from its mA circuits.
- Galvanic isolation, when a mA signal is connected, to more than one measurement or monitoring system.
- Conversion of measurement range 0-20 mA to 4-20 mA or vice versa.
- Load amplification and isolation when extra high load capacity is needed.

#### 2-wire transmitter supply

A 2-wire, 4-20 mA, transmitter can be connected directly to the input of the DA561, thanks to the built-in transmitter supply.

#### Configuration flexibility

DA561 is designed for the most usual input and output process signals, such as mA and V.

Input and output ranges are changed with the help of jumper connections, and a simple instruction table.

Fine adjustment of the amplifiers zero point and span can be made with potentiometers accessible from the front of the unit.

#### Noise immunity

DA561 meets the high demands from the process industry of good EMC performance. Criterion A applies for all EMC tests, which means that the amplifier stays within specifications during EMC influence.

#### Test connections

The mA output signal can be measured on the front terminals with a low-ohm mA instrument without breaking the output circuit.

#### Plug-in, screw terminals

DA561 is connected via plug-in screw terminals. The terminal blocks and cables are easy to disconnect from the unit for convenient dismantling and service. Installation is simplified by connection diagrams on the front panel.

#### Compact mounting on DIN-rail

DA561 snaps on to a 35 mm DIN-rail and can be mounted with high density.

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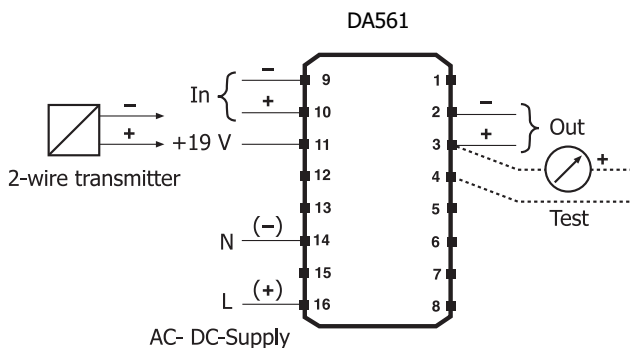
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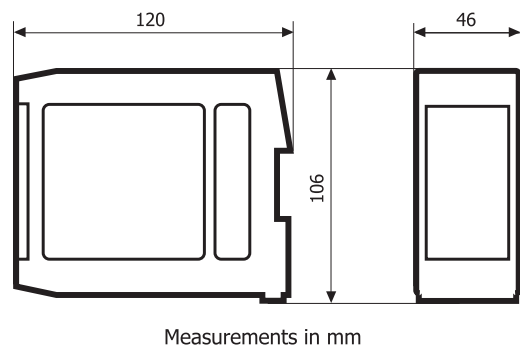
## SPECIFICATIONS DA561

<b>INPUT</b>		
Voltage		0(0.2)-1 V, 0(1)-5 V, 0(2)-10 V
Current	Input impedance	1 Mohm
	Input impedance	0(4)-20 mA (standard setting)
Maximum input level		11.9 ohm
		200 % of measurement span
<b>OUTPUT</b>		
Voltage		0(0.2)-1 V, 0(1)-5 V, 0(2)-10 V, short circuit protected
Current	Minimum load	500 kohm (error effect <0.1 %)
	Voltage limitation	Appr. 56 V
Current	Maximum load	0(4)-20 mA, open or short circuit protected (standard setting)
	Current limitation	600 ohm
Response time	Test output	Appr. 23 mA
	T(50 %)	mA instrument, $R_i \leq 10$ ohm
	T(90 %)	Appr. 25 ms
Ripple		Appr. 100 ms
		Max. 50 $\mu$ A, 5 kHz
<b>TRANSMITTER SUPPLY</b>		
Supply voltage		19 VDC, max. ripple 100 mV p-p
<b>ENVIRONMENT CONDITIONS</b>		
Ambient temperature	Operation	-20 to +60 °C
	Storage	-25 to +70 °C
Humidity		0 to 95 %RH
EMC	EN 50081-2, EN 50082-2 (Industrial)	Criterion A (within specifications)
LVD	IEC 1010-1	Installation category III, maximum 250 V
<b>GENERAL DATA</b>		
Galvanic isolation	AC & DC version	
	Input to output	1 500 VAC, 1 min
Power supply	Input/output to power supply	2 200 VAC, 1 min
	AC version	230 VAC, -15..+10 %, 45..75 Hz,
	DC version	19 to 60 VDC
Power consumption		4 VA
<b>ACCURACY</b>		
Calibration		$\pm 0.1$ % <sup>1)</sup>
Linearity		$\pm 0.1$ % <sup>1)</sup>
Repeatability		$\pm 0.05$ % <sup>1)</sup>
Temperature influence		$\pm 0.15$ % <sup>1)</sup> / 10 °C
Supply voltage influence		$\pm 0.05$ % <sup>1)</sup> within variation range
Long-term stability	First 3 months (burn-in)	$\pm 0.2$ % <sup>1)</sup> / year
	After 3 months	$\pm 0.05$ % <sup>1)</sup> / year
<b>HOUSING</b>		
Weight		Appr. 500 g
Protection		IP 20
Connection	Plug-in terminals	Stranded, $\leq 2.5$ mm <sup>2</sup> , AWG 14
Mounting		Rail acc. to DIN EN 50022, 35 mm
<sup>1)</sup> Of input span		

### CONNECTIONS



### DIMENSIONS



### ORDERING INFORMATION

**DA561 230 VAC**  
**DA561 19-60 VDC**  
**Configuration**

**51MOE00006**  
**51MOE00007**  
**70CAL00001**

### DISTRIBUTION