

# DATA SHEET



## T 6132 EN

### Type 6132 p/i Converter

For four-wire connection



#### Application

Used to convert a pneumatic signal into a standardized electric signal · Particularly suitable as intermediate element between pneumatic and electric measuring and control devices

p/i converters serve as an interface between pneumatic and electric measuring and control units, being used for example to connect pneumatic transmitters to electric controllers, computers or process control systems.

The input variable is a pneumatic signal and the output variable an electric DC current signal or DC voltage signal.

The Type 6132 p/i Converters are designed for four-wire connection and are available as rail-mounting units for top hat rails.

#### Special features

- Low hysteresis
- Good dynamic response due to capacitive pressure transducer in the input



Fig. 1: Type 6132-04 p/i Converter, rail-mounting unit

**Principle of operation** (see Fig. 1 and Fig. 2)

A capacitive ceramic pressure sensor (1) is used to convert the pressure  $p$  of the pneumatic input signal into an electric DC voltage signal.

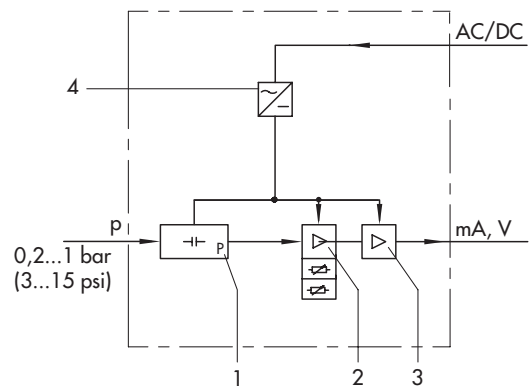
The DC voltage signal which is proportional to the pressure is amplified to a defined level in the measuring amplifier (3). Lower range value and span can be adjusted at the potentiometers located on the front panel (approx.  $\pm 10\%$ ).

The output stage (4) issues a load-independent DC current signal or DC voltage signal. The type of output signal (mA or V) can be set at the switches.

The power supply unit (5) is used for the voltage supply and galvanic isolation.

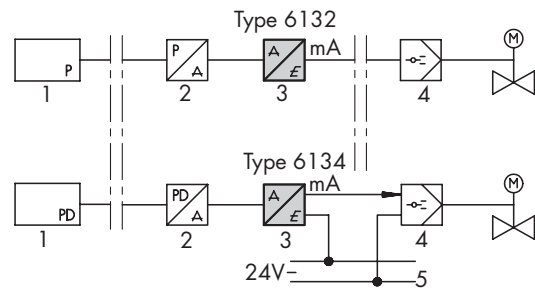
**Installation**

The valve can be mounted in any desired position.



- p Pneumatic input signal
- 1 Pressure transducer
- 2 Measuring amplifier and potentiometers for adjusting ZERO and SPAN
- 3 Output stage
- 4 Power supply unit

**Fig. 2:** Schematic diagram of the Type 6132 p/i Converter for four-wire connection



- 1 Sensor
- 2 Pneumatic transmitter
- 3 p/i converter
- 4 Controller
- 5 Two-wire network

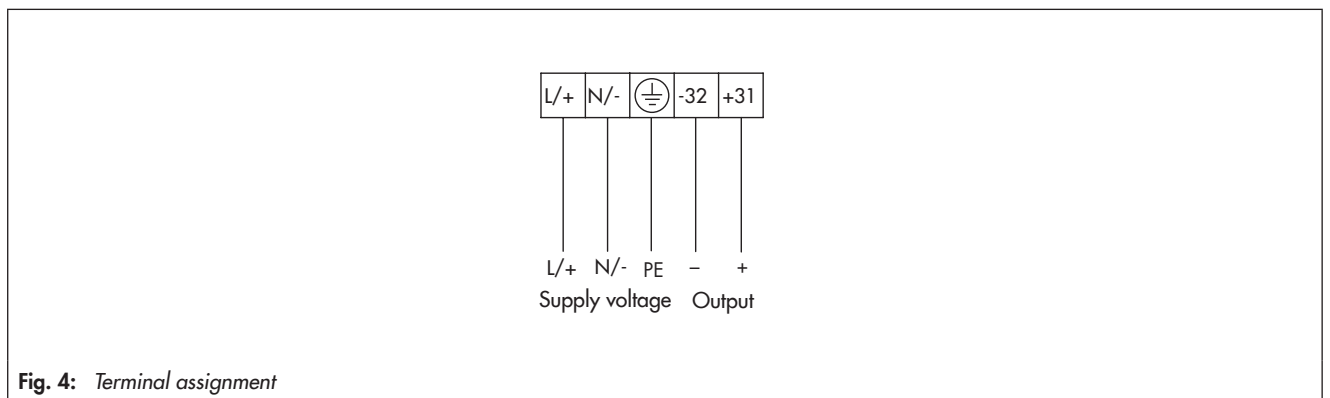
**Fig. 3:** Sample application for four-wire and two-wire connection

**Table 1: Technical data**

Type	Type 6132-04
Version	Rail-mounting unit
Input	Input 0.2 to 1 bar (3 to 15 psi), overloadable up to 2 bar
Selected using switches inside the device	0 to 20 mA · 4 to 20 mA 0 to 10 V · 2 to 10 V · 0 to 5 V · 1 to 5 V
Permissible load	0/4 to 20 mA 0/2 to 10 V
	≤750 Ω at 20 mA ≥2 kΩ
Supply voltage	24 V DC (18 to 36 V) 1.5 W; 230 V AC, 115 V AC, 24 V AC (-15/+10 %) 50/60 Hz, 3 VA
Characteristic <sup>1)</sup>	Characteristic: Output linear to input
Hysteresis	≤ 0.05 %
Deviation from terminal-based linearity	≤0.02 %
Dead band	≤ 0.03 %
Ripple of output signal	≤0.05 %
Effect of temperature	≤0.15 %/10 K for zero and span
EMC noise emission	EN 61000-6-3, EN 61326
EMC noise immunity	EN 61000-6-2, EN 61326
Device safety	EN 61010
Class of protection	I
Overvoltage category	II
Degree of contamination	2
<b>Ambient conditions, degree of protection, weight</b>	
Permissible ambient temperature range	-20 to +70 °C
Perm. storage temperature range	-40 to +85 °C
Perm. transportation temperature	-40 to +85 °C
Degree of protection acc. to EN 60529	IP 20
Conformity	<b>CE</b> · <b>ERC</b>
Weights	
AC supply voltage	Approx. 0.32 kg
DC supply voltage	Approx. 0.25 kg
<b>Installation and connections</b>	
Air connection	Connection for hose with 4 mm inside diameter and 6 mm outside diameter
Electrical connection	Terminals for 0.5 to 2.5 mm <sup>2</sup> wires Fixed wires 0.2 to 4 mm <sup>2</sup> Flexible wires 0.2 to 2.5 mm <sup>2</sup>
Installation	35 mm top-hat rail, DIN EN 60715

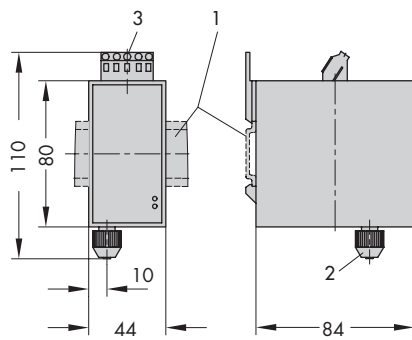
<sup>1)</sup> All errors specified based on output span

### Electrical connection



**Fig. 4: Terminal assignment**

## Dimensions in mm



- 1 Top-hat rail
- 2 Pneumatic connection (input)
- 3 Electrical connection (output)

Fig. 5: Dimensions

## Ordering data

Article code	Type 6132- ... ..					
Explosion protection	Without	0				
Rail-mounting unit		4	0			
Supply voltage	24 V DC			1		
	230 V AC			2		
	115 V AC			3		
	24 V AC			4		
Input	0.2 to 1 bar				1	
	3 to 15 psi				2	
Output <sup>1)</sup>	0 to 20 mA					0
	4 to 20 mA					1
	0 to 10 V					2
	2 to 10 V					3

<sup>1)</sup> mA or V and ranges can be selected using switches inside the device

## Ordering text

Type 6132-040... p/i Converter

Input: ... bar/... psi

Output: ... mA/... V

Supply voltage: 230 V AC, 115 V AC, 24 V AC, 24 V DC