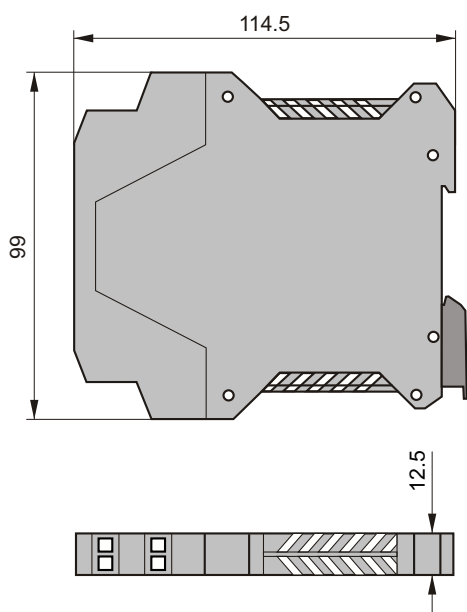


# Power supply/isolator/signal converter ZSP-41



- ✓ Full galvanic separation of circuits (IN-OUT, IN-SUP, OUT-SUP)
- ✓ Ability to select input and output signals
- ✓ Ability to use input line to power a two-wire transmitter
- ✓ Casing can be fitted on a standard rail (TS35)



## Applications and functions

The ZSP-41 provides galvanic separation of an input signal ( $4 \div 20$  mA,  $0 \div 20$  mA,  $0 \div 10$  V,  $0 \div 20$  V) and converts it, through a separation system into an output signal. An additional input line may be connected to any two-wire transmitter to provide it with a  $19 \div 24$  V.

The device is typically used to provide galvanic separation between the measurement circuits installed on an object, and the main section. This enables the effect of object-related interference in the monitoring, control and recording systems of automatic devices to be largely eliminated. The ability to alter the input and output signals makes it easier to configure automatic systems using apparatus based on differing standards.

## Configuration, calibration

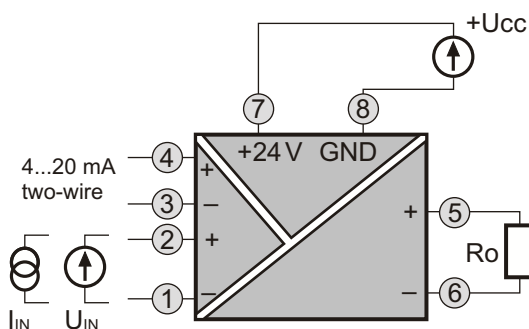
The user can use switches to configure input and output settings for the following signals

### Switches of input configuration

	DP2		DP4			
	1	2	1	2	3	4
0...20 mA	+	+	+	+	–	+
4...20 mA	+	+	+	–	+	+
Two-wire transmitter	–	+	+	–	+	+
0...10 V	+	+	–	+	–	+
0...20 V	+	+	–	+	–	–

### Switches of output configuration

	1	2	3	4	
0...20 mA	–	–	–	–	+
4...20 mA	–	+	–	+	–
0...10 V	+	–	+	–	



**Electrical diagram**

Access to switches by removing the front panel.

Isolator can be produced to support other input and output signals.

Calibration is carried out using potentiometers.

## Technical parameters

- **Input parameters**
  - Input signal (selected by switch)**

0...20 mA, 4...20 mA  
4...20 mA + converter power supply  
0...10 V
  - Special versions: other input signals
  - Input resistance**

$\geq 50 \text{ k}\Omega$  (voltage input)  
 $20 \text{ }\Omega$  (current input)
- **Output parameters**
  - Output signal (selected by switch)**

0...20 mA, 4...20 mA  
0...10 V
  - Special versions: other output signals
  - Load resistance**

0...500  $\Omega$  (current output)  
 $\geq 1 \text{ k}\Omega$  (voltage output)
- **Galvanic separation**
  - Strength test parameters**

opto-electronic  
1.5 kV AC, 50 Hz, 1 min
- **Dynamic characteristics**
  - Transmission band**

5 Hz (3 dB)
- **Conversion errors**
  - Accuracy**

$\leq \pm 0.16\%$

Typically, the converter is set for the range 4...20 mA / 4...20 mA. Setting of a different range will lower the class of the converter to 0.25% (tuning is possible using trimmers accessible from the front plate).
  - Effect of temperature fluctuations**

$\leq \pm 0.1\%$  /  $10^\circ\text{C}$
  - Effect of load resistance fluctuations**

$\leq \pm 0.1\%$  /  $100 \text{ }\Omega$  (for current output)  
 $\leq \pm 0.1\%$  (from 1 to  $10 \text{ k}\Omega$  for voltage output)
  - Effect of serial interference 50 Hz**

$\leq \pm 0.1\%$
  - Effect of parallel interference 220 V**

$\leq \pm 0.1\%$
  - Effect of supply voltage fluctuations**

$\leq \pm 0.1\%$
- **Power supply**
  - Supply voltage**

$24 \text{ V} \pm 20\%$
  - Supply current**

$\leq 100 \text{ mA}$
- **Conditions of normal use**
  - Ambient temperature**

$5...60^\circ\text{C}$
  - Relative humidity**

30...80%
- **Casing**
  - Type**

UEGM 22.5 (PHOENIX)
  - Ingress protection rating**

IP 20
- **Weight**

0.1 kg

## Ordering procedure

Standard version: **ZSP-41**

Special version: **ZSP-41 /**        **/**       

Input signal

Output signal