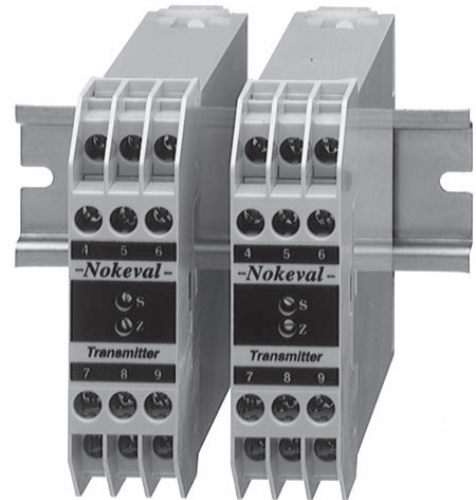


Signal converter 641

- Current inputs 0/4..20 mA
- Voltage inputs 0..5, 0..10 V, $\pm 10V$
- Potentiometer
- Output 0/4..20 mA, 0..5/10 V, $\pm 10V$, or passive 2-wire output 4-20 mA
- Power supply for 2-wire transmitter
- Galvanic isolation
- Four selectable dampings
- Nominal accuracy 0.05 % of range
- Power supply 24 VDC $\pm 10\%$
- mV-inputs on request



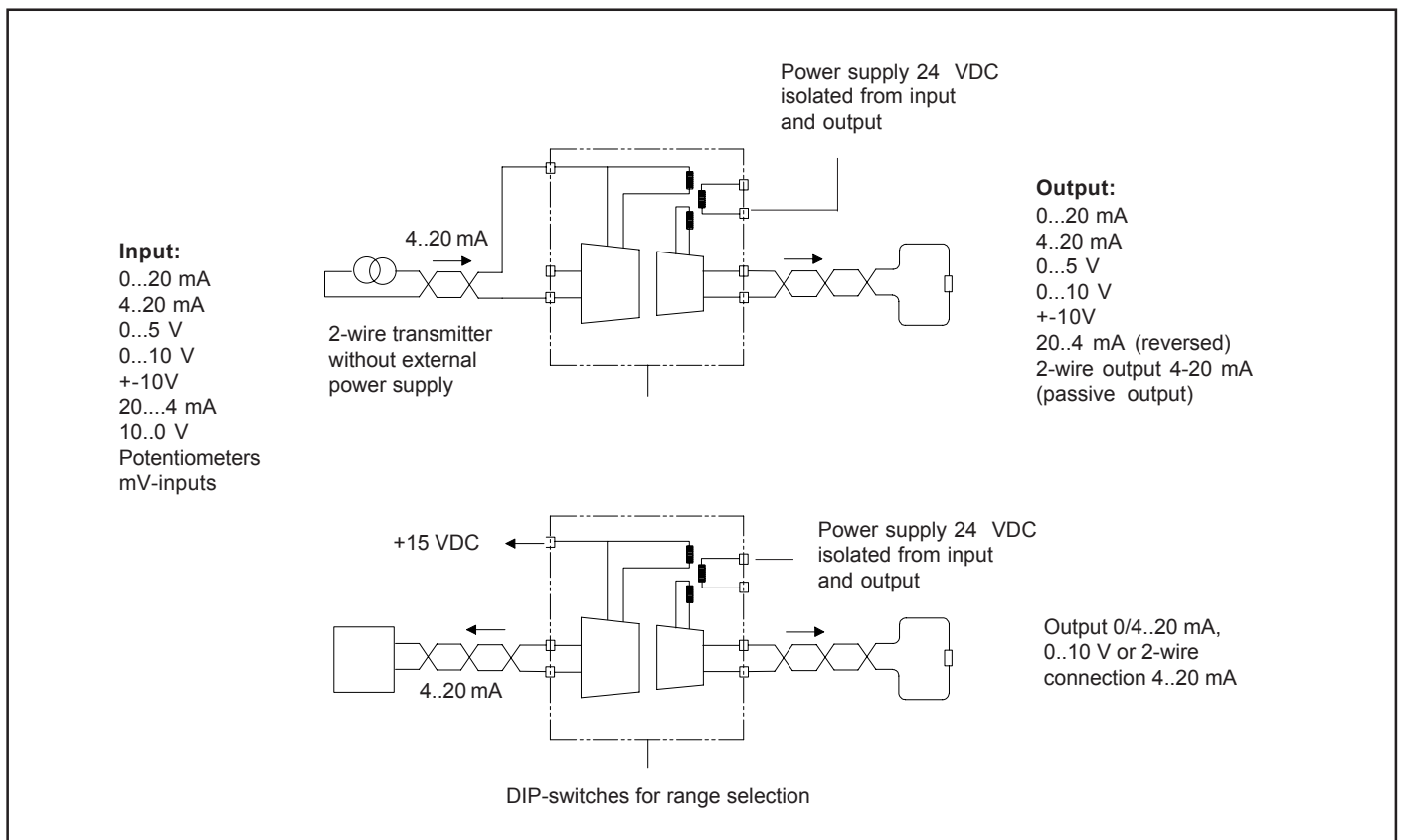
Signal converter 641 is designed to convert standard process input/output signals. Current inputs 0/4..20 mA can be converted into voltage outputs, $-10..+10 V$ can be converted to 0..10 V, low mV inputs can be converted to standard outputs etc. Signal converter 641 accepts 2-wire transmitters without a separate power supply. Potentiometer input as a standard.

Galvanic isolation is made at the same time with the conversion. Galvanic isolation cuts the noise signals which may exist when using low voltage signals, e.g. thermocouples.

0.. $\pm 5 V$, 0.. $\pm 10 V$ or current 0/4..20 mA. Converter 641 gives also the possibility to signal damping. There is four selectable dampings: 10 ms, 250 ms, 500 ms or 750 ms. Selection via DIP-switches. Operating voltage 24 VDC $\pm 10\%$ is also isolated from input and output.

The common inputs and outputs are selected via DIP-switches, see table next page. Fine adjustment is made with front panel zero and span potentiometers. The ranges, not given in the table, may be delivered on request. Signal converter 641 is delivered always to ordered range.

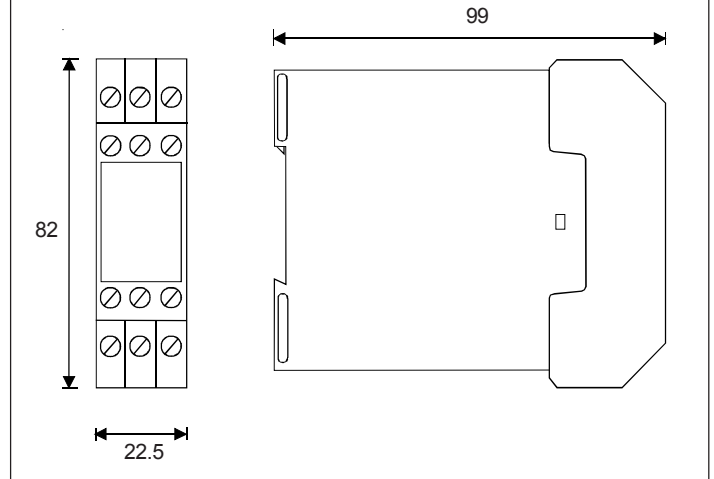
Output selectable via DIP-switches: voltage 0-5V, 0-10V,



Technical specifications:

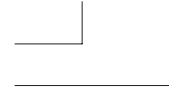
| | |
|----------------------|---|
| Accuracy | < 0,05% of range |
| Typical linearity | < 0.05 % of range |
| Temperature effects: | under 0.006% /°C |
| Input resistance | 50 W for current > 100 MW for voltage input |
| Potentiometer | 500W - 100 kW |
| Output load | Max. 600 W |
| Power supply | 24 VDC ± 10 % |
| Isolation | >1000 V input-output |
| Power consumption | 40 mA, voltage output 60mA, mA-output |
| Range selection | 80 mA, 2-wire transmitter DIP-switches and jumpers |
| Damping | Four selectable dampings |
| T=63% | 0,1 ms, 250 ms, 500 ms and 700 ms |
| Rise time 100% | 300 µs |
| Frequency response | 10 ms, 0...1 kHz, ± 10V input/output |
| Ambient temp. | 45°C |
| Case width | 22,5 mm |
| Mounting | DIN-rail, DIN46277 |
| Terminal blocks | 2 x 2,5 mm ² |

Dimensions (mm):



Order code: 641- 4/20mA - 0/10V

Input
Output



Standard ranges:

| Input | Output | Input | Output | Input | Output |
|---------|-----------|--------|---------|---------------|-----------|
| 0/20 mA | 0/20 mA | 0/10 V | 0/20 mA | -20/-4 mA | 4/20 mA |
| 0/20 mA | 4/20 mA | 0/10 V | 4/20 mA | -5/+5 V | -10/+10 V |
| 0/20 mA | 0/10 V | 0/10 V | 0/10 V | -5/+5 V | -5/+5 V |
| 0/20 mA | 0/5 V | 0/10 V | 0/5 V | -10/+10 V | -10/+10 V |
| 4/20 mA | 0/20 mA | 0/5 V | 0/20 mA | -10/+10 V | -5/+5 V |
| 4/20 mA | 4/20 mA | 0/5 V | 4/20 mA | Potentiometer | 0/20 mA |
| 4/20 mA | 0/10 V | 0/5 V | 0/10 V | Potentiometer | 4/20 mA |
| 4/20 mA | 0/5 V | 0/5 V | 0/5 V | Potentiometer | 0/10 V |
| 4/20 mA | -10/+10 V | | | Potentiometer | 0/5 V |
| 4/20 mA | -5/+5 V | | | | |

When selecting new ranges, fine adjustment is made via front panel potentiometers.

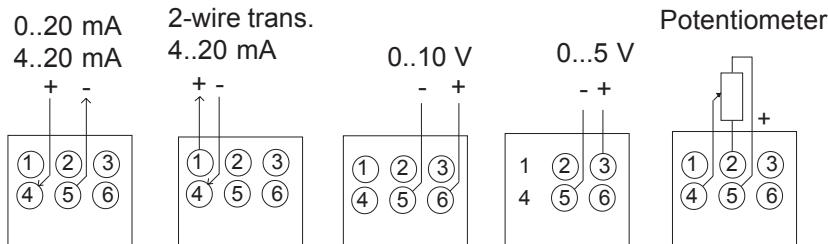
Potentiometer input is delivered according to potentiometer size, which can be changed later by selecting new range resistors.

Signal converter 641 is delivered always to ordered range.

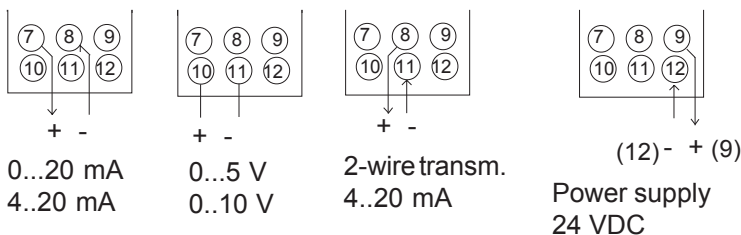
The ranges, not given in the table, may be delivered on request (mV, high voltages etc.).

Terminal connections:

Input:



Other inputs and outputs are connected as shown in users manual.



Output:

