KSG U/I is primarily used to provide galvanic separation between two circuits of analog signals. In addition, it converts the analog 0-10V signal into a 0/4-20mA analog current signal. The device can convert the input voltage signal 0-10V to a current signal of 0-20mA or 4-20mA. There is also the possibility of forcing a constant value of 4mA or 20mA on the current output regardless of the value of the voltage input signal. There are therefore 4 modes of operation of the device, which are selected using two jumpers.

The analogue input can also be connected to a 3-wire transmitter. Of any physical size (eg temperature, pressure) operating in the 0-10V standard.

Connection diagram of KSG U/I separator.
Technical data KSG U/I.

Power supply:
- power supply voltage: 24V +/-10%
- power consumption:
  - 30mA max, with unloaded auxiliary power supply and no load current output
  - 40mA max, with the current on the analogue output equal to 20mA
  - 70mA max, with a current on the analogue output equal to 20mA and additional power output short-circuit to ground

The additional power supply output:
- power supply voltage: 24V +/-10% unstabilized
- voltage drop: max 3V at the output current 20mA
- current limit: 30mA - protection against short circuit to ground
- level of ripple: +/- 0.2V

Voltage input:
- input resistance: >= 220kΩ

Current output:
- load resistance: max 450Ω
- accuracy of analog signal processing: +/- 0.2%
- response / conversion time (10-90%): 0.3sek
- separation (U/In/Out): 1kV, 50Hz, 1 min
- operating temperature range: 0-65 °C
- relative humidity range: 0-90% (without condensation)
- level of security: IP20
- work position: any
- housing dimensions: 17.5 x 94 x 65 mm
- assembly: in a housing for a DIN rail (TS35)