KSG I/U is primarily used to provide galvanic separation between two analogue signal circuits. In addition, it converts a 0-20mA or 4-20mA analog current signal into a 0-10V analog voltage signal.

The device can work with an input signal of 0-20mA or 4-20mA converting it into a 0-10V voltage signal. It is also possible to force an analog output to a constant 0V or 10V signal regardless of the current input signal value. There are therefore 4 modes of operation of the device, which are selected using two jumpers.

The analog input can also be connected to a 2-wire passive transducer of any physical size (e.g., temperature, pressure) operating in the standard of 4-20mA.

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

Power supply:
- power supply voltage: 24V +/-10%
- power consumption:
  - 30mA max, with an unloaded auxiliary power supply output
  - 60mA max, using additional power supply
  - 80mA max, when the auxiliary power supply is shorted to ground and shorted voltage output 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

Current input:
- voltage drop at the entrance: 5V max, at 20mA (corresponds to the input resistance 250Ω)
- current limit: 30mA - protection against applying too high voltage - max 30V

Voltage output:
- load resistance: 2kΩ or more
- short-circuit protection: 30mA - protection against short circuit to ground

- 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)