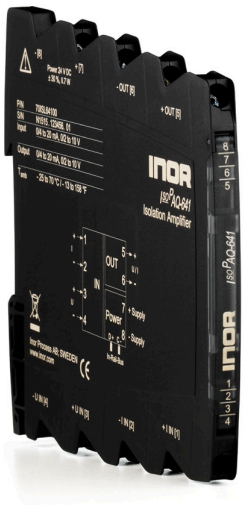
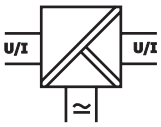
High-performance isolation transmitter for mA/V Signals with calibrated range selection



The Isolation Amplifier IsoPAQ-641 is used for isolation and conversion of 0/4 ... 20 mA and 0/2 ... 10 V standard signals.

The input and output range of IsoPAQ-641 can be easily set by using DIP switch. Due to the calibrated range selection no further adjustment is necessary. Also the cut-off frequency can be adapted to the measurement task by using the DIP Switch.

The auxiliary power can be supplied via the connection terminals or via the optional In-Rail-Bus connector. A green LED on the front of the unit has been provided to monitor the power supply.



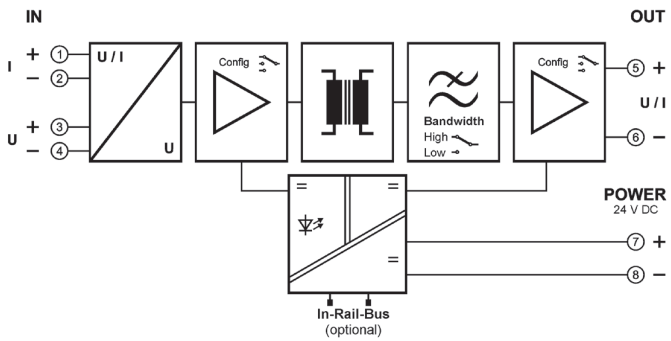
- **Calibrated signal setting via DIP switch**
  Input and output range can be set by using DIP switch – high precision without any further adjustment
- **3-Port Isolation**
  Protection against erroneous measurements due to parasitic voltages or ground loops
- **Extremely slim design**
  6.2 mm slim housing for a simple and space saving DIN rail mounting
- **Optional In-Rail-Bus mounting rail connector**
  allows for fast and economical installation
- **Protective Separation acc. to EN 61140**
  Protects service personnel and downstream devices against impermissibly high voltage
- **Maximum reliability**
  No maintenance costs

Specifications:

Input			
Input signal (calibrated switchable)	0 ... 20 mA 0 ... 10 V	4 ... 20 mA 2 ... 10 V	
Input resistance	Current input Voltage input		⩽ 25 Ω ⩾100 kΩ
Overload	Current input Voltage input		< 50 mA < 30 V
Output			
Output signal (calibrated switchable)	0 ... 20 mA 0 ... 10 V		4 ... 20 mA 2 ... 10 V
Load	Current output: ⩽12 V (600 Ω at 20 mA)		Voltage output: ⩽ 5 mA (2 kΩ at 10 V)
Linear transmission range	–1 ... +110 %		
Residual ripple	< 10 mV_{rms}		
General Data			
Transmission error	< 0.1 % full scale		
Temperature coefficient [1]	< 100 ppm/K		
Cut-off frequency -3 dB (switchable)	5 kHz	100 Hz	10Hz
Response time T_{99}	150 µs	7 ms	70 ms
Test voltage	3 kV AC, 50 Hz, 1 min.		Input against output against power supply
Working voltage[2] (Basic insulation)	600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1		
Protection against electrical shock [2]	Protective separation according to EN 61140 by reinforced insulation in accordance with EN 61010-1 up to 300 V AC/DC for overvoltage category II and pollution degree 2 between all circuits		
Ambient temperature	Operation Transport and storage		-25°C to +70°C -40°C to +85°C
Power supply	24 V DC	voltage range 16.8 V ... 31.2 V, approx. 0.7 W	
EMC[3]	EN 61326-1		
Construction	6.2 mm (0.244") housing, protection class IP 20, mounting on 35 mm DIN rail acc. to EN 60715		
Weight	Approx. 70 g		

1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.
3) Minor deviations possible during interference

Block diagram/Connections



Dimensions