# Isolation Amplifier
IS 28
Isolation and Conversion of Standard Signals

The Isolation Amplifier **IS** 28 is used for isolation and conversion of 0 ... 20 mA, 4 ... 20 mA and 0 ... 10 V standard signals.

For applications where one signal combination only is used, the Isolation Amplifier **IS** 28 offers a cost-effective alternative.
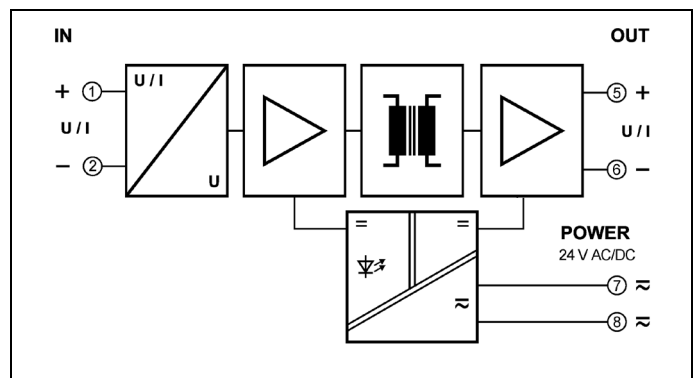
A cross-connector for the auxiliary power supply ensures fast and easy installation. The slim housing with 11.2 mm width saves significant space on the DIN-rail. If required a measuring range compensation can be performed at the Zero/Scan potentiometers behind the front cover.

Analog signal processing guarantees precise measured values with short response times and outstanding signal reproduction at the output. Protective Separation and the 24 V AC/DC power supply make the **IS** 28 universally applicable for all measurement and industrial applications, as well as for building automation.
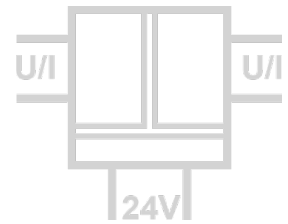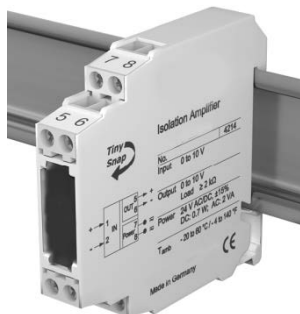
- **Cost optimized design**
  Economical separation for standard applications

- **Only 60 mm installation depth, 11.2 mm wide**
  Can be installed in economical standard terminal boxes

- **Fixed ranges, easy to use**
  Ready to use without any settings or adjustments

- **True 3-port separation**
  Protection against erroneous measurements due to parasitic voltages or ground loops

- **Protective Separation acc. to EN 61140**
  Protects service personnel and downstream devices against impermissibly high voltage

- **Unlimited use with 24 V AC/DC power supply**
  Universally applicable for all measurement and industrial applications

- **5 Years Warranty**
  Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant (carriage and insurance paid by sender)

Block diagram

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Technical Data

Input		
Input signal	0 ... 20 mA 4 ... 20 mA 0 ... 10 V see product line	
Input resistance	Current input	approx. 5 Ω
	Voltage input	approx. 1 MΩ
Overload	Current input	≤ 200 mA
	Voltage input	≤ 250 V
Output		
Output signal	0 ... 20 mA 4 ... 20 mA 0 ... 10 V see product line	
Load	Current output	≤ 500 Ω
	Voltage output	≥ 2 kΩ
Residual ripple	< 10 mV_{rms}	
General Data		
Transmission error	< 0.2 % full scale	
Temperature coefficient[1]	< 0.02 % /K	
Cut-off frequency -3 dB	200 Hz	
Response time T_{99}	3.5 ms	
Test voltage	3 kV AC, 50 Hz, 1 min. input against output against power supply	
Working voltage (Basic Insulation)[2]	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 - 20 to + 60 °C (- 4 to + 140 °F)	
	Transport and storage - 35 to + 85 °C (- 31 to + 185 °F)	
Power supply	24 V AC/DC, ± 15 % AC 48 ... 62 Hz, approx. 2 VA	
	DC approx. 0.7 W	
EMC[3]	EN 61326-1	
Construction	11.2 mm (0.44") housing, protection class: IP 20, mounting on 35 mm DIN rail acc. to EN 60715	
Weight	Approx. 50 g	

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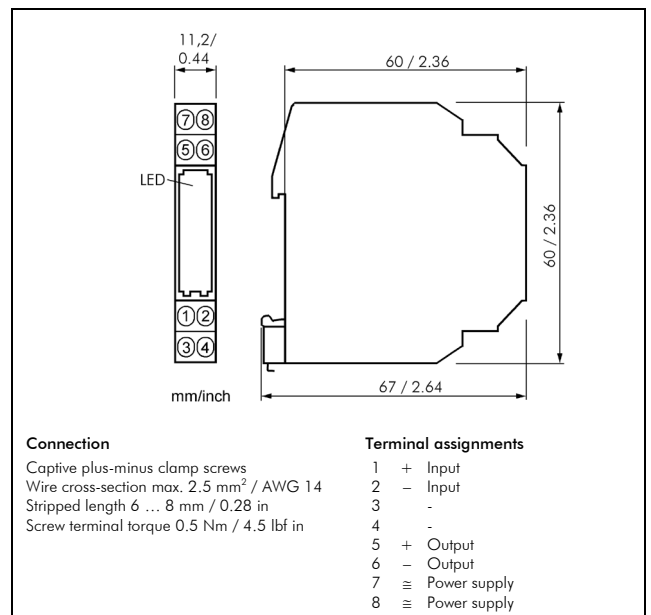2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.
3) Minor deviations possible during interference

Product line

Device			Order No.
Isolation Amplifier	IS 28 P		
	Input	Output	
	0 ... 20 mA	0 ... 20 mA	IS 28 P - 12
	4 ... 20 mA	0 ... 20 mA	IS 28 P - 32
	0 ... 10 V	0 ... 20 mA	IS 28 P - 52
	0 ... 20 mA	4 ... 20 mA	IS 28 P - 14
	4 ... 20 mA	4 ... 20 mA	IS 28 P - 12
	0 ... 10 V	4 ... 20 mA	IS 28 P - 54
	0 ... 20 mA	0 ... 10 V	IS 28 P - 16
	4 ... 20 mA	0 ... 10 V	IS 28 P - 36
	0 ... 10 V	0 ... 10 V	IS 28 P - 56
cross-connector (2 pcs.)	for looping through the power supply for up to 10 *Tiny Snap*, splittable		DZU 0801

Dimensions

Connection
Captive plus-minus clamp screws
Wire cross-section max. 2.5 mm² / AWG 14
Stripped length 6 ... 8 mm / 0.28 in
Screw terminal torque 0.5 Nm / 4.5 lbf in

Terminal assignments
1   +   Input
2   −   Input
3   -
4   -
5   +   Output
6   −   Output
7   ≅   Power supply
8   ≅   Power supply

Subject to change!