

## Product Datasheet - Technical Specifications



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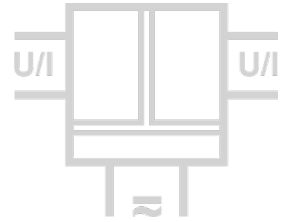
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# Isolation Amplifier DN 25000

Isolation and Conversion of Standard Signals



The Isolation Amplifier DN 25000 is used for isolation and conversion of 0/4 ... 20 mA and 0/2 ... 10 V standard signals.

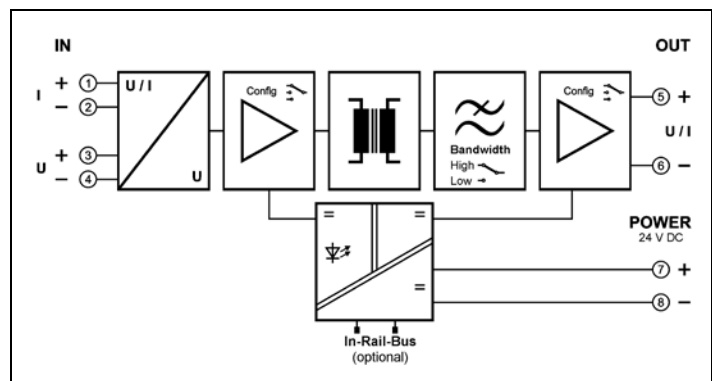
The input and output range of DN 25000 can be easily set by using DIP switch. Due to the calibrated range selection no further adjustment is necessary. Also the cut-off frequency can be adapted to the measurement task by using the DIP Switch.

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
- **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



6mm

## Technical Data

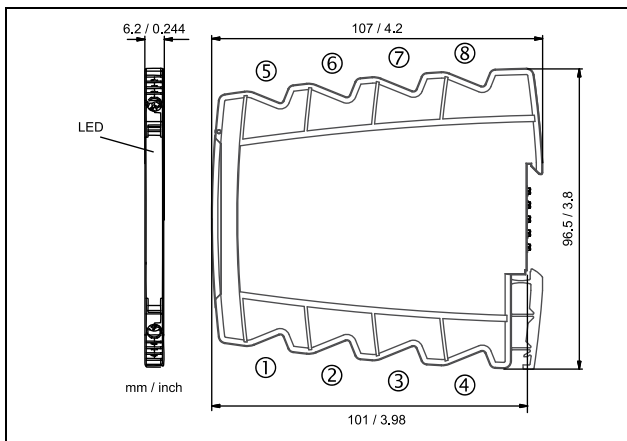
Input		
Input signal	0 ... 20 mA	4 ... 20 mA
(calibrated switchable)	0 ... 10 V	2 ... 10 V
Input resistance	Current input	≤ 25 Ω
	Voltage input	≥ 100 kΩ
Overload	Current input	< 50 mA
	Voltage input	< 30 V
Output		
Output signal	0 ... 20 mA	4 ... 20 mA
(calibrated switchable)	0 ... 10 V	2 ... 10 V
Load	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 <sub>rms</sub>	
General Data		
Transmission error	< 0.1 % full scale	
Temperature coefficient <sup>1)</sup>	< 100 ppm/K	
Cut-off frequency -3 dB (switchable)	5 kHz	100 Hz 10 Hz
Response time T <sub>99</sub>	150 μs	7 ms 70 ms
Test voltage	3 kV AC, 50 Hz, 1 min.	Input against output against power supply
Working voltage <sup>2)</sup> (Basic insulation)	600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1	
Protection against electrical shock	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	- 25 °C to + 70 °C (- 13 to + 158 °F)
	Transport and storage	- 40 °C to + 85 °C (- 40 to + 185 °F)
Power supply	24 V DC	voltage range 9.6 V ... 31.2 V, approx. 0.7 W
EMC <sup>3)</sup>	EN 61326-1	
Approvals (pending)	UL (USA/Canada):	UL 61010, Class I, Div. 2
	ATEX / IECEx:	Zone 2 (nA)
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

## Dimensions



Subject to change!

## Terminal assignments

- |   |   |
|---|---|
| 1 | + Input current                           |
| 2 | - Input current                           |
| 3 | + Input voltage                           |
| 4 | - Input voltage                           |
| 5 | + Output                                  |
| 6 | - Output                                  |
| 7 | + Power supply (connected to In-Rail-Bus) |
| 8 | - Power supply (connected to In-Rail-Bus) |

## Connection

Captive plus-minus clamp screws  
 Wire cross-section max. 2.5 mm<sup>2</sup> / AWG 14  
 Stripped length 6 ... 8 mm / 0.28 in  
 Screw terminal torque 0.8 Nm / 7 lbf in  
 Optional power connection via In-Rail-Bus (see accessories)

## Product line

Devices	Order No.
Isolation Amplifier, calibrated range selection	DN 25000 S
Isolation Amplifier, calibrated range selection, In-Rail-Bus for power supply	DN 25000 B