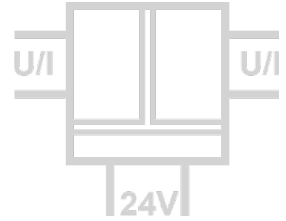


# Isolation Amplifier DN 28

Isolation and Conversion of Standard Signals



The Isolation Amplifier DN 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 DN 28 offers a cost-effective alternative.

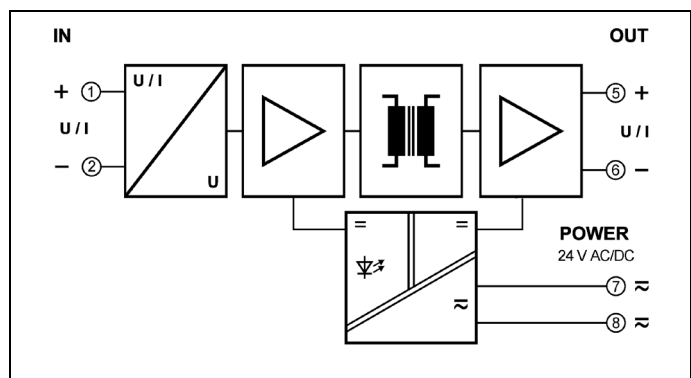
A cross-connector for the auxiliary power supply ensures fast and easy installation. The slim housing with 11.2 mm width saves significant space on the DIN-rail. If required a measuring range compensation can be performed at the Zero/Scan potentiometers behind the front cover.

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 DN 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





## 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 <sub>rms</sub>   |
| General Data                                      |  |
| Transmission error                                | < 0.2 % full scale   |
| Temperature coefficient <sup>1)</sup>             | < 0.02 % /K  |
| Cut-off frequency -3 dB                           | 200 Hz   |
| Response time T <sub>99</sub>                     | 3.5 ms   |
| Test voltage                                      | 3 kV AC, 50 Hz, 1 min.    input against output against power supply  |
| Working voltage (Basic Insulation) <sup>2)</sup>  | 600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1  |
| Protection against electrical shock <sup>2)</sup> | 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 <sup>3)</sup>                                 | 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

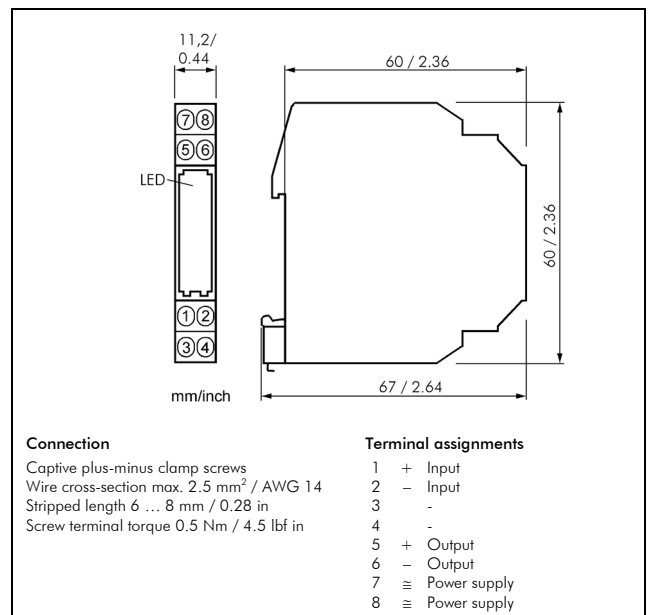
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.

3) Minor deviations possible during interference

## Product line

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

## Dimensions



Subject to change!