

Bipolar Isolation Amplifier DB 68

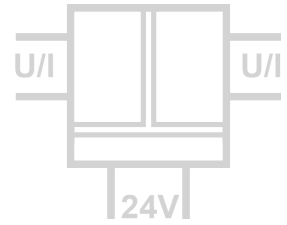
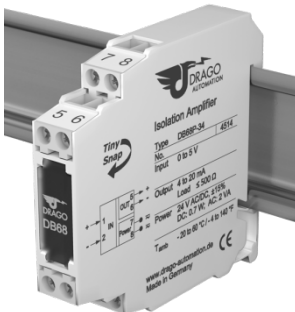
Isolation and Conversion of Fixed Range
Bipolar and Unipolar Standard Signals

The Isolation Amplifier DB 68 is used for isolation and conversion of bipolar and unipolar standard signals.

For applications where one signal combination only is used, the Isolation Amplifier DB 68 offers a cost-effective alternative.

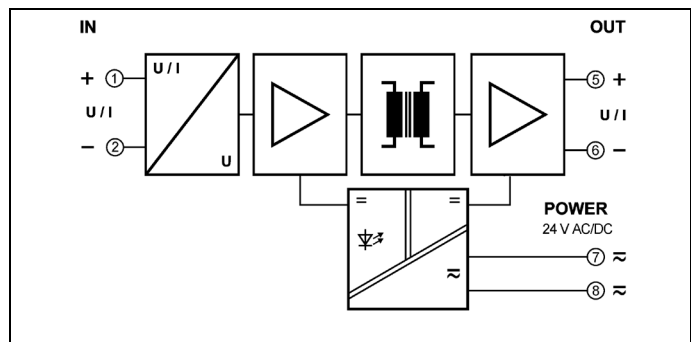
A cross-connector for the auxiliary power supply ensures fast and easy installation. The slim housing with 11.2 mm width saves significant space on the DIN-rail. If required a measuring range compensation can be performed at the Zero/Scan potentiometers behind the front cover.

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 DB 68 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
- **Zero/Scan compensation on front panel**
for readjustment of sensor signal or measuring equipment
- **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 (see product line) | $\pm 10\text{ V}$ | $\pm 5\text{ V}$ | $\pm 20\text{ mA}$ | $\pm 10\text{ mA}$ |
| | 0 ... 10 V | 0 ... 5 V | 0 ... 20 mA | |
| | 2 ... 10 V | 1 ... 5 V | 4 ... 20 mA | |
| Input resistance | Voltage input | approx. 1 M Ω | | |
| | Current input | approx. 5 Ω | | |
| Overload | Voltage input | $\leq 250\text{ V}$ | | |
| | Current input | $\leq 200\text{ mA}$ | | |
| Output | | | | |
| Output signal (see product line) | 0 ... 10 V | 0 ... 5 V | 0 ... 20 mA | |
| | 2 ... 10 V | 1 ... 5 V | 4 ... 20 mA | |
| Load | Voltage output | $\geq 2\text{ k}\Omega$ | | |
| | Current output | $\leq 500\text{ }\Omega$ | | |
| Residual ripple | $< 10\text{ mV}_{\text{rms}}$ | | | |
| General Data | | | | |
| Transmission error | $< 0.2\text{ }\%$ full scale | | | |
| Temperature coefficient ¹⁾ | $< 0.02\text{ }\%/K$ | | | |
| Zero/Span Compensation | $\pm 3\text{ }\%$ | | | |
| Cut-off frequency -3 dB | 500 Hz | | | |
| Response time T ₉₉ | $< 2\text{ ms}$ | | | |
| 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 | - 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, $\pm 15\text{ }\%$ | | 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

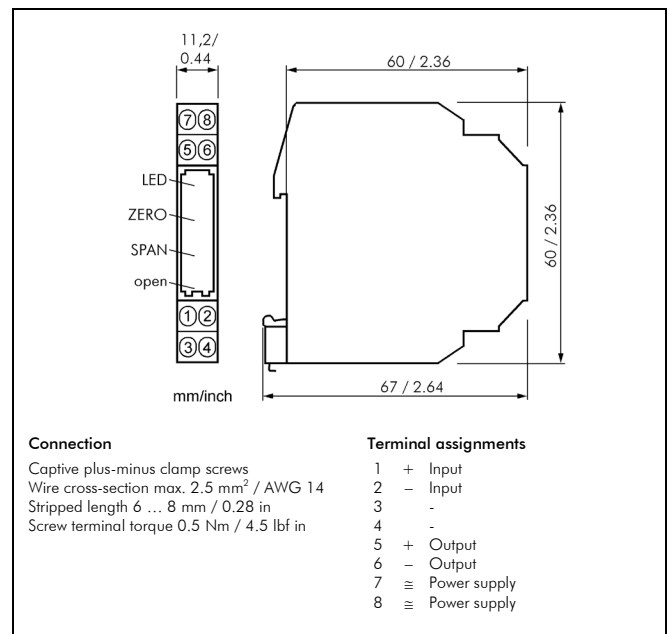
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.

3) Minor deviations possible during interference

Product line

| Device | Order No. | |
|-----------------------------|--|----------|
| Bipolar Isolation Amplifier | DB 68 P - | X X |
| | | ↓ |
| Input | 0 ... 10 V | 0 |
| | 2 ... 10 V | 6 |
| | $\pm 10\text{ V}$ | 1 |
| | 0 ... 5 V | 3 |
| | 1 ... 5 V | 7 |
| | $\pm 5\text{ V}$ | 2 |
| | 0 ... 20 mA | 8 |
| | 4 ... 20 mA | 9 |
| | $\pm 20\text{ mA}$ | 4 |
| | $\pm 10\text{ mA}$ | 5 |
| Output | 0 ... 10 V | 6 |
| | 2 ... 10 V | 7 |
| | 0 ... 5 V | 5 |
| | 1 ... 5 V | 8 |
| | 0 ... 20 mA | 2 |
| | 4 ... 20 mA | 4 |
| cross-connector (2 pcs.) | for looping through the power supply for up to 10 units, splittable | DZU 0801 |

Dimensions



Subject to change!