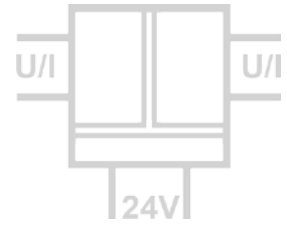


Bipolar Isolation Amplifier DB 68

Isolation and Conversion of Fixed Range Bipolar and Unipolar Standard Signals



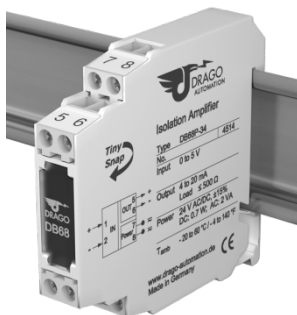
The Isolation Amplifier DB 68 is used for isolation and conversion of bipolar and unipolar standard signals.

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

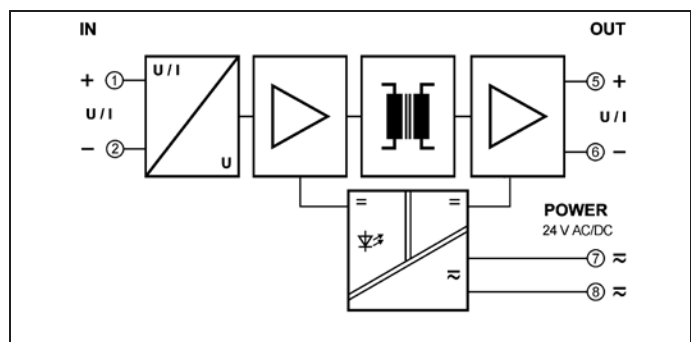
A cross-connector for the auxiliary power supply ensures fast and easy installation. The slim housing with 11.2 mm width saves significant space on the DIN-rail. If required a measuring range compensation can be performed at the Zero/Scan potentiometers behind the front cover.

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)	<table border="0"> <tr> <td>$\pm 10\text{ V}$</td> <td>$\pm 5\text{ V}$</td> <td>$\pm 20\text{ mA}$</td> <td>$\pm 10\text{ mA}$</td> </tr> <tr> <td>0 ... 10 V</td> <td>0 ... 5 V</td> <td>0 ... 20 mA</td> <td></td> </tr> <tr> <td>2 ... 10 V</td> <td>1 ... 5 V</td> <td>4 ... 20 mA</td> <td></td> </tr> </table>	$\pm 10\text{ V}$	$\pm 5\text{ V}$	$\pm 20\text{ mA}$	$\pm 10\text{ mA}$	0 ... 10 V	0 ... 5 V	0 ... 20 mA		2 ... 10 V	1 ... 5 V	4 ... 20 mA	
$\pm 10\text{ V}$	$\pm 5\text{ V}$	$\pm 20\text{ mA}$	$\pm 10\text{ mA}$										
0 ... 10 V	0 ... 5 V	0 ... 20 mA											
2 ... 10 V	1 ... 5 V	4 ... 20 mA											
Input resistance	<table border="0"> <tr> <td>Voltage input</td> <td>approx. 1 MΩ</td> </tr> <tr> <td>Current input</td> <td>approx. 5 Ω</td> </tr> </table>	Voltage input	approx. 1 M Ω	Current input	approx. 5 Ω								
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Current input	approx. 5 Ω												
Overload	<table border="0"> <tr> <td>Voltage input</td> <td>$\leq 250\text{ V}$</td> </tr> <tr> <td>Current input</td> <td>$\leq 200\text{ mA}$</td> </tr> </table>	Voltage input	$\leq 250\text{ V}$	Current input	$\leq 200\text{ mA}$								
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Output													
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Load	<table border="0"> <tr> <td>Voltage output</td> <td>$\geq 2\text{ k}\Omega$</td> </tr> <tr> <td>Current output</td> <td>$\leq 500\text{ }\Omega$</td> </tr> </table>	Voltage output	$\geq 2\text{ k}\Omega$	Current output	$\leq 500\text{ }\Omega$								
Voltage output	$\geq 2\text{ k}\Omega$												
Current output	$\leq 500\text{ }\Omega$												
Residual ripple	$< 10\text{ mV}_{\text{rms}}$												
General Data													
Transmission error	$< 0.2\%$ full scale												
Temperature coefficient ¹⁾	$< 0.02\%$ /K												
Zero/Span Compensation	$\pm 3\%$												
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	<table border="0"> <tr> <td>Operation</td> <td>- 20 to + 60 °C (- 4 to + 140 °F)</td> </tr> <tr> <td>Transport and storage</td> <td>- 35 to + 85 °C (- 31 to + 185 °F)</td> </tr> </table>	Operation	- 20 to + 60 °C (- 4 to + 140 °F)	Transport and storage	- 35 to + 85 °C (- 31 to + 185 °F)								
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Power supply	<table border="0"> <tr> <td>24 V AC/DC, $\pm 15\%$</td> <td>AC: 48 ... 62 Hz, approx. 2 VA</td> </tr> <tr> <td></td> <td>DC: approx. 0.7 W</td> </tr> </table>	24 V AC/DC, $\pm 15\%$	AC: 48 ... 62 Hz, approx. 2 VA		DC: approx. 0.7 W								
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	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

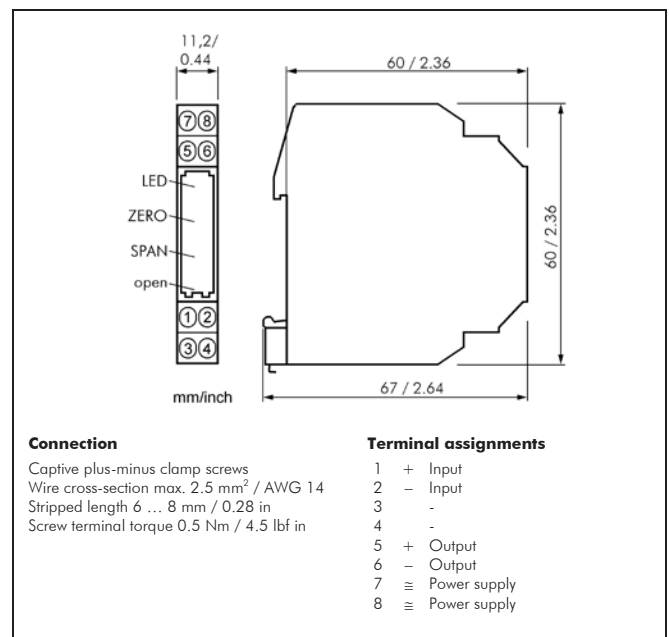
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.

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!