

Filter Isolation Amplifier DB 6230

Isolation and Conversion of Industrial Signals
 with Configurable Filter Function

The Filter Isolation Amplifier DB 6230 is used for isolation and conversion of bipolar and unipolar industrial signals.

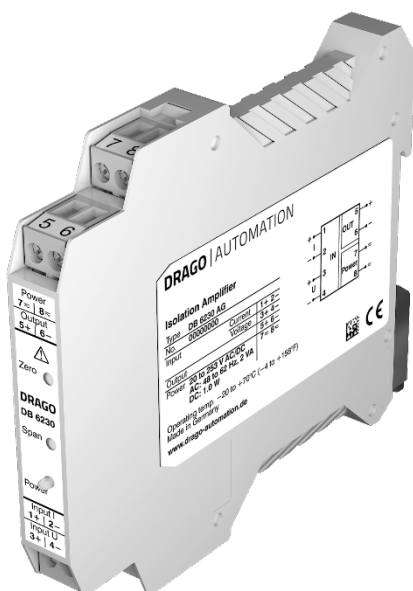
Due to the easy selection of the input and output ranges, the new universal power pack and the ultra-small housing the Isolation Amplifier is suitable for flexible use. High reliability and Protective Separation are further characteristics that make the DB 6230 unrivaled.

The order key allows you to select the desired input and output ranges to which the unit will be adjusted at the factory before delivery. These can be easily reconfigured at any time by means of DIP switch settings. Subsequent readjustment or measured range compensation can then be performed at the zero/span potentiometers on the front panel. Also the cut-off frequency can be adapted to the measurement task by using the DIP Switch.

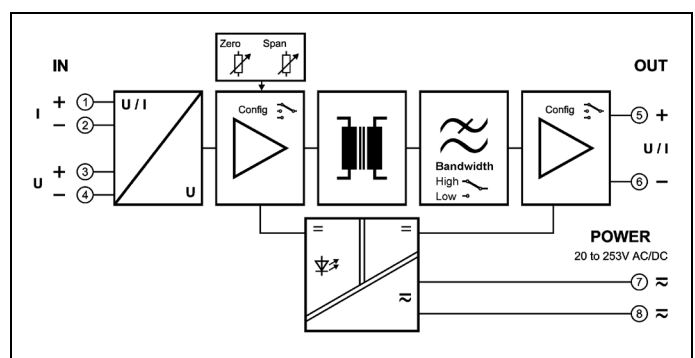
The small housing with 12.5 mm width saves space in your switch cabinet and facilitates by the practical plug-in screw terminal blocks the assembly. For range setting a simple housing unblocking is installed which makes it possible to reach easily all control elements on the mounting rail.

The new universal power pack for 20 ... 253 V AC/DC means the DB 6230 can be used anywhere in the world, with all mains power supplies. The unit's high efficiency contributes significantly to reducing the unit's own heat generation. This is reflected in extremely high reliability and long-term stability. A green LED on the front of the unit has been provided to monitor the power supply.

- **Easy selection of input and output range**
 Input and output range for unipolar and bipolar signals can be easily set by using DIP switch
- **Universal power supply for 20...253 V AC/DC**
 Applicable world-wide for all common supply voltages
- **3-port isolation**
 Protection against erroneous measurements due to parasitic voltages or ground loops
- **Ultra small sized housing**
 12.5 mm housing with plug-in screw terminal blocks
- **Selectable cut-off frequency; high accuracy**
 No distortion; no falsification of measured signal
- **Protective Separation**
 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



Technical Data

Input	Voltage	Current
Input signals (terminal/switch selectable)	$\pm 10\text{ V}$ $0 \dots 10\text{ V}$ $2 \dots 10\text{ V}$ $\pm 5\text{ V}$ $0 \dots 5\text{ V}$ $1 \dots 5\text{ V}$	$\pm 20\text{ mA}$ $0 \dots 20\text{ mA}$ $4 \dots 20\text{ mA}$ $\pm 10\text{ mA}$ $0 \dots 10\text{ mA}$ $2 \dots 10\text{ mA}$
Input resistance	Approx. $1\text{ M}\Omega$	Approx. $25\ \Omega$
Input capacitance	Approx. 1 nF	Approx. 1 nF
Overload	Voltage limitation via 30 V Z-Diode , max. continuous current 30 mA	$\leq 200\text{ mA}$
Output	Voltage	Current
Output signals (switch selectable)	$\pm 10\text{ V}$ $0 \dots 10\text{ V}$	$\pm 20\text{ mA}$ $0 \dots 20\text{ mA}$
Load	$\leq 10\text{ mA}$ ($1\text{ k}\Omega$ at 10 V)	$\leq 12\text{ V}$ ($600\ \Omega$ at 20 mA)
Linear transmission range	unipolar: $-2 \dots +110\%$ bipolar: $-110 \dots +110\%$	
Residual ripple	$< 10\text{ mV}_{\text{rms}}$	
General Data		
Transmission error	$< 0.1\%$ of full scale	
Temperature coefficient ¹⁾	$< 100\text{ ppm/K}$	
Zero/Span compensation	$\pm 10\%$	
Filter function (switchable)	Cut-off frequency -3 dB Response time T_{99}	10 Hz 1 Hz $0,5\text{ Hz}$ $0,1\text{ Hz}$ 70 ms 700 ms 1.5 s 7 s
Test voltage	4 kV AC , 50 Hz , 1 min. Input against output against power supply	
Working voltage ²⁾ (Basic Insulation)	1000 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 600 V AC/DC for overvoltage category II and pollution degree 2 between all circuits	
Ambient temperature	Operation -20 to $+70\text{ }^\circ\text{C}$ (-4 to $+158\text{ }^\circ\text{F}$) Transport and storage -35 to $+85\text{ }^\circ\text{C}$ (-31 to $+185\text{ }^\circ\text{F}$)	
Power supply	$20 \dots 253\text{ V AC/DC}$ $AC\ 48 \dots 62\text{ Hz}$, approx. 2 VA DC approx. 1.0 W	
EMC ³⁾	EN 61326-1	
Construction	12.5 mm ($0.49''$) housing, protection class IP 20, mounting on 35 mm DIN rail acc. to EN 60715	
Weight	Approx. 100 g	

1) Average TC related to full scale value in specified operating temperature range, reference temperature $23\text{ }^\circ\text{C}$

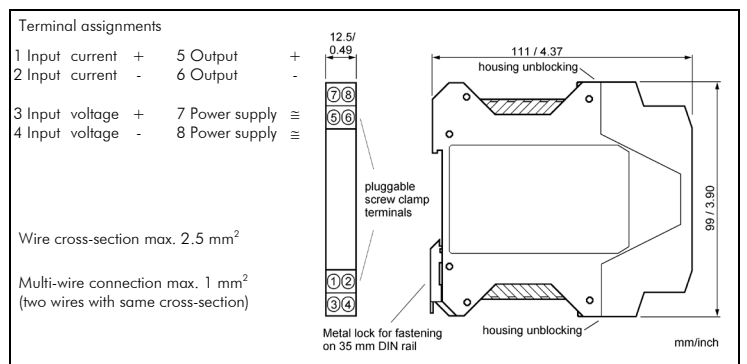
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.

3) Minor deviations possible during interference

Ordering Table For Factory Setting

DB 6230 AG	- XX	- YY
	Input	Output
Range	XX	YY
$\pm 10\text{ V}$	00	00
$0 \dots 10\text{ V}$	01	01
$2 \dots 10\text{ V}$	02	
$\pm 5\text{ V}$	03	
$0 \dots 5\text{ V}$	04	
$1 \dots 5\text{ V}$	05	
$\pm 20\text{ mA}$	06	06
$0 \dots 20\text{ mA}$	07	07
$4 \dots 20\text{ mA}$	08	
$\pm 10\text{ mA}$	09	
$0 \dots 10\text{ mA}$	10	
$2 \dots 10\text{ mA}$	11	

Dimensions



Subject to change!

Example: Input: $\pm 5\text{ V}$, Output: $0 \dots 20\text{ mA}$, Order No.: DB 6230 AG - 03 - 07

Product line

Device	Order No.
Filter Isolation Amplifier, configurable	DB 6230 AG - XX - YY

If no information is given by ordering, the devices are delivered with the standard configuration: Input signal $\pm 10\text{ V}$, Output signal $\pm 10\text{ V}$.