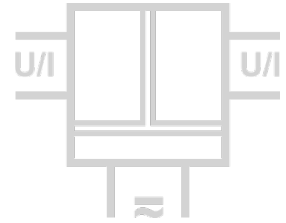


# Isolation Amplifier DN 2000

Isolation and Conversion of Standard Signals



The Isolation Amplifier DN 2000 is used for isolation and conversion of 0 ... 20 mA, 4 ... 20 mA and 0 ... 10 V standard signals.

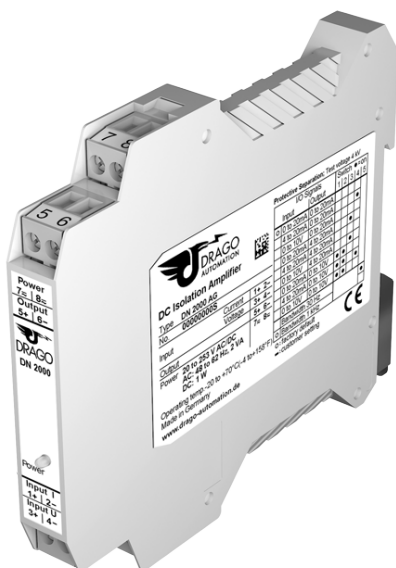
Due to the calibrated selection of the input and output ranges, the new universal power supply and the ultra-small housing the Isolation Amplifier is suitable for flexible use. The high reliability and the protective separation are further features, which ensure a safe system operation.

The desired input and output range can be easily set by using DIP switch and 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. Alternatively, all signal combinations are also available in the form of fixed range units.

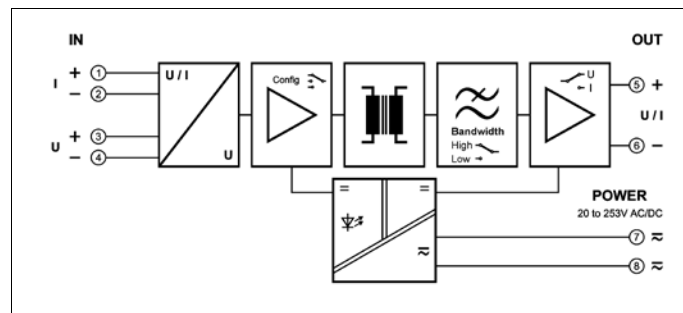
The slim housing with 12.5 mm width saves space in the switch cabinet and facilitates by the practical plug-in screw terminal blocks the assembly. A simple housing latch has been provided for range setting purposes to make all the operating elements, including those on the DIN-rail, easily accessible.

The new universal power pack for 20 ... 253 V AC/DC means the DN 2000 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.

- **Calibrated signal setting**  
Input and output range can be set by using DIP switch - without any further adjustment
- **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
- **High accuracy**  
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**

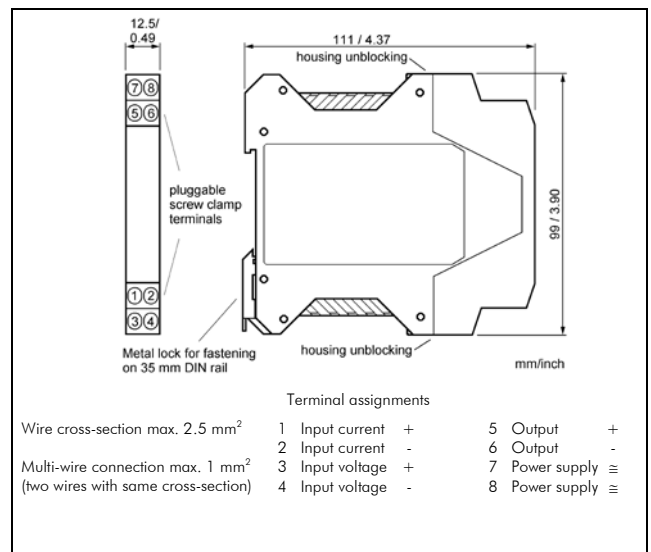
Input			
Input signal (calibrated switchable)	0 ... 20 mA	4 ... 20 mA	0 ... 10 V
Input resistance	Current input	22 Ω	
	Voltage input	1 MΩ	
Input capacitance	Approx. 1 nF		
Overload	Current input	≤ 200 mA	
	Voltage input	Voltage limitation via 30 V Z-Diode, max. continuous current 30 mA	
Output			
Output signal (calibrated switchable)	0 ... 20 mA	4 ... 20 mA	0 ... 10 V
Load	Current output	≤ 12 V	(600 Ω at 20 mA)
	Voltage output	≤ 10 mA	(1 kΩ at 10 V)
Linear transmission range	- 2 ... + 110 %		
Residual ripple	< 10 mV <sub>rms</sub>		
General Data			
Transmission error	< 0.1 % full scale		
Temperature coefficient <sup>2)</sup>	< 50 ppm/K		
Cut-off frequency -3 dB	1 kHz	DN 2000 switchable to < 30 Hz	
Response time T <sub>99</sub>	0.7 ms	20 ms	
Test voltage	4 kV AC, 50 Hz, 1 min. input against output against power supply		
Working voltage <sup>3)</sup> (Basic Insulation)	600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1		
Protection against electrical shock <sup>3)</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 + 70 °C (- 4 to + 158 °F)	
	Transport and storage	- 35 to + 85 °C (- 31 to + 185 °F)	
Power supply	20 ... 253 V AC/DC		AC 48 ... 62 Hz, approx. 2 VA
	DC approx. 1.0 W		
EMC <sup>4)</sup>	EN61326-1		
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 °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	calibrated range selection		DN 2000 AG
Isolation Amplifier fixed setting	Input	0 ... 20 mA	DN 2012 AG
		4 ... 20 mA	DN 2032 AG
	Output	0 ... 20 mA	DN 2052 AG
		4 ... 20 mA	DN 2014 AG
	Input	0 ... 10 V	DN 2012 AG
		4 ... 20 mA	DN 2054 AG
	Output	0 ... 10 V	DN 2016 AG
		0 ... 10 V	DN 2036 AG
	0 ... 10 V	0 ... 10 V	DN 2056 AG

**Dimensions**



Subject to change!