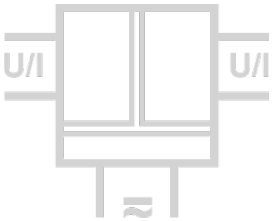
Isolation Amplifier
DN 2400

Isolation and Conversion of Process Signals in Standard Applications



The Isolation Amplifier DN 2400 is used for isolation and conversion of 0 ... 20 mA, 4 ... 20 mA and 0 ... 10 V standard signals.

Its high level of reliability and cost optimized design make the DN 2400 the first choice in its class!

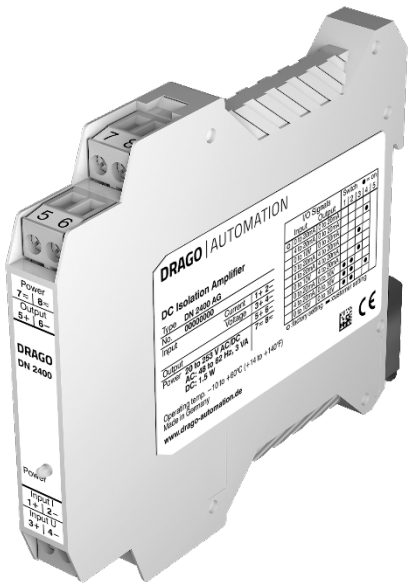
Unique in its price class, the DN 2400 provides application flexibility thanks to the calibrated range selection and the new universal power pack.

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.

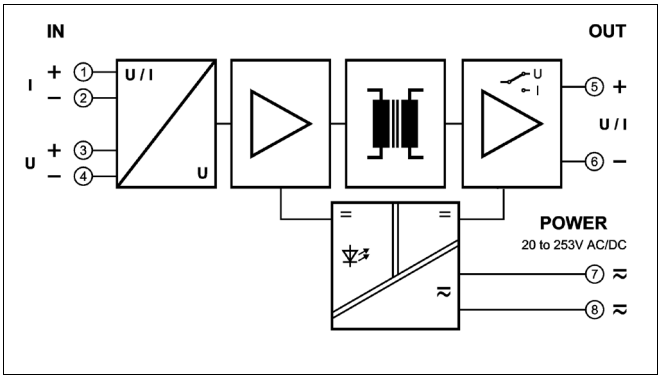
The slim housing with 12.5 mm width saves space in the switch cabinet and facilitates by the practical plug-in screw terminal blocks the assembly. For range selection a simple housing unblocking is installed which makes it possible to reach easily all control elements on the mounting rail.

In cause of the new universal power pack for 20 ... 253 V AC/DC the Isolation Amplifier DN 2400 is applicable world-wide for all common supply voltages.

- **Cost optimized design**
  Economical separation for standard applications
- **Calibrated signal setting**
  Input and output range can be set by using DIP switch - without any further adjustment
- **Universal power pack 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
- **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



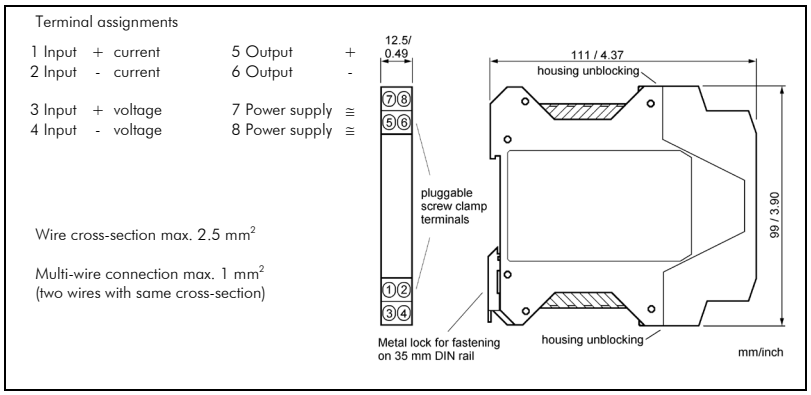
High Functionality

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
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		≤ 10 V (500 Ω at 20 mA)
	Voltage output		≤ 10 mA (1 kΩ at 10 V)
Residual ripple	< 20 mV_{rms}		
General Data			
Transmission error	< 0.3 % full scale		
Temperature coefficient[1)]	< 150 ppm/K		
Cut-off frequency -3 dB	1 kHz		
Response time T_{99}	0.7 ms		
Test voltage	2.5 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		
Ambient temperature	Operation		- 10 to + 60 °C (+ 14 to + 140 °F)
	Transport and storage		- 20 to + 80 °C (- 4 to + 176 °F)
Power supply	20 ... 253 V AC/DC		AC 48 ... 62 Hz, approx. 3 VA DC approx. 1.5 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 °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

Dimensions



Subject to change!

Product line

Device	Order No.
Isolation Amplifier, calibrated range selection	DN 2400 AG