

# Shunt/mV Isolation Amplifier IS 7200

Isolation and Conversion of Bipolar and Unipolar mV-Signals

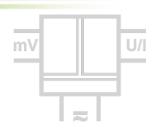
The Isolation Amplifier IS 7200 is used for separation and conversion of bipolar and unipolar mV-signals such as those frequently used for current measuring with shunt-resistors or other applications with low sensor voltages.

Due to the easy selection of the input and output ranges, the new universal power supply and the ultrasmall housing the Isolation Amplifier is suitable for flexible use. High reliability and Protective Separation are further characteristics that make the IS 7200 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/scan potentiometers on the front panel. Also the cut-off frequency can be adapted to the measurement task by using the DIP Switch.

The slim 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 DIN-rail. The new universal power pack for 20 ... 253 V AC/DC means the IS 7200 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.





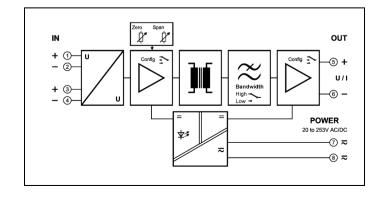
- Easy selection of input and output range Input and output range for unipolar and bipolar signals can be easily set by using DIP switch
- Universal power supply for 20 ... 253 V AC/DC Applicable world-wide for all common supply voltages
- 3-port isolation

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
- High bandwidth; high accuracy
   No distortion; no falsification of measured signal
- Protective Separation, 5 kV Test Voltage
   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**

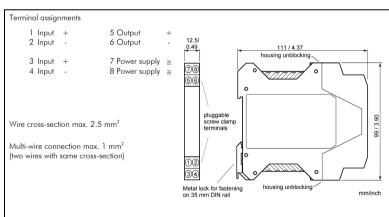
Input								
Input signals	± 60 mV	± 100 mV	± 150 mV	± 250 mV	± 300 mV	± 500 mV		
(terminal/switch selectable)	0 60 mV	0 100 mV	0 150 mV	0 250 mV	0 300 mV	0 500 mV		
Input resistance	> 100 kΩ							
Input capacitance	Approx. 1 nF							
Overload	< 30 V							
Output	Voltage			Current				
Output signals	± 10 V	0 10 V	2 10 V	$\pm~20~\text{mA}$	0 20 mA	4 20 mA		
(switch selectable)	± 5 V	0 5 V	1 5 V	$\pm$ 10 mA	0 10 mA	2 10 mA		
Load	≤ 10 mA (1 k	$\leq$ 10 mA (1 k $\Omega$ at 10 V) $\leq$ 12 V (600 $\Omega$ at 20 mA)						
Linear transmission range	Unipolar: - 2	Unipolar: - 2 + 110 % bipolar: - 110 + 110 %						
Residual ripple	$<$ 20 mV $_{rms}$							
General data								
Transmission error	< 0.1 % full scale							
Temperature coefficient <sup>1)</sup>	< 100 ppm/K							
Zero/Span compensation	± 10 %	± 10 %						
Cut-off frequency -3 dB (switchable)	10 kHz 30	10 kHz 30 Hz						
Response time T <sub>99</sub>	80 μs 20	80 μs 20 ms						
Test voltage	4 kV AC, 50 Hz, 1 min. Input against output against power supply							
	5 kV AC, 50 Hz, 1 min. Input against output/power supply (DS7200HV only)							
Working voltage <sup>2)</sup> (Basic Insulation)	1000 V AC/E	1000 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1						
Protection against electrical shock <sup>2)</sup>	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 °C	(-4 to + 158)	3 °F)			
	Transport and	<u> </u>	- 35 to + 85 °C	· ·	5 °F)			
Power supply	20 253 V AC/DC AC 48 62 Hz, approx. 2 VA							
	DC approx. 1.0 W							
EMC <sup>3)</sup>	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							

# **Ordering Table for Factory Setting**

IS 7200 AG - XX - YY								
Input	- XX	Output	- YY					
± 60 mV	50	± 10 V	00					
0 60 mV	51	0 10 V	01					
$\pm~100~\text{mV}$	52	2 10 V	02					
0 100 mV	53	± 5 V	03					
$\pm$ 150 mV	54	0 5 V	04					
0 150 mV	55	1 5 V	05					
± 250 mV	56	$\pm~20~\text{mA}$	06					
0 250 mV	57	0 20 mA	07					
± 300 mV	58	4 20 mA	80					
0 300 mV	59	$\pm$ 10 mA	09					
± 500 mV	60	0 10 mA	10					
0 500 mV	61	2 10 mA	11					

Input: ± 150 mV, Output: 4 ... 20 mA Order No.: IS 7200 AG - 54 - 08 Example:

# **Dimensions**



## **Product line**

Device	Order No.
Shunt/mV Isolation Amplifier, configurable	IS 7200 AG - XX - YY
Shunt/mV Isolation Amplifier, config., 5 kV Test Voltage	IS 7200 HV - XX - YY

If no information is given by ordering, the devices are delivered with the standard configuration: Input signal  $\pm$  60 mV, Output signal  $\pm$  10 V.

Subject to change!

<sup>1)</sup> 2) 3) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C
For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.
Minor deviations possible during interference