

# Standard Signal Converter DN 25000



Read these instructions before using the product and retain for future information.

## DN 25000

### ► Before Startup



When operating the signal converter, certain parts of the module can carry dangerous voltage! Ignoring the warnings can lead to serious injury and/or cause damage!

The signal converter should only be installed and put into operation by qualified staff. The staff must have studied the warnings in these operating instructions thoroughly.

The signal converter may not be put into operation if the housing is open.

In applications with high operating voltages sufficient distance and isolation as well as shock protection must be ensured.

Safe and trouble-free operation of this device can only be guaranteed if transport, storage and installation are carried out correctly and operation and maintenance are carried out with care.



Appropriate safety measures against electrostatic discharge (ESD) should be taken during range selection and assembly on the transmitter.

### ► Short description

The Standard Signal Converter is used for electrical isolation and conversion of unipolar process signals. The input and output range can be set by using DIP switch and due to the calibrated range selection no further adjustment is necessary.

The 3-way isolation guarantees reliable decoupling of the sensor circuit from the processing circuit and prevents linked measurement circuits from influencing each other. The Protective Separation with high isolation level provides protection for personnel and downstream devices against impermissibly high voltage.

The auxiliary power can be supplied via the connection terminals or type-specific via the optional In-Rail-Bus connector (see accessories). A green LED on the front of the unit has been provided to monitor the power supply.

### ► Functioning

The input signal is modulated and then electrically decoupled using a transformer. The isolated signal is then made available at the output, demodulated, filtered and amplified.

### ► Settings

Set the input and output ranges with DIP switch as indicated in the following table:

Input	Output	S1 -					
		1	2	3	4	5	6
0 ... 20 mA	0 ... 20 mA						
	4 ... 20 mA			•			
	0 ... 10 V	•	•				
	2 ... 10 V	•	•	•			
4 ... 20 mA	0 ... 20 mA				•		
	4 ... 20 mA						
	0 ... 10 V	•	•		•		
	2 ... 10 V	•	•				
0 ... 10 V	0 ... 20 mA						
	4 ... 20 mA				•		
	0 ... 10 V	•	•				
	2 ... 10 V	•	•	•			
2 ... 10 V	0 ... 20 mA					•	
	4 ... 20 mA						
	0 ... 10 V	•	•		•		
	2 ... 10 V	•	•				
Filter 5kHz							
Filter 100 Hz					•		
Filter 10 Hz						•	

Factory settings: all switches in position OFF • = on

### ► Mounting, Electrical Connection

The isolation transmitter is mounted on standard 35 mm DIN rail.

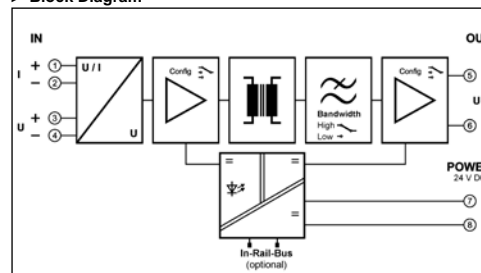
Terminal assignments			
1	Input I +	5	Output +
2	Input I -	6	Output -
3	Input U +	7	Power supply +
4	Input U -	8	Power supply -

### ► Technical Data

Input	Voltage	Current
Input signal	0 ... 10 V	0 ... 20 mA
(calibrated switchable)	2 ... 10 V	4 ... 20 mA
Input resistance	≥ 100 kΩ	≤ 25 Ω
Overload	≤ 30 V	≤ 50 mA
Output	Voltage	Current
Output signal	0 ... 10 V	0 ... 20 mA
(calibrated switchable)	2 ... 10 V	4 ... 20 mA
Load	≤ 5 mA (2 kΩ at 10 V)	≤ 12 V (600 Ω at 20 mA)
Linear transmission range	-1 to +110 %	
Ripple	< 10 mV <sub>rms</sub>	
General data		
Transmission error	< 0.1 % full scale	
Temperature coefficient <sup>1)</sup>	< 100 ppm/K	
Cut-off frequency -3 dB (switchable)	5 kHz, 100 Hz, 10 Hz	
Response time T <sub>99</sub>	150 μs, 7 ms, 70 ms	
Test voltage	3 kV, 50 Hz, 1 min.	
Input against output against power supply		
Working voltage <sup>2)</sup> (Basic insulation)	600 V AC/DC for overvoltage category II and contamination class 2 acc. to EN 61010-1	
Protection against dangerous body currents <sup>3)</sup>	Protective Separation by reinforced insulation acc. to EN 61010-1 up to 300 V AC/DC for overvoltage category II and contamination class 2 between input and output and power supply.	
Ambient temperature	Operation -25 °C to +70 °C (-13 to +158 °F) Transport -40 °C to +85 °C (-40 to +185 °F) and storage	
Power supply	24 V DC	16.8 V ... 31.2 V, approx. 0.7 W
EMC <sup>3)</sup>	EN 61326-1	
Construction	6.2 mm (0.244") housing, protection type: IP 20 mounting on 35 mm DIN rail acc. to EN 60715	
Connection (captive plus-minus clamp screws)	Solid: 0.5 mm <sup>2</sup> - 4 mm <sup>2</sup> / AWG 20-12 Fine-stranded: 0.5 mm <sup>2</sup> - 2.5 mm <sup>2</sup> / AWG 20-14 Stripped length: 6-8 mm / 0.28 in Screw terminal torque 0.8 Nm / 7 lbf in	
Weight	Approx. 70 g	

- 1) Average TC in specified operating temperature range
- 2) As far as relevant the standards and rules mentioned above are considered by development and production of our devices. In addition relevant assembly rules are to be considered by installation of our devices in other equipment. For applications with high working voltages, take measures to prevent accidental contact and make sure that there is sufficient distance or insulation between adjacent situated devices.
- 3) Minor deviations possible during interference

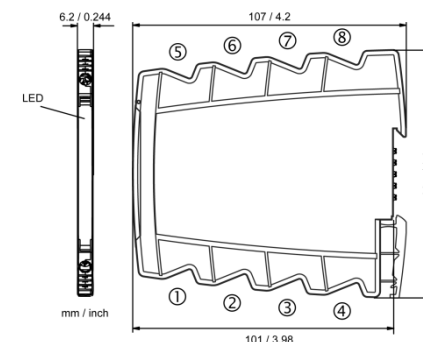
### ► Block Diagram



### ► Order Information

Product	Input / Output	Order No.
Isolation Amplifier	calibrated switchable	DN 25000 S
Isolation Amplifier	calibrated switchable	DN 25000 B
In-Rail-Bus for power supply	switchable	

### ► Dimensions



### LIMITED WARRANTY

DRAGO Automation GmbH hereby warrants that the Product will be free from defects in materials or workmanship for a period of **five (5) years** from the date of delivery ("Limited Warranty"). This Limited Warranty is limited to repair or replacement at DRAGO's option and is effective only for the first end-user of the Product. This Limited Warranty applies only if the Product:

1. is installed according to the instructions furnished by DRAGO;
2. is connected to a proper power supply;
3. is not misused or abused; and
4. there is no evidence of tampering, mishandling, neglect, accidental damage, modification or repair without the approval of DRAGO or damage done to the Product by anyone other than DRAGO.

Delivery conditions are based upon the „GENERAL CONDITIONS FOR THE SUPPLY OF PRODUCTS AND SERVICES OF THE ELECTRICAL AND ELECTRONICS INDUSTRY“, recommended by the Zentralverband Elektrotechnik- und Elektronikindustrie (ZVEI) e.V. .

Subject to change!

**DRAGO Automation GmbH**  
Waldstrasse 86 - 90  
13403 BERLIN  
GERMANY

Phone: +49 (0)30 40 99 82 - 0  
Fax: +49 (0)30 40 99 82 - 10

E-Mail: info@drago-automation.de  
Internet: www.drago-automation.de