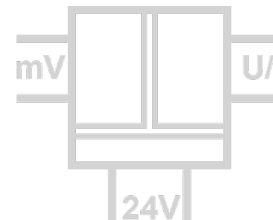


Shunt/mV Isolation Amplifier DS 78

Isolation and Conversion of
mV-Shunt Signals



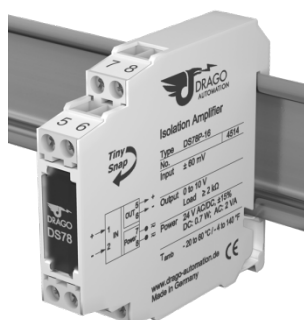
The Isolation Amplifier DS 78 is used for isolation and conversion of bipolar and unipolar mV-Signals such as those frequently used for current measuring with shunt-resistors or other applications with low sensor voltages.

For applications where one signal combination only is used, the Isolation Amplifier DS 78 offers a cost-effective alternative.

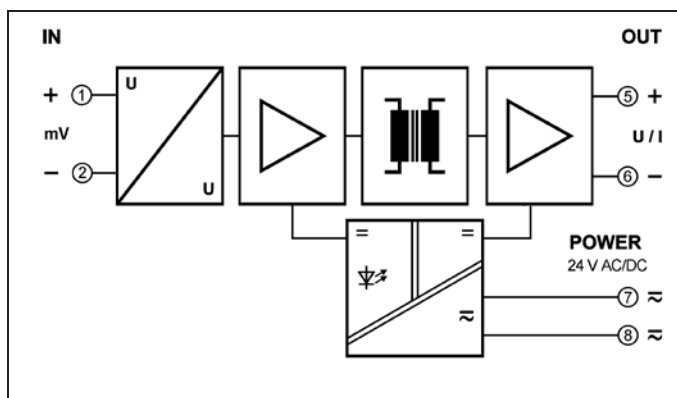
A cross-connector for the auxiliary power supply ensures fast and easy installation. The slim housing with 11.2 mm width saves significant space on the DIN-rail. If required a measuring range compensation can be performed at the Zero/Scan potentiometers behind the front cover.

Analog signal processing guarantees precise measured values with short response times and outstanding signal reproduction at the output. Protective Separation and the 24 V AC/DC power supply make the DS 78 universally applicable for all measurement and industrial applications, as well as for building automation.

- **Cost optimized design**
Economical separation for standard applications
- **Only 60 mm installation depth, 11.2 mm wide**
Can be installed in economical standard terminal boxes
- **Fixed ranges, easy to use**
Ready to use without any settings or adjustments
- **Zero/Scan compensation on front panel**
for readjustment of sensor signal or measuring equipment
- **True 3-port separation**
Protection against erroneous measurements due to parasitic voltages or ground loops
- **Protective Separation acc. to EN 61140**
Protects service personnel and downstream devices against impermissibly high voltage
- **Unlimited use with 24 V AC/DC power supply**
Universally applicable for all measurement and industrial applications
- **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	0 ... 60 mV ± 60 mV 0 ... 100 mV ± 100 mV 0 ... 150 mV ± 150 mV 0 ... 300 mV ± 300 mV see product line
Input resistance	> 100 kΩ
Overload	< 30 V
Output	
Output signal	0 ... 10 V 0 ... 5 V 0 ... 20 mA see product line 2 ... 10 V 1 ... 5 V 4 ... 20 mA
Load	Voltage output ≥ 2 kΩ Current output ≤ 500 Ω
Residual ripple	< 10 mV _{rms}
General Data	
Transmission error	< 0.2 % full scale
Temperature coefficient ¹⁾	< 0.02 % /K
Cut-off frequency -3 dB	500 Hz
Response time T ₉₉	2 ms
Test voltage	3 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
Protection against electrical shock ²⁾	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 + 60 °C (- 4 to + 140 °F) Transport and storage - 35 to + 85 °C (- 31 to + 185 °F)
Power supply	24 V AC/DC, ± 15 % AC 48 ... 62 Hz, approx. 2 VA DC approx. 0.7 W
EMC ³⁾	EN 61326-1
Construction	11.2 mm (0.44") housing, protection class: IP 20, mounting on 35 mm DIN rail acc. to EN 60715
Weight	Approx. 50 g

1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C

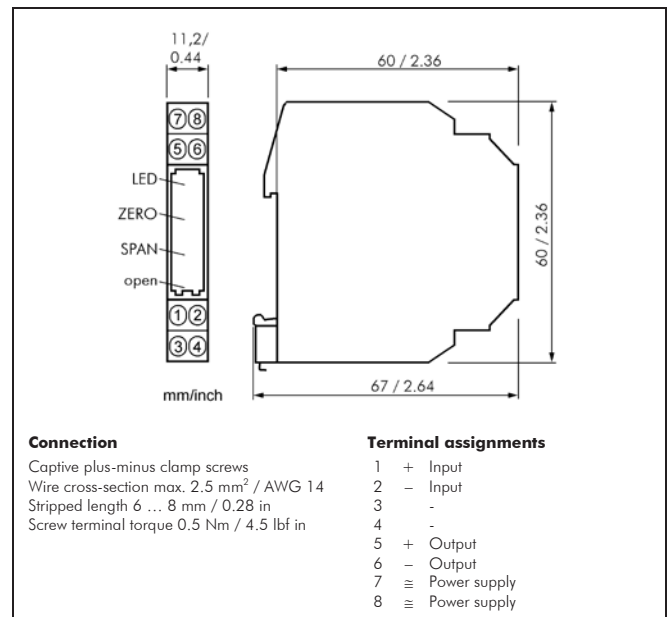
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.

3) Minor deviations possible during interference

Product line

Device	Order No.
Shunt/mV Isolation Amplifier	DS 78 P - X X
	↓
Input	
0 ... 60 mV	0
± 60 mV	1
0 ... 100 mV	2
± 100 mV	3
0 ... 150 mV	4
± 150 mV	5
0 ... 300 mV	6
± 300 mV	7
	↓
Output	
0 ... 10 V	6
2 ... 10 V	7
0 ... 5 V	5
1 ... 5 V	8
0 ... 20 mA	2
4 ... 20 mA	4
cross-connector (2 pcs.)	for looping through the power supply for up to 10 units, splittable DZU 0801

Dimensions



Subject to change!