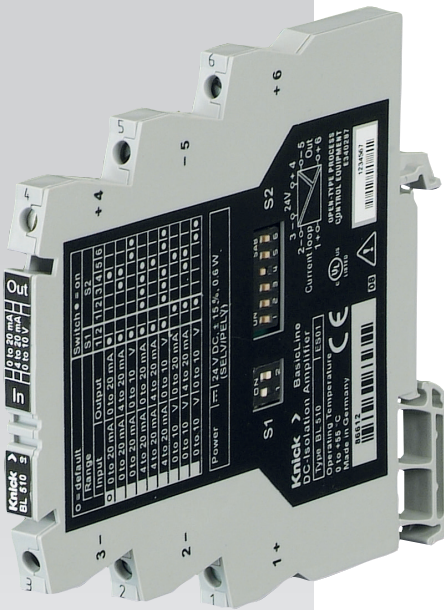


Isolators for Standard Signals



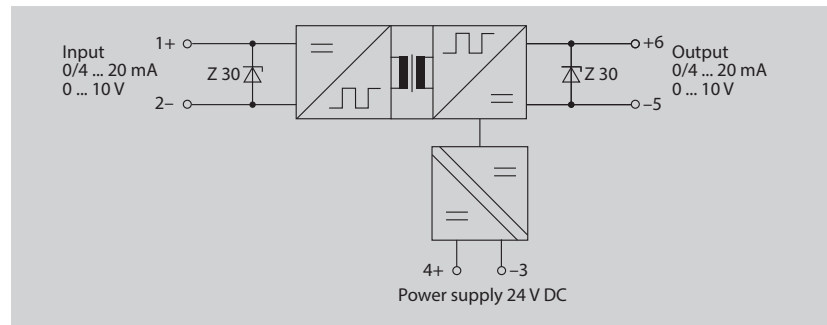
BasicLine BL 510

The compact isolator for standard signals

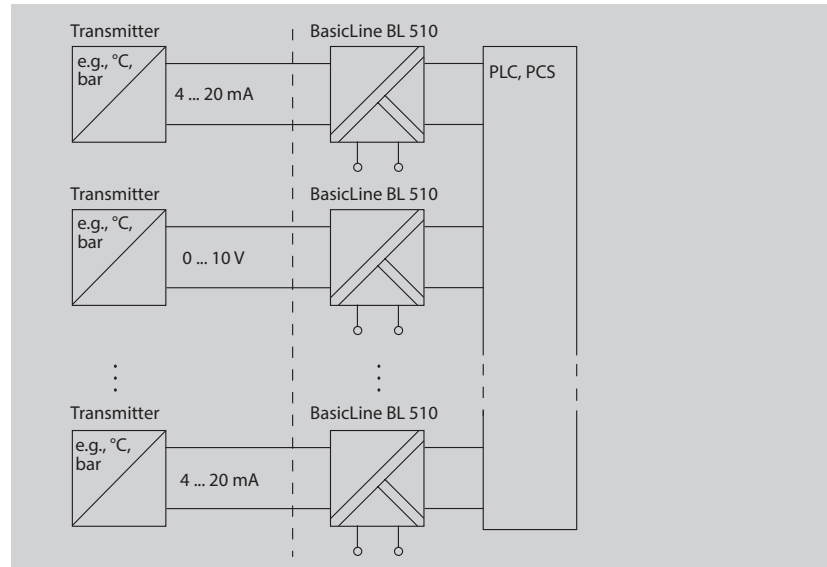
Facts

- Straightforward galvanic isolation in standard applications
- Conversion of one standard signal to another one, as required
- Galvanic 3-port isolation prevents measurement errors
- 6-mm housing requires minimal space
- Long service life, in particular due to its low power dissipation
- Calibrated range selection without complicated manual adjustments
- Easy configuration using DIP switches accessible from the outside
- CE compliant and UL approved
- 3-year warranty
- Perfect price-performance ratio

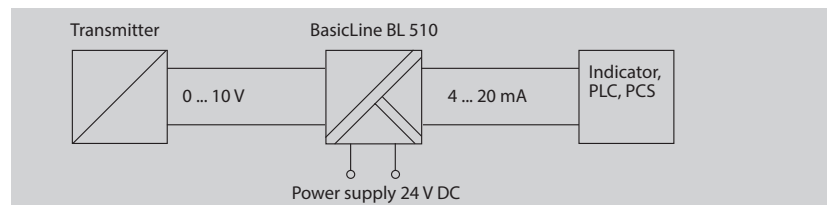
Block Diagram



Reliable Measurement due to Galvanic Isolation Between Field Level and Control Level



Signal Conversion, e.g. Voltage to Current, for Interference-Free Transmission over Long Distances



Input ranges	Output	Power supply
0 ... 20 mA	0 ... 20 mA	24 V DC
4 ... 20 mA	4 ... 20 mA	
0 ... 10 V	0 ... 10 V	

Product Line

Device	Input	Output	Order No.
BasicLine BL 510 with calibrated switching of input and output	0 ... 20 mA 4 ... 20 mA 0 ... 10 V	0 ... 20 mA 4 ... 20 mA 0 ... 10 V	BL 510

Specifications

Input

Voltage	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V calibrated switching	
Resistance	Current input	< 0.1 V at 20 mA (< 5 ohms), open output or power failure: approx. 350 mV
	Voltage input	Approx. 100 kohms
Overload capacity	Current input	< 100 mA
	Voltage input	Suppressor diode 30 V, < 3 mA

Output

Outputs	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V calibrated switching	
Load	Output current	≤ 10 V (≤ 500 ohms at 20 mA)
	Output voltage	≤ 1 mA (≥ 10 kohms at 10 V)
Residual ripple	< 10 mV _{rms}	

Transmission behavior

Gain error	< 0.3 % full scale (DC) Additional error in live-zero operation 20 μA or 10 mV	
Cutoff frequency	> 100 Hz	
Temperature coefficient ¹⁾	0.01 %/K full scale	

Power supply

Power supply	24 V DC (± 15%), 0.6 W
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Isolation

Galvanic isolation	3-port isolation between input, output and power supply
Test voltage	0.51 kV AC
Working voltage	150 V AC/DC (basic insulation) with overvoltage category II / pollution degree 2 according to EN 61010-1.

Standards and approvals

Conformity	CE compliant
EMC ²⁾	Product family standard: EN 61326
Approval	UL Listed, File No. E340287, Standard: UL 61010-1 and CAN/CSA C22.2 No. 61010-1

Further data

Ambient conditions	Stationary operation, weatherproof, relative humidity 5 ... 95 %, no condensation, max. altitude 2000 m, water or wind-driven precipitation (rain, hail, snow) excluded
Ambient temperature	Operation: 0 ... +55 °C Transport, storage: -25 ... +85 °C
Housing	Modular housing, screw terminals, IP 20 protection
Mounting	35-mm mounting rail, EN 60715
Dimensions	6.1 mm x 98 mm x 88 mm
Wire cross-section	Max. 2.5 mm ² , 24-14 AWG
Weight	Approx. 50 g

1) Average TC in specified operating temperature range, reference temperature 23 °C

2) Slight deviations are possible while there is interference