

Isolators for Standard Signals



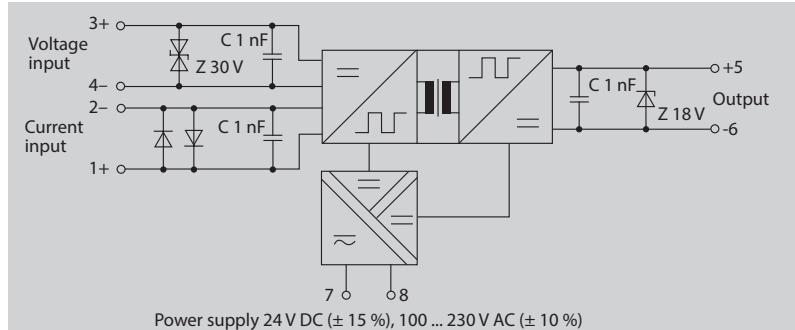
BasicLine BL 513

The mains-powered isolator for standard signals

Facts

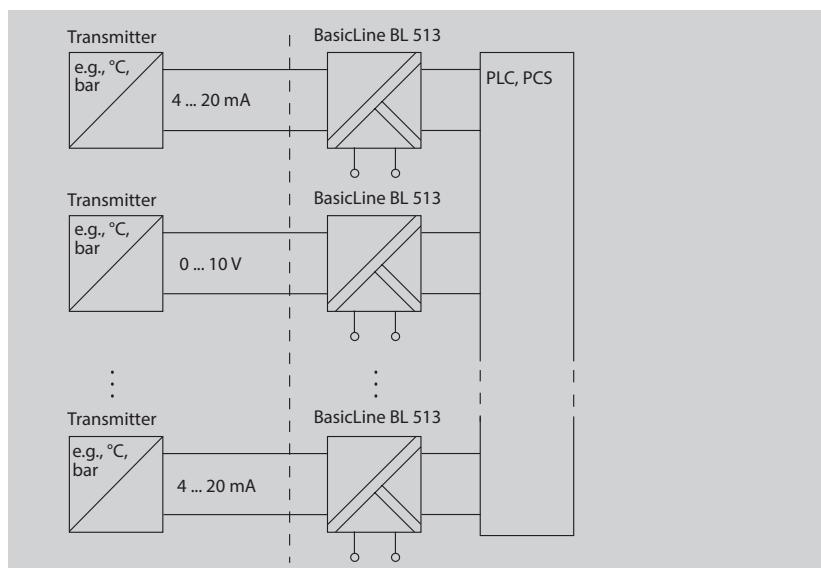
- Universal power adapter for 24 V DC supply or 100 ... 230 V mains supply
- Galvanic 3-port isolation prevents measurement errors
- Exemplary signal transmission for standard applications
- Conversion of one standard signal to another one, as required
- Calibrated range selection without complicated manual adjustments
- Easy configuration using DIP switches – protected against accidental adjustment
- CE compliant and UL approved
- 3-year warranty
- Perfect price-performance ratio

Block Diagram

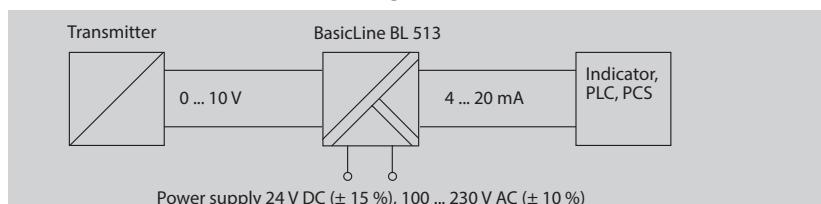


Power supply 24 V DC ($\pm 15\%$), 100 ... 230 V AC ($\pm 10\%$)

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 or |
| 4 ... 20 mA | 4 ... 20 mA | 100 ... 230 V AC mains supply |
| 0 ... 10 V | 0 ... 10 V | |

Product Line

| Device | Input | Output | Order No. |
|--|--|--|------------------|
| BasicLine BL 513 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 513 |

Specifications

| Input |
|--|
| Voltage |
| 0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V calibrated switching |
| Input resistance |
| Current input approx. 500 mV at 20 mA |
| Voltage input approx. 1 Mohm |
| Overload capacity |
| Current input \leq 300 mA |
| Voltage input Suppressor diode 30 V, max. 20 mA |
| Output |
| Outputs |
| 0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V calibrated switching |
| Load |
| Output current \leq 10 V (500 ohms at 20 mA) |
| Output voltage \leq 10 mA (1 kohm at 10 V) |
| Residual ripple $< 20 \text{ mV}_{\text{rms}}$ |
| Transmission behavior |
| Gain error $< 0.3\%$ full scale (DC) |
| Cutoff frequency $> 100 \text{ Hz}$ |
| Temperature coefficient ¹⁾ 0.015 %/K full scale |
| Power supply |
| Power supply 24 V DC ($\pm 15\%$); 1 W 100 ... 230 V AC ($\pm 10\%$), 48 ... 62 Hz, 2 VA |
| Isolation |
| Galvanic isolation 3-port isolation between input, output and power supply |
| Test voltage 1.5 kV AC |
| Working voltage 300 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 12.5 mm x 111 mm x 99 mm |
| Wire cross-section Max. 2.5 mm ² , 24-14 AWG |
| Weight Approx. 150 g |

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

2) Slight deviations are possible while there is interference