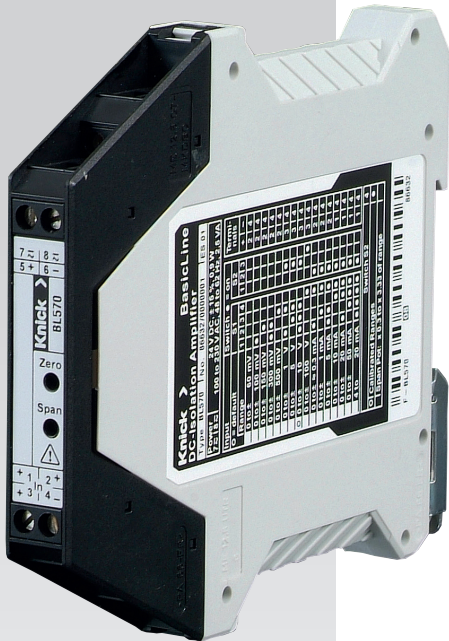


Universal Isolators



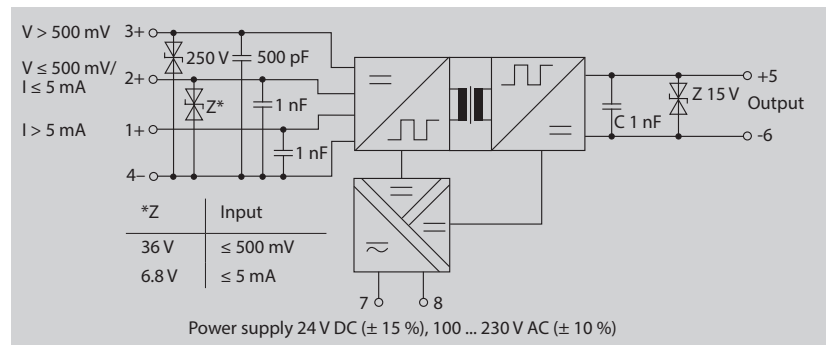
BasicLine BL 570

An isolator as versatile as its applications

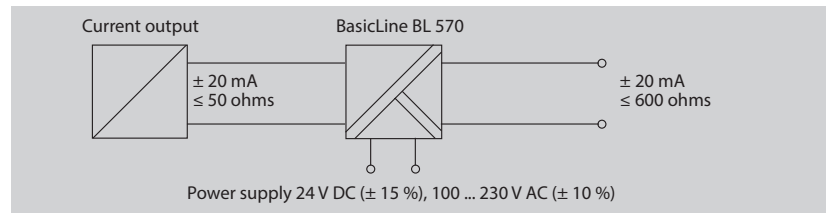
Facts

- Universal DC voltage and current measurement
- 480 switchable calibrated ranges without readjustment
- Voltage range anywhere between ± 20 mV and ± 200 V, individually adjustable
- Currents up to 100 mA are measured directly; higher currents via external shunt resistor
- Adjustable range offset
- Universal power adapter for 24 V DC supply or 100 ... 230 V mains supply
- 3-port isolation protects against incorrect measurements or damage
- Maximum reliability
- CE compliant and UL approved
- 3-year warranty
- Perfect price-performance ratio

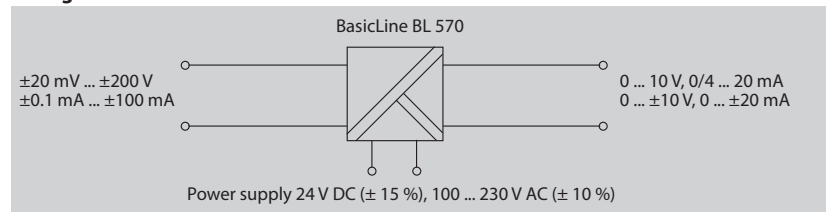
Block Diagram



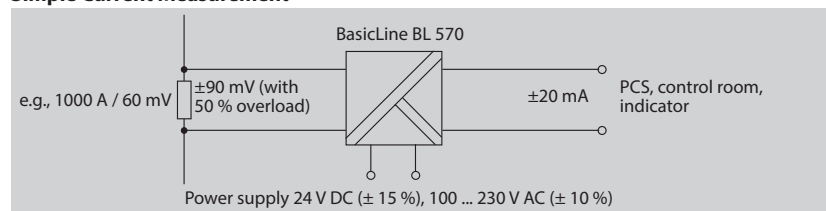
Electrical isolation



Voltage and Current Measurement



Simple Current Measurement



Input ranges	Output	Power supply
(±) 20 mV ... (±) 200 V	0 ... 20 mA / 0 ... 5 V / 0 ... 10 V	24 V DC or
(±) 100 µA ... (±) 100 mA	± 20 mA / ± 5 V / ± 10 V	100 ... 230 V AC mains supply
	4 ... 20 mA, 1 ... 5 V ; 2 ... 10 V	

Product Line

Device	Input	Output	Order No.
BasicLine BL 570	0 ... ±20 mV/200 V	0 ... 20 mA, 4 ... 20 mA	BL 570
Input and output adjustable	0 ... ±0.1 mA/100 mA	0 ... 10 V, 0 ... ±10 V	
		0 ... ±20 mA	

Accessories		Download
BasicSoft SW 113	Adjustment tool for the BasicLine BL 570 universal isolator	www.knick-international.com

Specifications

Input

Voltage	(±) 20 mV ... (±) 200 V		
	Calibrated steps	60 mV, 100 mV, 150 mV, 300 mV, 500 mV, 1 V, 5 V, 10 V, 100 V, uni-/bipolar	
Current	(±) 0.1 mA ... (±) 100 mA		
	Calibrated steps	1 mA, 5 mA, 10 mA, 20 mA, 50 mA, uni-/bipolar and 4 ... 20 mA ¹⁾	
Input resistance	Current input	≤ 5 mA	approx. 100 ohms
		> 5 mA	approx. 5 ohms
Overload capacity	Voltage input		approx. 1 Mohm
		Current input	≤ 60 mA
	> 5 mA		≤ 300 mA
Voltage input	≤ 500 mV	Suppressor diode 36 V, ≤ 20 mA	
	> 500 mV	Suppressor diode 250 V, ≤ 3 mA	

Output

Ranges	0...20 mA / 0...5 V / 0...10 V, ±20 mA / ±5 V / ±10 V / 4...20 mA, 1...5 V ; 2...10 V, calibrated switching		
Offset	-100 %, -50 %, 0 %, 50 %, 100 % output span, calibrated		
Load	Output current	≤ 12 V (600 ohms at 20 mA)	
	Output voltage	≤ 10 mA (1 kohm at 10 V)	
Residual ripple	< 10 mV _{rms}		

Transmission behavior

ZERO pot	± 25 % output span adjustable		
SPAN pot	0.33 ... 3.30 x final value of input range (max. V _{in} = 200 V)		
Gain error	< 0.25 % full scale (DC)		
Cutoff frequency	> 100 Hz		
Temperature coefficient ²⁾	< 0.005 %/K full scale		

Power supply

Power supply	24 V DC (± 15%); 0.9 W / 100 ... 230 V AC (± 10%), 48 ... 62 Hz, 2.5 VA		
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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 ³⁾	Product 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) Input 4 ... 20 mA: Offset switching not calibrated

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

3) Slight deviations are possible while there is interference