

Modular Housings

Knick >

Repeater power supply in 6-mm housing.

The Task

Supply of 2-wire transmitters via the measuring line and 1:1 transmission of 4 ... 20 mA measurement signals.

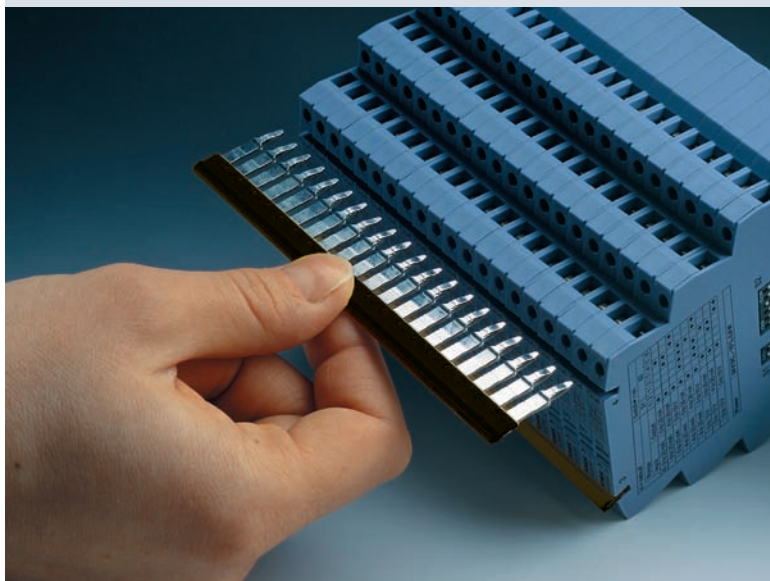
The Problems

In many cases, space is limited at the operating site and furthermore, additional effort for the supply units and galvanic isolation often requires two separate devices.

The Solution

We supply one of the narrowest repeater power supplies at an extremely attractive price. The IsoAmp® PWR B 10116 supplies the transmitter with power and transmits the measurement signal galvanically isolated to the output with a high level of accuracy. A high supply voltage allows use with almost all commercially available 2-wire transmitters.

IsoAmp® PWR B 10116



The Housing

Mounted in a 6-pin terminal housing with 6.1 mm row width. Connection with screw terminals.

The Advantages

The new IsoAmp® PWR B 10116 repeater power supply unites excellent technology with unbeatable value for money.

The Technology

Transformer signal and energy transmission. The output signal is permanently set to 4 ... 20 mA.

Warranty
5 years!

Defects occurring within 5 years from delivery are remedied free of charge at our works (carriage and insurance paid by sender).

Repeater Power Supplies

Isolation Amplifiers
Transmitters

Indicators

Process Analytics

Portable Meters

Laboratory Meters

Sensors

Fittings

Knick 



■ The Facts

Extremely flat

3-port isolation in a 6-mm modular housing

Low-cost assembly

Supply of the current loop and galvanic isolation of the measured signal in one device

Safety in the smallest space

3-port isolation in a 6-mm housing

Supplies all common 2-wire transmitters (2-wire sensors)

24 V DC power supply

Cross-connections for power supply

Power supply only wired once for almost any number of parallel repeater power supplies

5-year warranty



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IsoAmp® PWR B 10116

■ Product Line

Devices	Input	Output	Order No.
IsoAmp® PWR B 10116	4 ... 20 mA	4 ... 20 mA	B 10116 F0
Power supply			
24 V DC			
Accessories			
Cross-connections	Pluggable cross-connection for looping through of the power supply for up to 41 power supply connections of B 10XXX F0 and A 20XXX F0, separable.		ZU 0542

■ Specifications

Input data

Input (current loop)	4 ... 20 mA, supply voltage 16.5 V, constant for 3 ... 22 mA, Current limited to max. 25 mA
Residual ripple	< 10 mV _{rms}

Output data

Output	4 ... 20 mA
Output signal with input short-circuit	22 ... 25 mA
Output signal with open input	< 3 mA
Load	≤ 10 V (500 ohms at 20 mA)
Offset ¹⁾	< 30 µA
Residual ripple at output	< 10 mV _{rms}

Transmission behavior

Gain error	< 0.1 % meas. val.
Response time	< 5 ms

1) Additional error 30 µA for output 0 ... 20 mA

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Specifications (continued)

Power supply

Power supply	24 V DC ($\pm 15\%$), approx. 1 W The power supply can be routed from one device to another via cross-connections.
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Isolation

Galvanic isolation	3-port isolation between current loop, output, and power supply
Test voltage	1.5 kV AC current loop against output/power supply 510 V AC output against power supply
Working voltage (basic insulation)	Up to 300 V AC/DC across current loop and output/power supply with overvoltage category II and pollution degree 2, up to 100 V AC/DC across output and power supply with category II and degree 2 according to EN 61010-1. For applications with high working voltages, you should ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.

Standards and approvals

EMC ²⁾	Product standard: EN 61326 Emitted interference: Class B Immunity to interference: Industry
Approval	cURus, File No. E 220033, Standards: UL 508 and CAN/CSA 22.2 no. 14-95

Other data

MTBF ³⁾	Approx. 450 years
Ambient temperature	Operation: 0 ... +55 °C Transport and storage: -25 to +85 °C
Design	Modular housing, width 6.1 mm, see dimension drawing for other measurements, with screw terminals
Ingress protection	IP 20
Mounting	For 35 mm top hat rail to EN 50022 See dimension drawings for conductor cross section
Weight	Approx. 50 g

2) Slight deviations are possible while there is interference

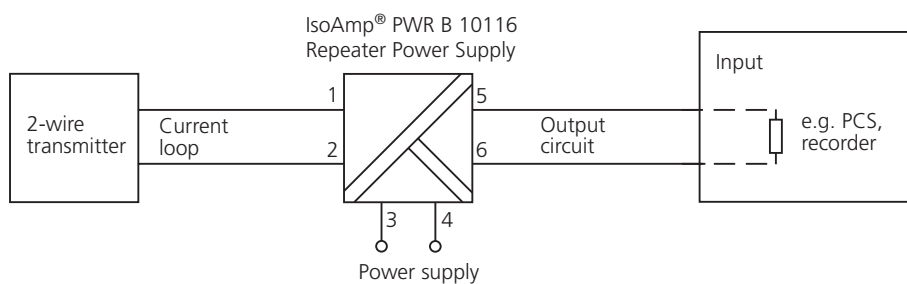
3) Mean Time Between Failures – MTBF – according to EN 61709 (SN 29500).

Conditions: stationary operation in well-kept rooms, average ambient temperature 40 °C, no ventilation, continuous operation

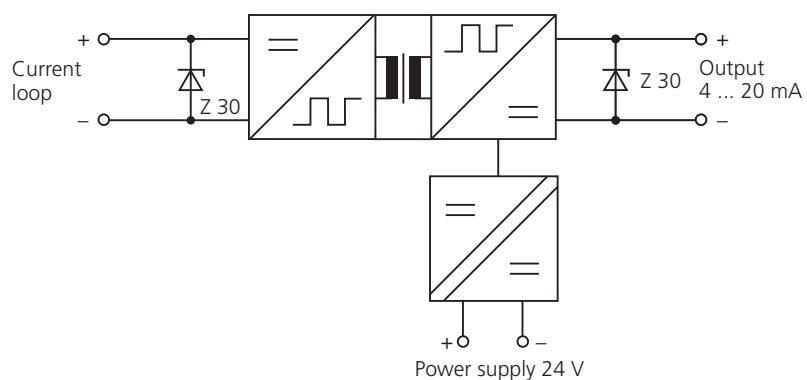
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IsoAmp® PWR B 10116

■ Application Example



■ Block Diagram

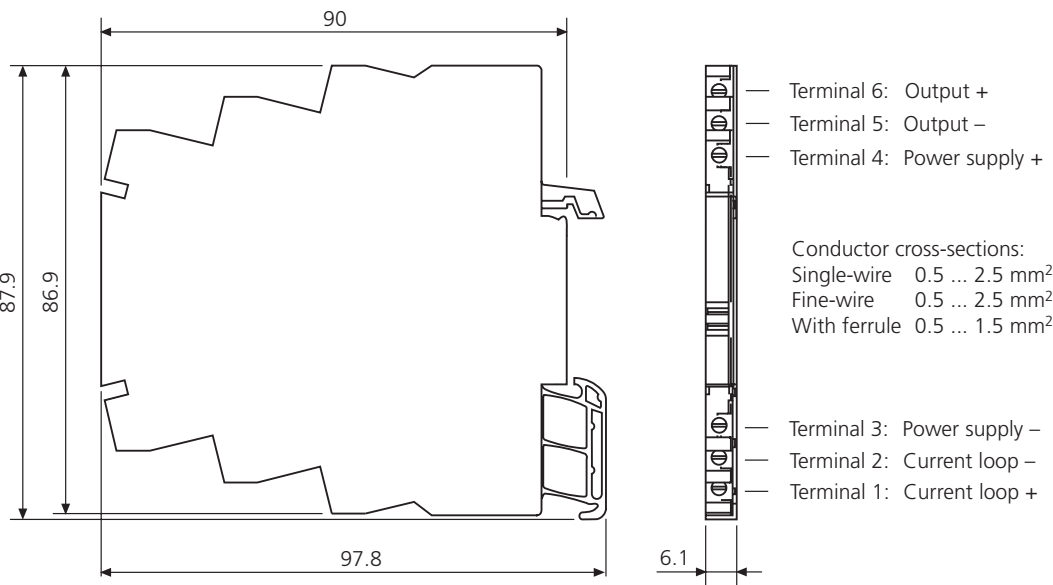


Repeater Power Supplies

Isolation Amplifiers Transmitters	Indicators	Process Analytics	Portable Meters	Laboratory Meters	Sensors	Fittings
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■ Dimension Drawings and Terminal Assignments



All dimensions in mm!