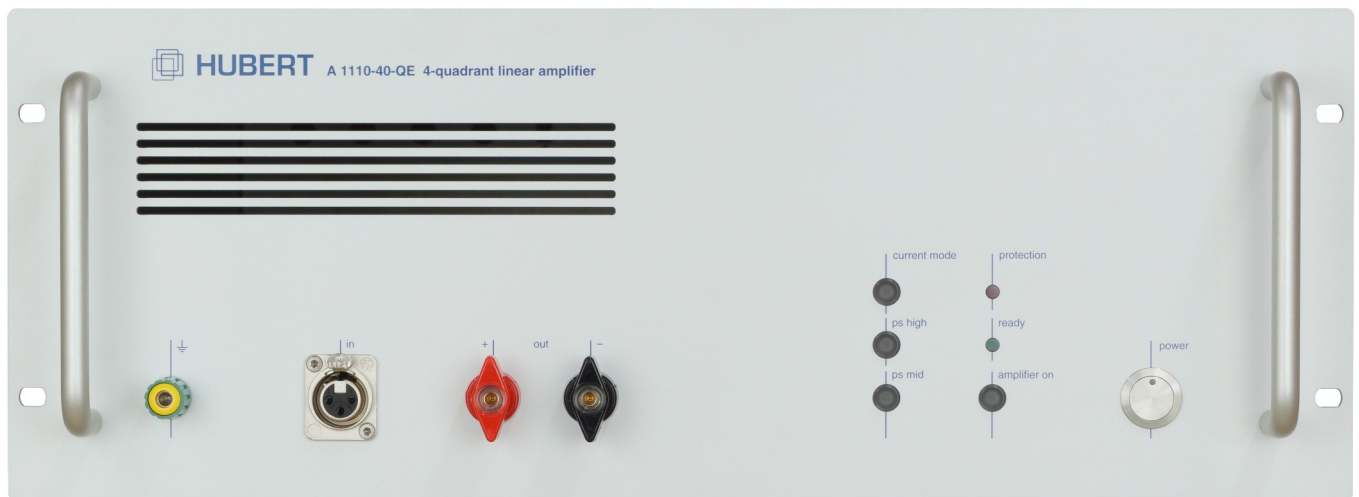


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Datasheet



Option Isolation Amplifier

Series A1110



1 Product Description

The 3-channel isolation amplifier is used to isolate the signal input and power output. In addition, the two voltage and current monitors are electrically isolated. This option is essential for series connection of amplifiers.

It is used wherever galvanic isolation between input and output isolation between input and output signals is required, whether because of an interfering high common-mode voltage, to separate ground loops or simply for safety reasons.

Due to the purely analog signal transmission, the output signal is free of clock and switching signals.

The high offset stability is achieved by temperature control of the offset values.

The selected option affects the bandwidth and slew rate of the amplifier.



2 Features

- 3-channel isolation amplifier (input signal, voltage and current monitor)
- Input instrument amplifier with high common mode suppression
- The large small-signal band width from DC to > 800 kHz ensures excellent signal reproduction with little influence on the total bandwidth of the complete amplifier
- Through purely analog signal transmission, the output signal is free from cycle and switching signals
- High offset stability is achieved through temperature control of the offset variables
- Max. differential voltage input ground / output ground 500 V_{AC} / 1 kV_{DC}

3 Applications

- General lab applications for research, development and testing
- Universally applicable in scenarios with required galvanic isolation
- Galvanic isolation for personal protection, e.g. in medical engineering
- Galvanic isolation for safety reasons, e.g. for signal acquisition via computer systems
- Prevention of ripple pickup
- Measurement of small differential signals in high common-mode voltages
- Suppression of common-mode interference
- Actuation for series connection of amplifiers / power supply units
- Injection of interference signals in supply lines without transformer
- Design of automated test fields
- Automotive Standard: LV123, ISO 21498-2, VW80300



4 Specifications

The values refer only to the installed hardware.

Parameters	Specification	Conditions/Moments
		25° C ambient temperature
		Continuous operation
Gain	1 ($\pm 1\% \pm 100 \text{ ppm}/^\circ\text{C}$)	
Output Offset	$< \pm 1 \text{ mV}$	
Output Offset Drift (Temp.)	$< \pm 5 \text{ mV}/10\text{-}50^\circ\text{C}$	
Small Signal Frequency Response	DC – 800 kHz	
Insulation Voltage, permanent	500 V AC, 1 kV DC	Input – Output
Insulation Test Voltage	1 kV AC, 2 kV DC	60 sec: Input – Output

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5 Contact

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6 Document History

Version	Date	Changelog
1	June 2025	First publication

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