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Find the *VX Instruments VX4616* at our website: ***Click HERE***

VX4616
Dual Precision Power Amplifier



TECHNICAL DATA SHEET

PXI
VXI
LAN
cPCI
PXIe
GPIB
USB
RS232 485
external PCIe

Features

- Frequency bandwidth of 70 kHz (150 kHz optional)
- Two galvanically isolated bipolar output channels
- Outputs are operating as inverting precision power amplifier
- Outputs are operating as programmable DC source (voltage or current)
- Outputs are programmable or adjustable via an external analog source
- Autosensing
- Pulse moduleation with extremely high slew rate

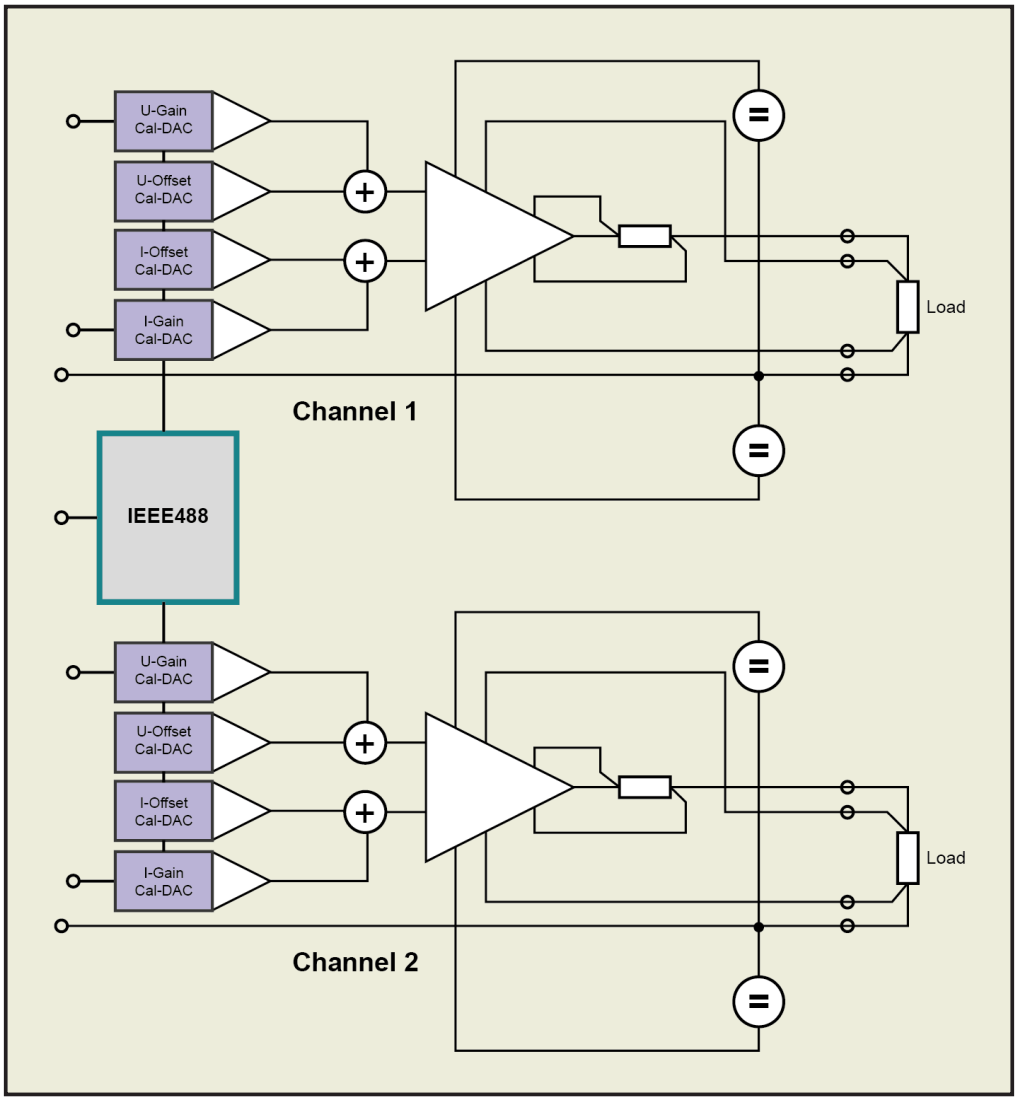
Product Information

The VX4616 is a two output high precision four-quadrant power amplifier and can be used either as an inverting amplifier or as a programmable DC source. Both power stages are separated galvanically.

Typically the VX4616 is used as a voltage source with current limiting.

Together with option A and D the VX4616 can be used as a voltage controlled current source for AC signals of up to 70 kHz (150 kHz option B).

This function can be used to generate a constant magnetic field in coils even with changing frequencies and inductance.



Mode: Voltage-Control/Current-Limit

DC Output Voltage	Specification	Comment
Programming range	-50 V ... +50 V	Programmable current limit ±0.1 A ... ±1.6 A
Resolution	16 Bit, 1.6 mV	
Bandwidth	70 kHz (3 dB)	Extended bandwidth available (Option B)
Distortion	4 mV_{RMS}	At 1 kHz and R_{Load} = 35 Ω
Nominal gain	+5	Gain factor U_{out}/U_{in}
Gain error	0.015%	
Gain drift	20 ppm/°C	
Offset voltage	±5 mV	Offset voltage at U_{out} = 0 V
Offset drift	200 µV/°C	
Input impedance	10 kΩ	Input impedance of analog control input
Maximum sensing voltage	±3 V	
Pulse moduleation[1,2]		Option C
Rise time	<50 ns	U_{Out} = 10 V; R_{Load} = 200 Ω
Fall time	<100 ns	U_{Out} = 10 V; R_{Load} = 200 Ω
Minimum pulse width	1 µs	

DC Output Current	Specification	Comment
Programming range	-1.6 A ... +1.6 A	Positive and negative limit set to same value
Nominal gain	0.16 A/V	Gain factor I_{out}/U_{in}
Gain error	0.5%	
Gain drift	100 ppm/°C	
Offset current	15 mA	
Input impedance	10 kΩ	Input impedance of analog control input

1 Positive output voltage only.
2 Channel 1 only.

Notes: All product data are specified for an ambient temperature of 23°C ± 5°C (after 1 hour warm-up time).
Product specification and description in this document are subject to change without notice.

Mode: Current-Control / Voltage-Limit

DC Output Current	Specification	Comment
Programming range	-1.6 A ... +1.6 A	Positive and negative limit set to same value
Resolution	16 Bit, 50 µA	
Bandwidth	5 kHz (3 dB)	
Nominal gain	0.16 A/V	Gain factor I_{out}/U_{in}
Gain error	0.2%	
Gain drift	100 ppm/°C	
Offset current	15 mA	
Input impedance	10 kΩ	Input impedance of analog control input

DC Output Voltage	Specification	Comment
Programming range	-50 V ... +50 V	Positive and Negative limit set to same value
Nominal gain	5	Gain factor U_{out}/U_{in}
Gain error	0.5%	
Gain drift	100 ppm/°C	
Offset current	15 mA	

Ordering Information	Comment
Option A	Current source, requires option D
Option B	Extended bandwidth (150 kHz)
Option C	Pulse moduleation (ch. 1 only)
Option D-1/2/3	Remote control (RS232, USB, and IEEE-488)

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