

VECTO

LPVT AMPLIFIER

by CT LAB



User Guide

Important Notes

- A load resistor may be required for the LPVT depending on the model. Ensure that the LPVT is compatible with high-impedance inputs; if not, the use of a load resistor may be necessary to maintain proper functionality.
- Gain must be specified at purchase. Gain values can range from 10 to 100.

Device Overview

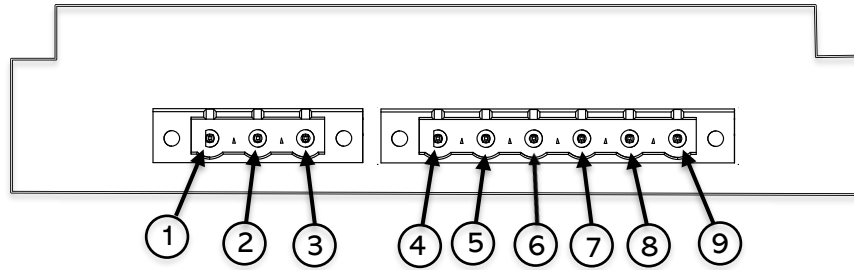
The VECTO LPVT Amplifier is a high-performance, 100kHz bandwidth device specifically designed to convert the output signals of Low-Power Voltage Transformers (LPVTs) into conventional 110V_{L-L} output signals. This innovative solution addresses the limitations of traditional Voltage Transformers (VTs), which often lack the bandwidth and accuracy required for effective harmonic measurement.

LPVTs offer superior bandwidth and phase performance compared to traditional VTs but frequently present output voltage levels incompatible with standard measurement equipment. The VECTO LPVT Amplifier bridges this gap by enhancing LPVT output signals to match the levels of conventional VTs ($\pm 63.5V_{L-E}$), ensuring seamless compatibility with existing systems.

A LPVT and VECTO LPVT Amplifier combination serves as a cost-effective, high-performance alternative to traditional VTs. Offering an impressive 100kHz bandwidth, far superior to the typical ± 2 kHz bandwidth of traditional VTs.

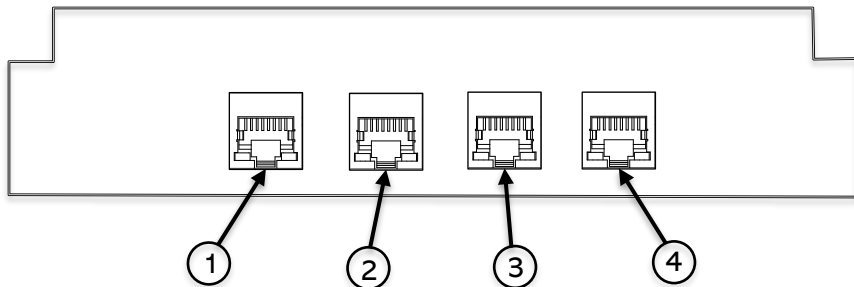
Installation and Connections

Terminals Connectors



No.	Symbol	Description	Note
1	V+	Positive DC Voltage Input	
2	G	Ground	Negative voltage input and ground pin are internally connected
3	V-	Negative DC Voltage Input	
4	V1	Channel 1 Output Voltage	
5	V2	Channel 2 Output Voltage	
6	V3	Channel 3 Output Voltage	
7	V ₍₁₋₃₎ Ref	Voltage Reference for Channel 1-3	Reference for Channel 1-3 and reference for Channel 4 are internally bridged.
8	V4	Channel 4 Output Voltage	
9	V ₍₄₎ Ref	Voltage Reference for Channel 4	Reference for Channel 1-3 and reference for Channel 4 are internally bridged.

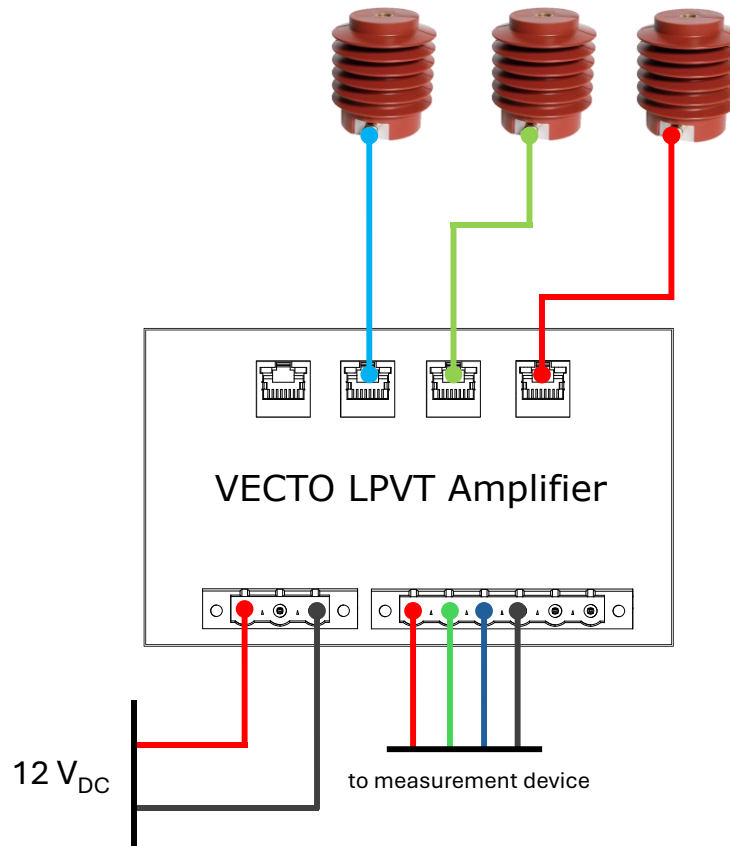
LPVT Connections



No.	Symbol	Description	Note
1	V1 _{in}	LPVT Input 1	
2	V2 _{in}	LPVT Input 2	
3	V3 _{in}	LPVT Input 3	
4	V4 _{in}	LPVT Input 4	

	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
	NC	NC	NC	NC	NC	NC	V+	V-

Typical Wiring Diagram



Specifications

Description	
Inputs	
Number of channels	4
Input impedance	>1 MΩ
Connector Type	8-pin RJ45 (Ethernet Connector)
Supply voltage	12 V _{DC}
Supply Power	25 VA (minimum)
Output	
Gain	Configurable at Purchase (10-100)
Output Voltage Limit	100 V _{L-E} 170 V _{L-L} ± 150 V _{DC}
Output Current Limit	± 20 mA
Accuracy	±0.5% on reading at 63.5 V _{L-E}
General	
Analog Bandwidth	100 kHz
Temperature (Operating)	-20 °C to + 70 °C

Warranty and Support

Technical Support

Please contact CT LAB (PTY) LTD for technical support.

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Sales Assistance

Please contact CT LAB (PTY) LTD for any sales assistance.

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