



# New High-Reliability Isolation Amplifiers for Precision Applications Offer Industry-Leading CMTI to 150 kV/ $\mu$ s, Bandwidth to 400 kHz, and Low Gain Error Down to $\pm 0.05$ %

## Product Benefits:

- High typical common-mode transient immunity (CMTI) to 150 kV/ $\mu$ s
  - Provides robust performance even in harsh environments, such as heavy-duty motor applications
- Low gain error of  $\pm 0.05$  % and minimal gain drift of 15 ppm/ $^{\circ}$ C
  - Ensure calibration-free, precise measurements over time and temperature
- High bandwidth to 400 kHz
  - Enables faster measurements compared to traditional opto-based isolation amplifiers
- Wide temperature range from  $-40$   $^{\circ}$ C to  $+125$   $^{\circ}$ C
- Based on proprietary capacitive isolation technology
- Differential input voltage:
  - $\pm 50$  mV (VIA0050DD): Ideal for precision isolated current measurements in space-constrained applications
  - $\pm 250$  mV (VIA0250DD): Allows for isolated current as well as voltage measurements
  - 0.02 V to 2 V (VIA2000SD): Enables precise isolated voltage measurements for applications such as bus voltage monitoring and UPS
- High signal to noise ratio (SNR) of 70 dB is ideal for high fidelity signal transmission in complex environments



## Market Applications:

- Precision isolated current and voltage measurements for bus voltage monitoring, AC motor controls, power and solar inverters, and UPS; high voltage potential dividers and precision shunts; industrial motor drives; renewable energy systems; and critical power systems

## The News:

Vishay Intertechnology announces the release of its latest isolation amplifiers, the VIA0050DD, VIA0250DD, and VIA2000SD. These new devices offer enhanced performance for a wide range of industrial, medical, and automotive applications, where high precision, reliability, and compact size are critical.

- The VIA series of isolation amplifiers are designed to deliver exceptional thermal stability and precise measurement capabilities
- Each amplifier features low offset error and drift, reinforced isolation, and inbuilt diagnostics for simplified precision current and voltage measurements
- Inbuilt common mode voltage detection prevents failures in current and voltage measurement applications, making these amplifiers particularly suited for demanding applications where reliability is paramount
- The series is designed to be compatible with Vishay's WSBE high TCR shunts



## The Key Specifications:

Part #	VIA0050DD	VIA0250DD	VIA2000SD
Gain error	$\pm 0.05 \%$	$\pm 0.05 \%$	$\pm 0.3 \%$
Gain drift	$\pm 15 \text{ ppm}/^{\circ}\text{C}$	$\pm 15 \text{ ppm}/^{\circ}\text{C}$	$\pm 45 \text{ ppm}/^{\circ}\text{C}$
Bandwidth	250 kHz	250 kHz	400 kHz
CMTI	100 kV/ $\mu\text{s}$	150 kV/ $\mu\text{s}$	150 kV/ $\mu\text{s}$
Linear input voltage	$\pm 50 \text{ mV}$	$\pm 250 \text{ mV}$	0.02 V to 2 V

### Availability:

Samples and production quantities of the VIA0050DD, VIA0250DD, and VIA2000SD are available now, with lead times of 12 to 16 weeks.

To access the product datasheets on the Vishay Website, go to

<http://www.vishay.com/ppg?80900> (VIA0050DD)

<http://www.vishay.com/ppg?80901> (VIA0250DD)

<http://www.vishay.com/ppg?80902> (VIA2000SD)

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