Verivolt

Solving Electrical Sensing Today

About Verivolt

We address real and immediate sensing challenges by **developing advanced power monitoring platforms tailored for medium and high voltage applications.**

We are on a mission to help customers electrify the world. We see electrification as a transformative force that is reshaping the **energy, transportation, and innovation landscape.**

We take pride in our role as problem solvers, addressing real and immediate sensing challenges since our inception. Our journey has been fueled by a dedicated team of highly competent individuals, each bringing years of valuable experience to the table.
For us, the year 2008 marks not just the beginning but the foundation of a commitment to excellence.

Our focus has consistently revolved around the development of advanced power monitoring platforms tailored for medium and high voltage applications. By proactively listening to industry needs we have optimized performance of our products across the pillars of accuracy, bandwidth, isolation, measurement range and output type.

Specialized Team

23% PHD

15% Masters

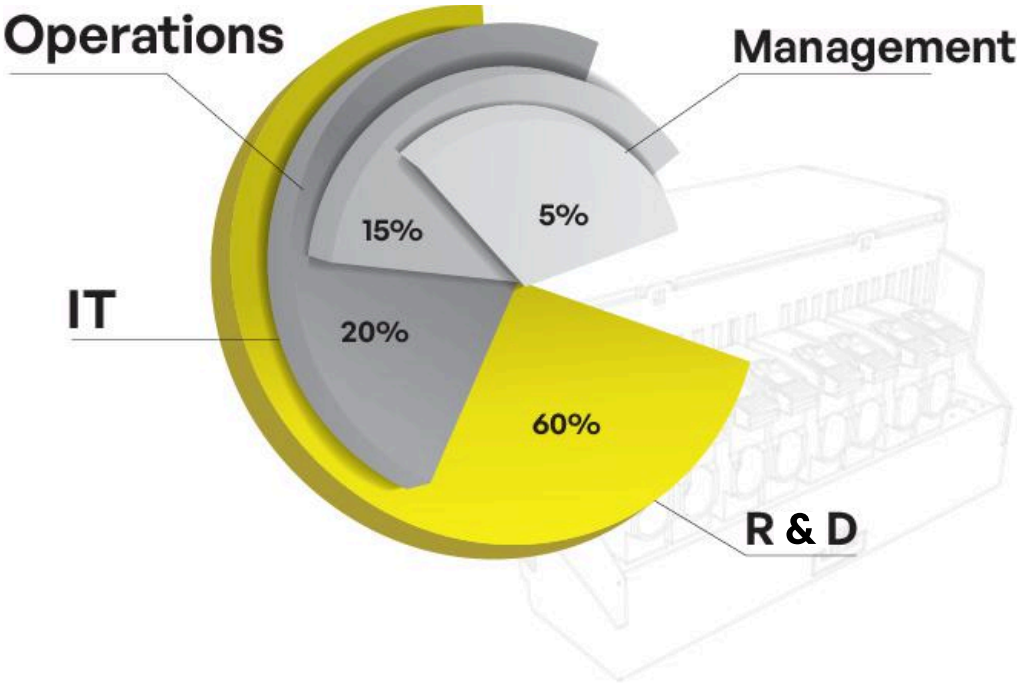
62% B.S

20% IT

60% R&D

5% Management

15% Operations

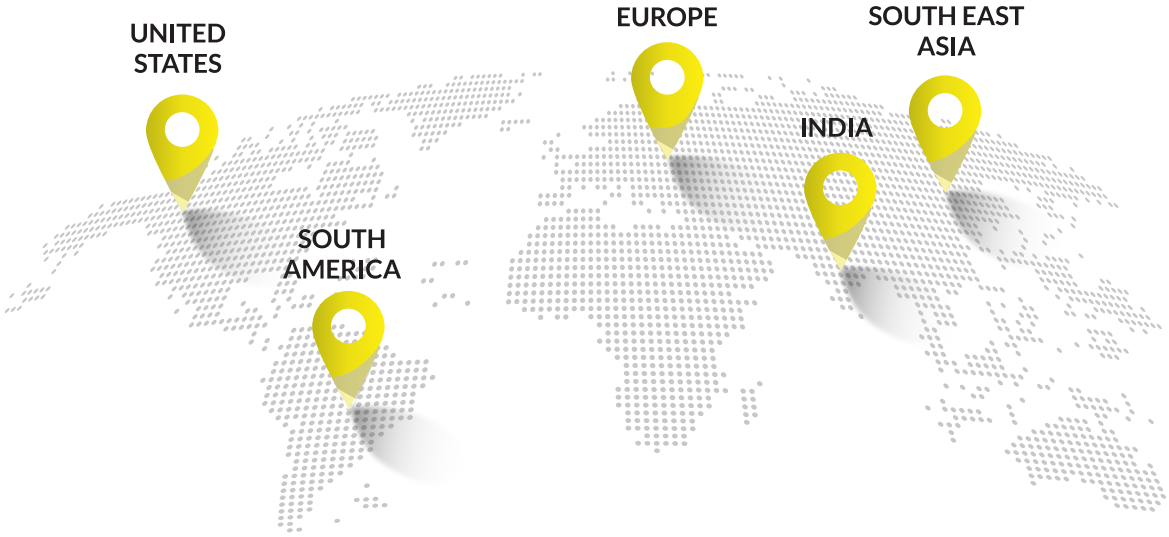


Widespread customer base

What sets us apart

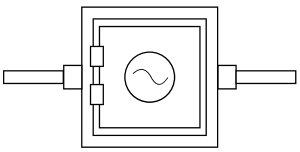
- Optimized performance of our products across **accuracy, bandwidth, output, range, and isolation**.
- We develop our products by listening to **industry insights** and ensuring they meeting **real sensing needs**.
- Achieved **operational excellence** by optimizing **part number availability** and **reducing lead time**.
- Ensured **prompt service** with strategically positioned **global offices** and a **vast distributor network**.
- **Offer customization** with **unique configurations** or specialized features to fit your application perfectly.

Customers in over 50 countires



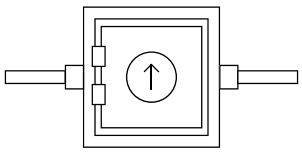
Product Overview

Verivolt Product Capabilities



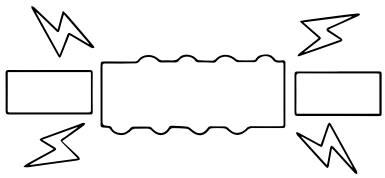
Voltage

Our broad range of voltage **sensors/transducers** are developed for **accuracy, bandwidth, output, range, and isolation.**



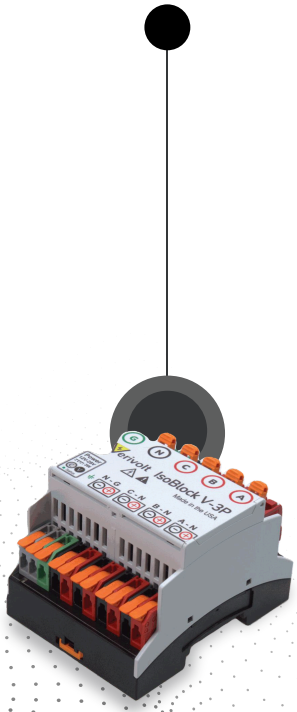
Current

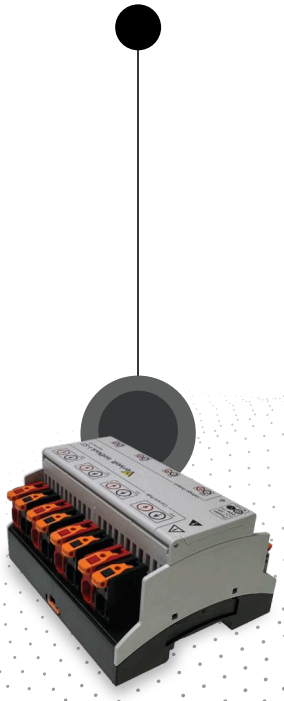
We offer current **sensors/transducers** based on the range of sensing technologies that **match the high-performance of our voltage sensors**

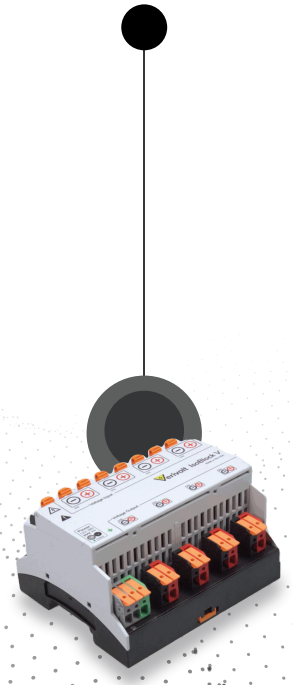


Isolator

Our Isolators provide best-in-class **galvanic isolation that preserve accuracy and signal integrity**

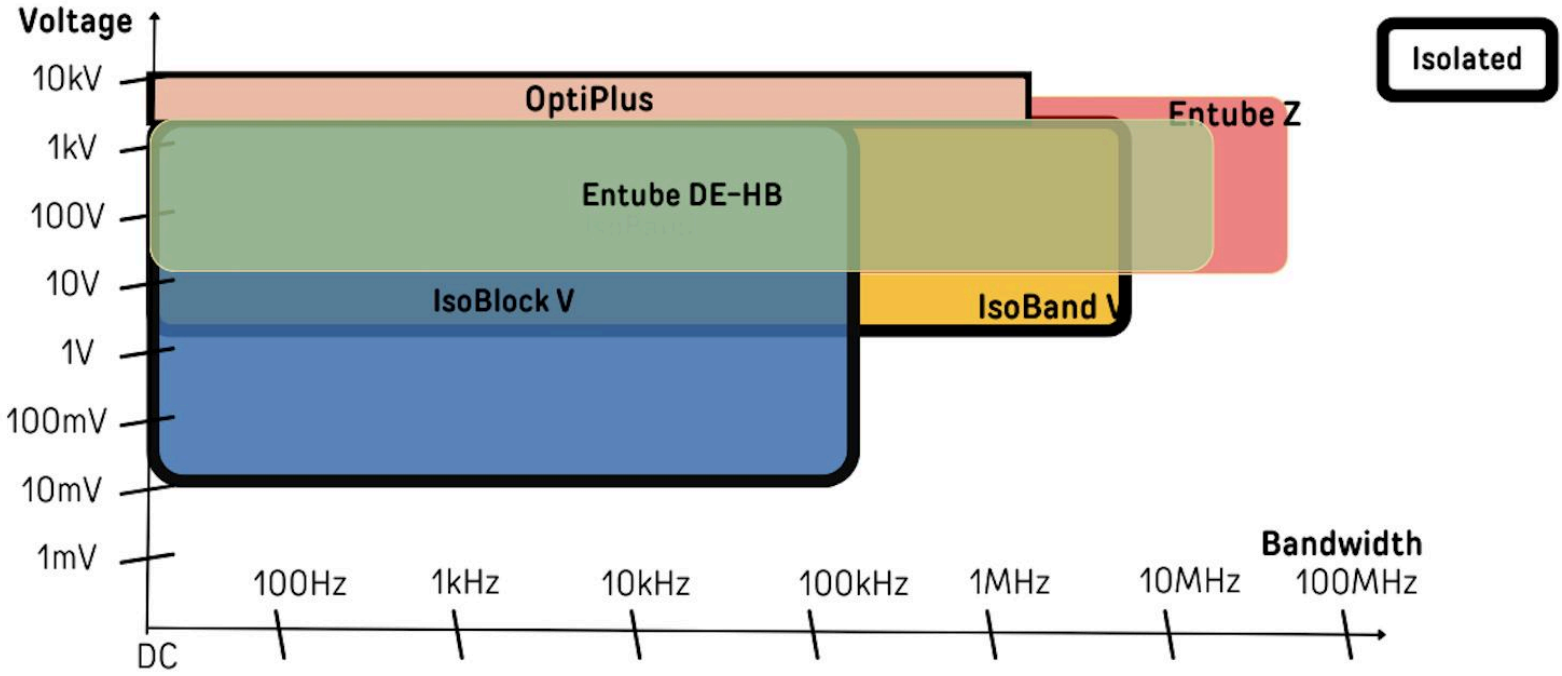






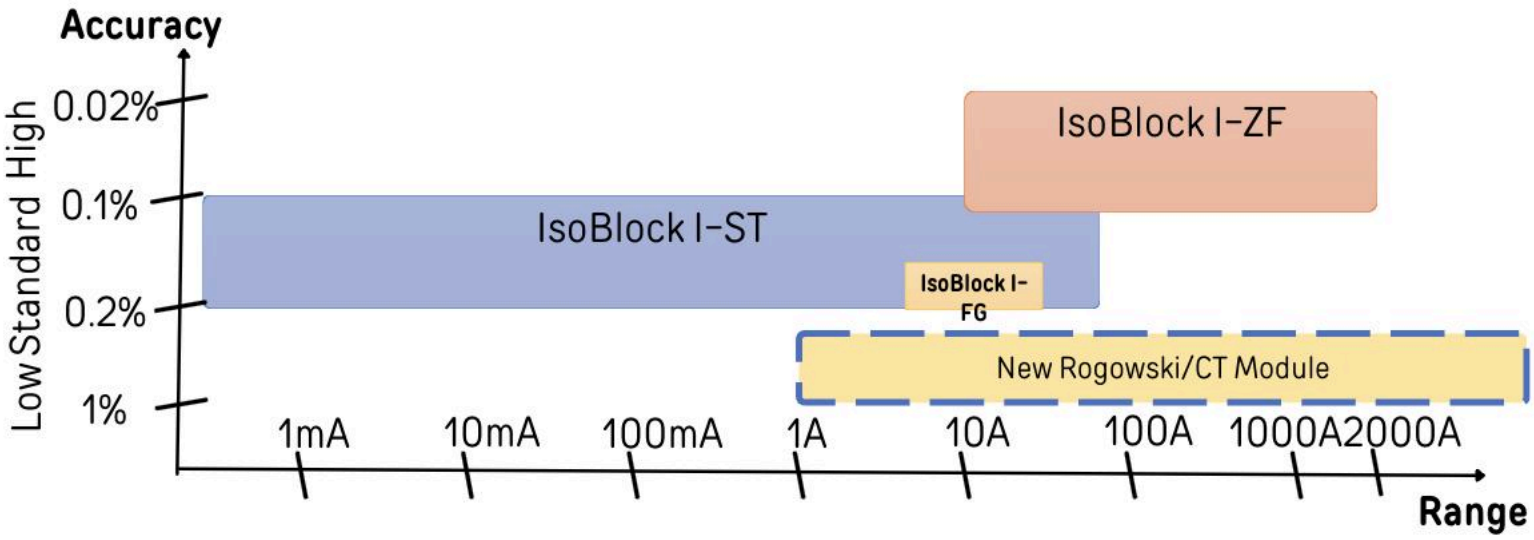
Product Overview

Verivolt **Voltage Sensors**



Product Overview

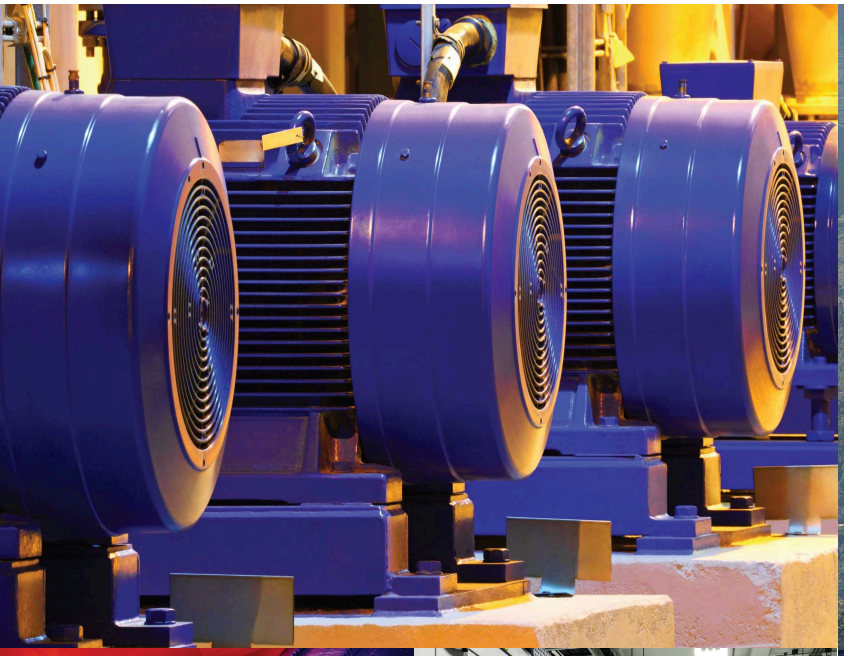
Verivolt **Current Sensors**

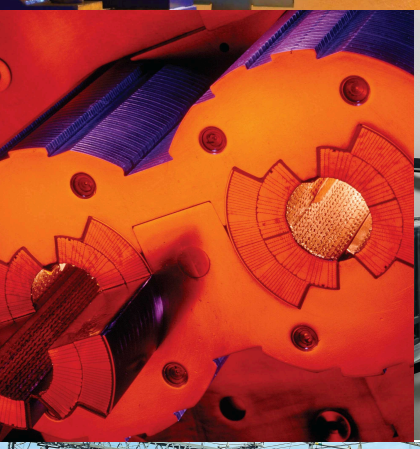


Industries & Application

Verivolt's **voltage and current sensors** are used across broad range of **industries**

Solar · eVTOL · Mobility · Manufacturing Testing · Aerospace · Power Electronics · Defense · EV Testing · Manufacturing Tests · VFD Monitoring · Motor Actuators · Safety False Testing · Power Supply Monitoring

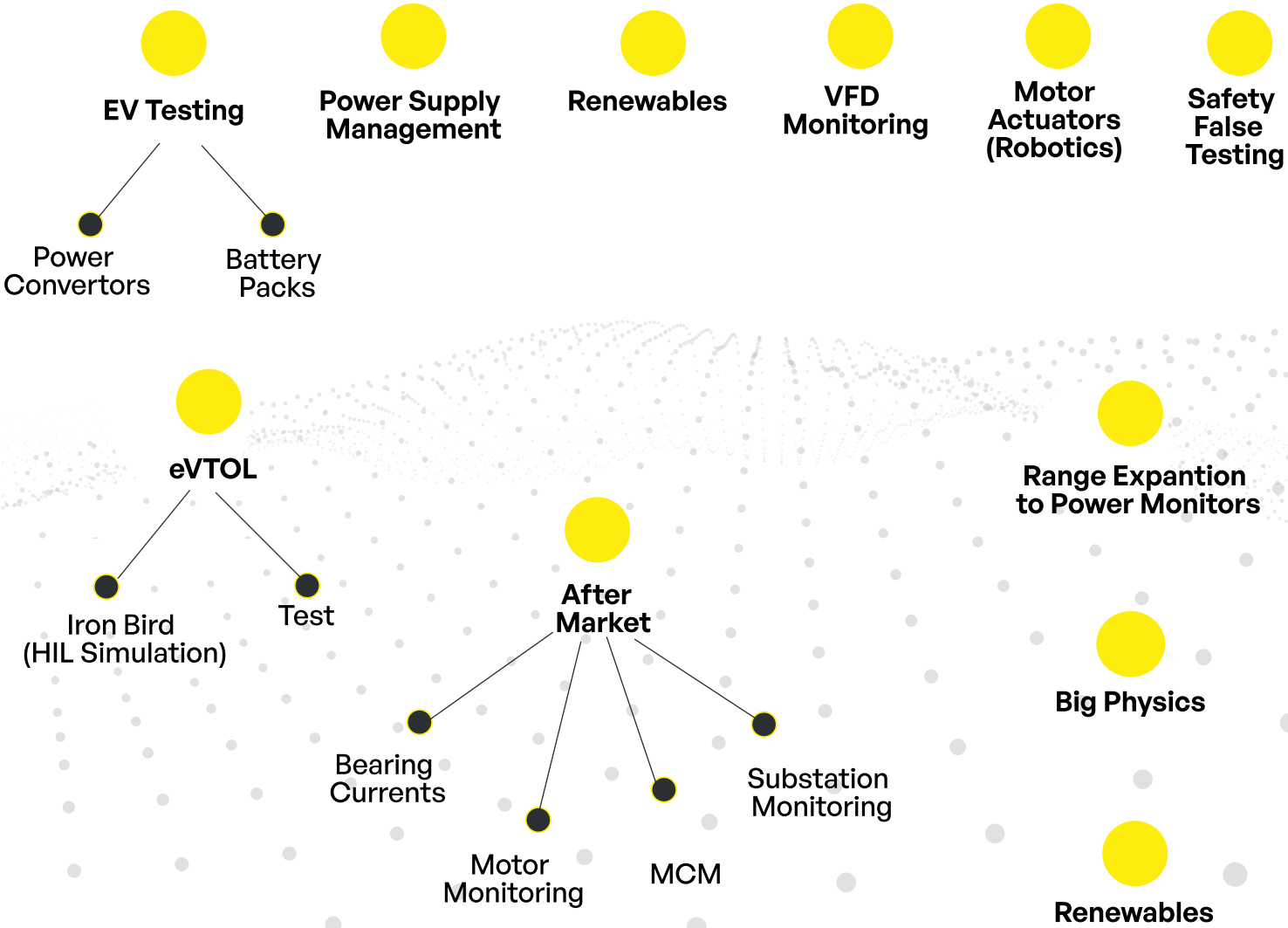






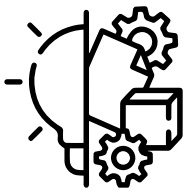

Industries & Application

And **applications distributed across industries**



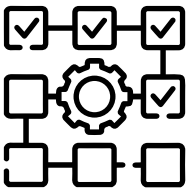
Industries & Application

Sensing across asset lifetime



Prototype / V&V

Prototyping of specialized hardware with special high voltage or current requirements



Manufacturing /Testing

Monitoring of Production Equipment Product Line Monitoring and Quality Control

After Market Monitoring

Fault Detection and Predictive Maintenance

Voltage Sensor Overview

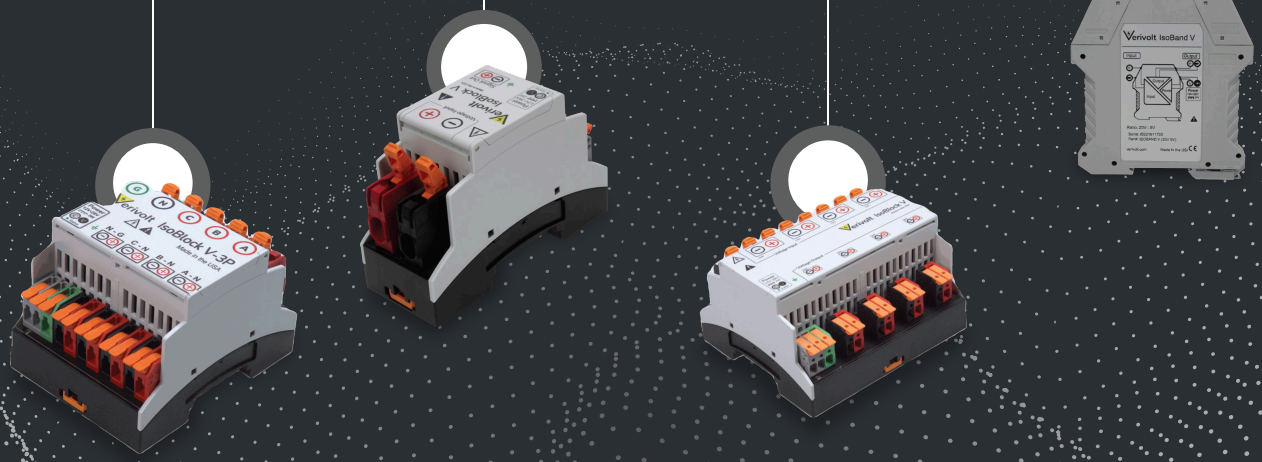
A Few Highlights from Voltage Sensor Collection

IsoBlock V-1c
Galvanically Isolated Differential Voltage Sensor

IsoBand V
High Bandwidth Voltage Transducer

IsoBlock V-3P
high quality three-phase Isolated Differential Voltage Sensor

IsoBlock V-4c
Voltage Sensor Module with Galvanic Isolation



Voltage Sensors

IsoBlock V-4c

Designed to provide high-quality isolated differential voltage measurements for applications requiring scaling of high voltages, as well as superior isolation.

The unit hosts four separate isolated channels, each of which can be connected to separate measurement sources while providing a range of functional coverage up to 1500V. The input of each specific IsoBlock channel has its own isolated reference and can be configured to suit user needs.

Iso Block V-4c	50V	100V	200V	300V	500V	750V	1000V	500V
Bandwidth (-3dB Point)	100kHz (100kHz to 300kHz custom)							
Differential input dynamic range	10mV	50mV	100mV	500mV	2V	5V	10V	20V
	30V	50V	200V	300V	500V	500V	7500V	1000V
	1500V							

Electrical

Accuracy (% of reading)	±(0.2% of reading + 0.005% range) or ±(0.1% of reading + 0.005% range)
Max total phase shift at 60Hz	< 0.05°
Max input delay (100kHz versions)	5.7 µs
Isolation voltage from primary to secondary	±1500 V
Max common mode transient voltage for 1 minute	±5000 V
Max differential-mode transient voltage at 65°C	
For ranges: 5V, 10V, 15V, 20V, 30V	300V
For ranges: 50V, 100V, 150VAC, 300V, 250VAC	1000V
For ranges: 500V, 500VAC, 750V, 1000V, 1500V	2000V

Mechanical

Mounting Type	DIN Rail
Connectivity	Spring Cage connector
Outer Dimensions	3.9" x 3.5" x 2.5"
Max input delay (100kHz versions)	4 channels
Weight	198 g (7.0 oz)

Performance

Input-Output non-linearity	< ±0.04%
Output voltage	±10 V (±5V custom)
Gain temperature drift	±50 ppm/°C
Common mode rejection at 60Hz	112 dB
Power Supply Voltage*	12V to 28 V
Output type	Differential pair
Output Offset Voltage (Referenced to output)	2σ < ±500 µV (typical) 4σ < ±1 mV (limit)
Differential Input impedance	
For ranges: 5V, 10V, 15V, 20V, 30V	440 kΩ
For ranges: 50V, 100V, 150VAC, 300V, 250VAC	2MΩ
For ranges: 500V, 500VAC, 750V, 1000V, 1500V	8MΩ
Insulation impedance	> 10 GΩ || 2pF
Output impedance	20Ω

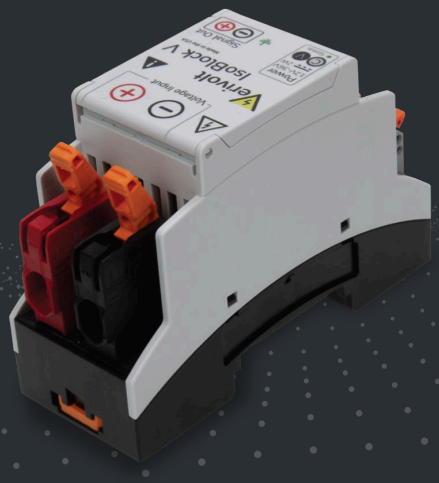
Environmental

Operating temperature	– 25 to 70 °C
Storage temperature	– 40 to 80 °C

*New powering voltage range since January of 2020

- The isolation barrier of every device is tested with a 5 second partial discharge of 1800V for 5 seconds, with a detection threshold of 150pC.
- Withstanding common mode surge voltage is 2 seconds half sinewave.
- Withstanding differential mode surge voltage is 4 seconds half sinewave.

Voltage Sensors



IsoBlock V-1c

Each IsoBlock V-1c unit hosts an isolated channel that can be connected to separate measurement sources while providing a range of functional coverage up to 1500V.

The input has its own isolated reference, and can be configured to suit user needs. The output signal from the IsoBlock unit is referenced in respect to the ground channel of the user's data acquisition system.

Verivolt designs its IsoBlock V modules with consideration for user great flexibility, and low power consumption.

IsoBlock V-1c

Electrical

Accuracy	**±(0.2% of reading + 0.005% range) or ±(0.1% of reading + 0.005% range**
Max total phase shift at 60Hz	**< 0.05°**
Max input delay (100kHz versions)	**3.8 µs**
Isolation voltage from primary to secondary	**±1500 V**
Max common mode transient voltage for 1 minute	**5000 V**
Max differential-mode transient voltage at 65°C	
For ranges: 5V, 10V, 15V, 20V, 30V	**300V**
For ranges: 50V, 100V, 150VAC, 300V, 250VAC	**1000V**
For ranges: 500V, 500VAC, 750V, 1000V, 1500V	**2000V**

Mechanical

Mounting Type	**DIN Rail**
Connectivity	**Spring Cage connector**
Outer Dimensions	**1.4" x 3.5" x 2.5"**
Max input delay (100kHz versions)	**1 channel**
Weight	**198 g (7.0 oz)**

Performance

Input ranges	**5V, 10V, 15V, 20V, 30V, 50V, 100V, 150VAC, 300V, 250VAC, 500V, 500VAC, 750V, 1kV, 1.5kV, Custom**
Bandwidth (-3dB point)	**100kHz (500kHz option)**
Input-Output non-linearity	**< ±0.04%**
Output voltage	**±10 V, 7VAC, ±5V**
Gain temperature drift	**±50 ppm/°C**
Common mode rejection at 60Hz	**112 dB**
Power Supply Voltage*	**12V to 28 V**
Output type	**Differential pair**
Output Offset Voltage (Referenced to output)	**2σ < ±500 µV (typical) 4σ < ±1 mV (limit)**
Differential Input impedance	
For ranges: 5V, 10V, 15V, 20V, 30V	**440 kΩ**
For ranges: 50V, 100V, 150VAC, 300V, 250VAC	**2MΩ**
For ranges: 500V, 500VAC, 750V, 1000V, 1500V	**8MΩ**
Insulation impedance	**> 10 GΩ || 2pF**
Output impedance	**20Ω**

Environmental

Operating temperature	**– 25 to 70 °C**
Storage temperature	**– 40 to 80 °C**

- The isolation barrier of every device is tested with a 5 second partial discharge of 1800V for 5 seconds, with a detection threshold of 150pC.
- Withstanding common mode surge voltage is 2 seconds half sinewave.
- Withstanding differential mode surge voltage is 4 seconds half sinewave.

Voltage Sensors

IsoBand V

Designed to isolate and scale differential voltages, while keeping a bandwidth that spans from DC to 8MHz. It covers a large set of possible input ranges, from ±5V to ±2000V, which are isolated and linearly scaled to a standard ±10V output signal.

The IsoBand V also provides isolation between primary and secondary, consisting of a galvanic barrier with 5kV surge protection, and 1.5kV working voltage.

IsoBand V

Electrical

Accuracy	**±(0.2% of reading + 0.005% range)**
Max total phase shift at 60Hz	**< 0.004°**
Max latency	**325 ns**
Isolation voltage from primary to secondary	**> ±1500 V**
Withstanding common mode surge voltage	**±5000 V**
Withstanding differential surge voltage	**±2500 V**

Mechanical

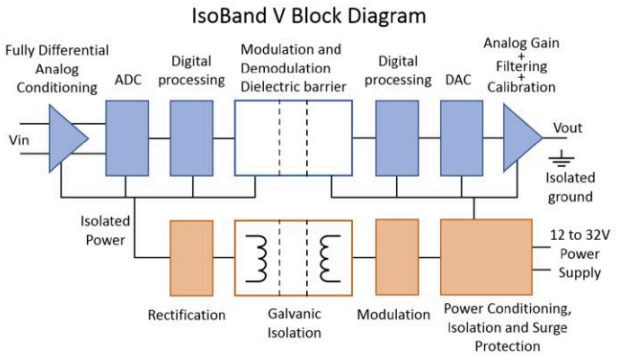
Mounting Type	**DIN Rail**
Connectivity	**Spring Cage connector**
Outer Dimensions	**114 x 99 x 17.6 mm**
Max input delay (100kHz versions)	**1 channel**
Weight	**238 g**

Performance

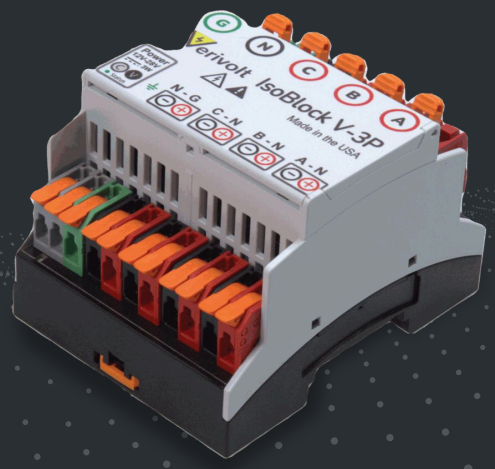
Input ranges	**±5, ±10, ±15, ±20 V ±50, ±100, ±150, ±200 V ±500, ±1000, ±1500, ±2000 V**
Bandwidth (-3dB point)	**8MHz**
Input-Output non-linearity	**< ±0.04%**
Output voltage	**±10 V, ±5V**
Gain temperature drift	**±50 ppm/°C**
Common mode rejection at 60Hz	**112 dB**
Power Supply Voltage*	**12V to 28 V**
Output type	**Single Ended**
Output Offset Voltage (Referenced to output)	**2σ < ±500 µV (typical) 4σ < ±1 mV (limit)**
Differential Input impedance	**> 10 GΩ || 2pF**
Output impedance	**100Ω**

Environmental

Operating temperature	**– 25 to 70 °C**
Storage temperature	**– 40 to 80 °C**



Voltage Sensors



IsoBlock V-3p

Designed for high quality three-phase plus Neutral measurements in a very compact form factor, without need for power supplies.

This module covers multiple ranges from 150VAC to 1000VAC, with up to 100kHz bandwidth and as high as 0.1% accuracy.

It operates as a differential divider network with an anti-aliasing filter on its output. It generates a 7VAC scaled down version of the input terminals

IsoBlock V-3p

Electrical

Accuracy	**±(0.2% of reading + 0.005% range) or ±(0.1% of reading + 0.005% range)**
Max total phase shift at 60Hz	**< 0.05°**
Max through delay	**3.8 µs**
Isolation voltage from primary to secondary	**> ±1500 V**
Max common mode transient voltage for 1 minute	**±5000 V**
Max differential-mode transient voltage at 65°C	**2000V**

Mechanical

Mounting Type	**DIN Rail**
Connectivity	**Spring Cage connector**
Max input delay (100kHz versions)	**4 channels**
Weight	**198 g (7.0 oz)**

Performance

Input ranges	**150VAC, 250VAC, 500VAC, 700VAC, 1000VAC**
Bandwidth (-3dB point)	**100kHz**
Input-Output non-linearity	**< 0.04%**
Output voltage	**7VAC**
Gain temperature drift	**±50 ppm/°C**
Common mode rejection at 60Hz	**112 dB**
Power Supply Voltage*	**12V to 28 V**
Output type	**Differential pair**
Output Offset Voltage (Referenced to output)	**2σ < ±500 µV (typical) 4σ < ±1 mV (limit)**
Differential Input impedance	**8MΩ**
Insulation impedance	**> 10 GΩ || 2pF**
Output impedance	**20Ω**

Environmental

Operating temperature	**– 25 to 70 °C**
Storage temperature	**– 40 to 80 °C**

- The isolation barrier of every device is tested with a 5 second partial discharge of 1800V for 5 seconds, with a detection threshold of 150pC.
- Withstanding common mode surge voltage is 2 seconds half sinewave.
- Withstanding differential mode surge voltage is 4 seconds half sinewave.

Current Sensor Overview

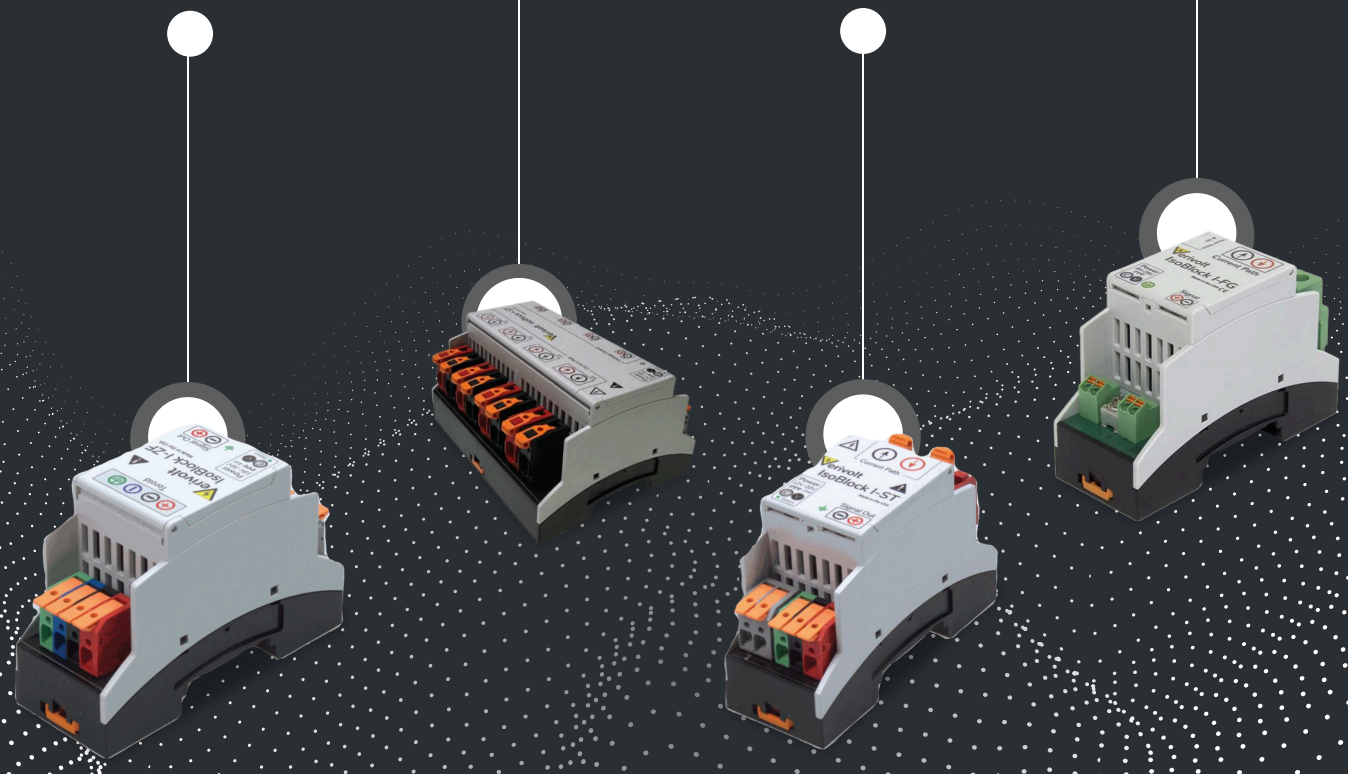
A Few Highlights from Current Sensor Collection

IsoBand I-ST-4c
4-Channel Shunt Based Current Measuring Module

IsoBlock I-ZF
Zero Flux High Performance Current Sensor

IsoBlock I-ST-1c
Shunt Based High Performance Current Sensor

IsoBlock I-FG
Inline Current Sensor (FluxGate)



Current Sensors

IsoBlock I-ZF

Zero Flux high performance current sensor. A single channel module designed for high-quality high current measurements in the range from 20 to 2000 Amperes. The IsoBlock I-ZF is a combination of two units:

(1) sense the current flowing through a conductor
(2) condition the signal into a standard ±10V .

IsoBlock I-ZF	20A	50A	100A	200A	300A	500A	600A	1000A	2000A
Bandwidth (-3dB Point)	DC - 100kHz					DC-80kHz	DC-60kHz		DC-50kHz
Power consumption@24V	200mA					300mA			600mA

Electrical

Accuracy	±(0.1% of reading + 0.005% range) or ±(0.02% of reading + 0.005% range)
Max total phase shift at 60Hz	0.03°
Max input delay	< 1 µs
Isolation voltage	5kV for 1min
Isolation voltage for transient	10kV for 50µs
Insulation Resistance	>10GΩ
Thermal drift gain	< ±0.01% / °C

Mechanical

Mounting Type	DIN Rail and Panel
Weight	800g

Integrated sensor noise

Input-Output non-linearity	< 0.01% or < 0.005%
Output voltage	±10V
Gain temperature drift	±25 ppm/°C

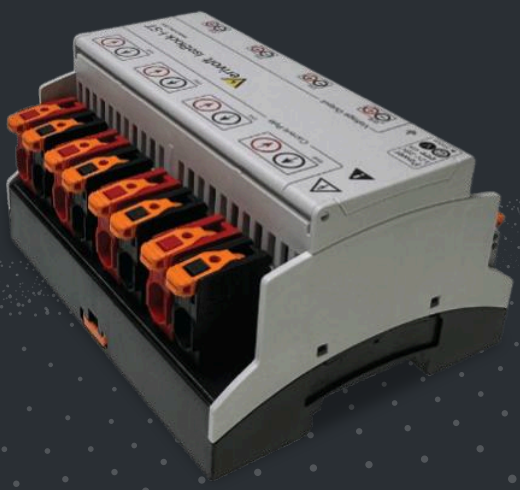
Differential input dynamic range

Power Supply Voltage	24V
Output type	Differential signal
Output Offset Voltage	< ±500µV
Differential Input impedance	20Ω

Environmental

Operating temperature	
Storage temperature	

Current Sensors



IsoBlock I-ST-4c

The IsoBlock I-ST-4c is a four channel shunt based module designed for high-quality isolated current measurements in the range from 1mA to 30 Amperes.

The IsoBlock Current-ST module provides 1500V primary-to-secondary isolation, which allows users to monitor a miscellaneous of currents at different potentials.

IsoBlock I-ST-4c

Electrical

Accuracy	**±(0.2% of reading + 0.005% range) or ±(0.1% of reading + 0.005% range)**
Max total phase shift at 60Hz	**< 0.05º**
Max Input delay (100kHz versions)	**< 2.8 µs**
Isolation voltage from primary to secondary	**> ±1500 V**
Withstanding common mode surge voltage	**±5000 V**
Withstanding differential mode surge voltage	**±2500 V**
Thermal drift gain	**< ±0.01% / ºC**

Mechanical

Mounting Type	**DIN Rail**
Connectivity	**Spring Cage connector**
Max input delay (100kHz versions)	**4 channels**
Outer Dimensions	**3.9" x 3.5" x 2.5"**

Performance

Input ranges	**±1mA,±2mA,±3mA,±5mA, ±10mA,±20mA, ±30mA, ±50mA, ±100mA, ±200mA, ±300mA, ±500mA, ±1A, ±2A, ±3, ±4A, ±5A, ±10A, ±20A, ±30A, Custom**
Bandwidth (-3dB point)	**100kHz (custom option)**
Input-Output non-linearity	**< ±0.04%**
Integrated channel noise (Referenced to output)	**< 1.2 mV**
Output voltage	**±10V (±5V custom)**
Gain temperature drift	**±50 ppm/ºC**
Common mode rejection at 60Hz	**112 dB**
Power Supply Voltage*	**12V to 28 V**
Output type	**Differential pair**
Output Offset Voltage (Referenced to output)	**2σ < ±500 µV (typical) 4σ < ±1 mV (limit)**
Voltage drop at imput	**< 50mV**
Insulation impedance	**> 10 GΩ || 2pF**
Output impedance	**100Ω**

Environmental

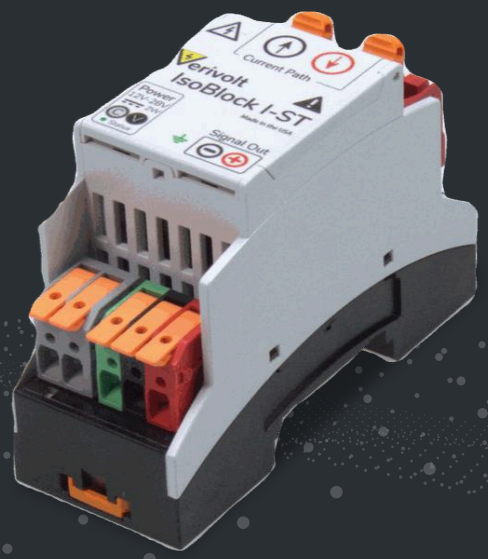
Operating temperature	**– 25 to 70 ºC**
Storage temperature	**– 40 to 80 ºC**

Current Sensors

IsoBlock I-ST-1c

The IsoBlock I-ST is a sensor designed for high-quality isolated current measurements up to 80 Amperes.

The IsoBlock I-ST module provides 1400V primary-to-secondary sustained isolation, which allows users to monitor a miscellaneous of currents at different potentials



IsoBlock I-ST-1c

Electrical

Accuracy	**±(0.2% of reading + 0.005% range) or ±(0.1% of reading + 0.005% range)**
Max total phase shift at 60Hz	**< 0.08°**
Max through delay	**5 µs**
Max working voltage across isolation barrier	**1500V**
Withstanding common mode surge voltage	**±5000 V**
Max common-mode transient voltage for 1 minute	**5000V**

Mechanical

Mounting Type	**DIN Rail**
Outer Dimensions	**3.5" x 2.5" x 1.5"**
Weight	**205 g (7.2 oz)**

Performance

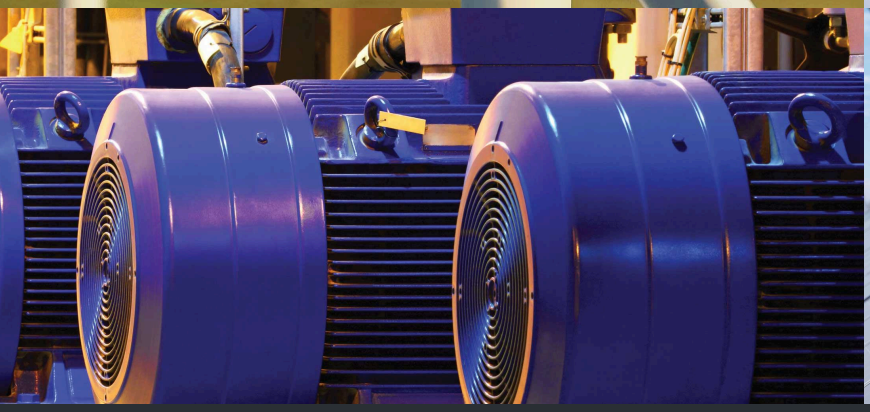
Input ranges	**±10mA, ±20mA, ±30mA, 50±mA, ±100mA, ±200mA, ±300mA, ±500mA, ±1A, ±2A, ±3A, ±4A, ±5A, ±10A, ±20A, ±30A, ±50A, ±60A, ±70A, ±80A**
Shunt voltage drop at full scale	**50mV**
Input-Output non-linearity	**< 0.04%**
Output voltage	**±10V, ±5V**
Common mode rejection at 60Hz	**112 dB**
Gain temperature drift	**±50 ppm/°C**

Power Supply Voltage*	**12V to 36V**
Output type	**Differential pair**
Output Offset Voltage (Referenced to output)	**2σ < ±500 µV (typical) 4σ < ±1 mV (limit)**
Isolation impedance	**> 10 GΩ || 2pF**
Output impedance	**100Ω**

Environmental

Operating temperature	**– 25 to 70 °C**
Storage temperature	**– 40 to 80 °C**



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