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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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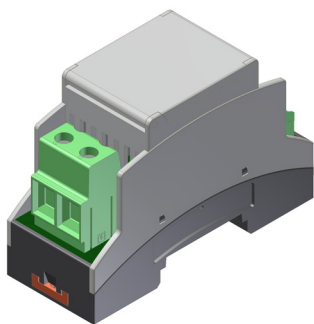
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# IsoBlock I-ST

Single-Channel High Performance Shunt Current Measuring Module



## OVERVIEW

The IsoBlock I-ST is a sensor designed for high-quality isolated current measurements up to 80 Amperes. The IsoBlock I-ST module provides 1500V primary-to-secondary sustained isolation, which allows users to monitor a miscellaneous of currents at different potentials.

The IsoBlock I-ST uses shunt methodology to measure the current flowing through the input conductor. In essence, this technique works by placing a high performance low impedance resistor along the current path (primary), while a galvanic isolation separates primary and secondary sides. The input current is then obtained by amplifying the voltage induced across the shunt resistor. This is followed by an anti-aliasing filter and a conditioning stage to output a  $\pm 10V$  signal.

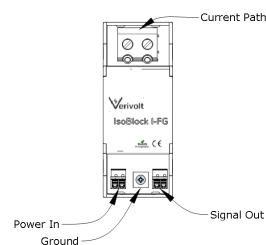
The compact form factor of the IsoBlock I-ST module allows users to setup high channel density monitoring systems, making it ideal for deployed and portable systems.

## SPECIFICATION

IsoBlock I-ST	External Shunt	5A	10A	30A	40A	50A	80A
Bandwidth (-3dB point)		DC - 1MHz					
Integrated sensor noise (Referenced to output)		<2mV rms					
Conversion Factor	N/A	2000 V/A	1000 mV/A	333.33 mV/A	250 mV/A	200 mV/A	125 mV/A
Input dynamic range	N/A	10A	20A	60A	80A	100A	160A

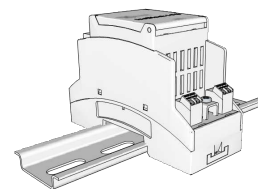
## HARDWARE DESCRIPTION

The current input connector is located at the top of the module in the figure below. A connector that serves to power the unit, output signal and ground the sensor lay along the bottom.



indication of input, output and power of the IsoBlock I-ST

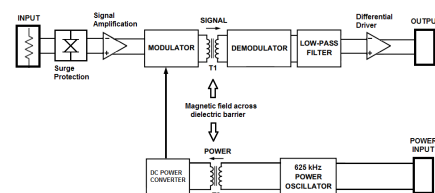
The IsoBlock module is designed to mount on standard NS-35 or NS-32 DIN rails with minimal preparation, providing users ease of use and flexibility.



Installation on DIN rail

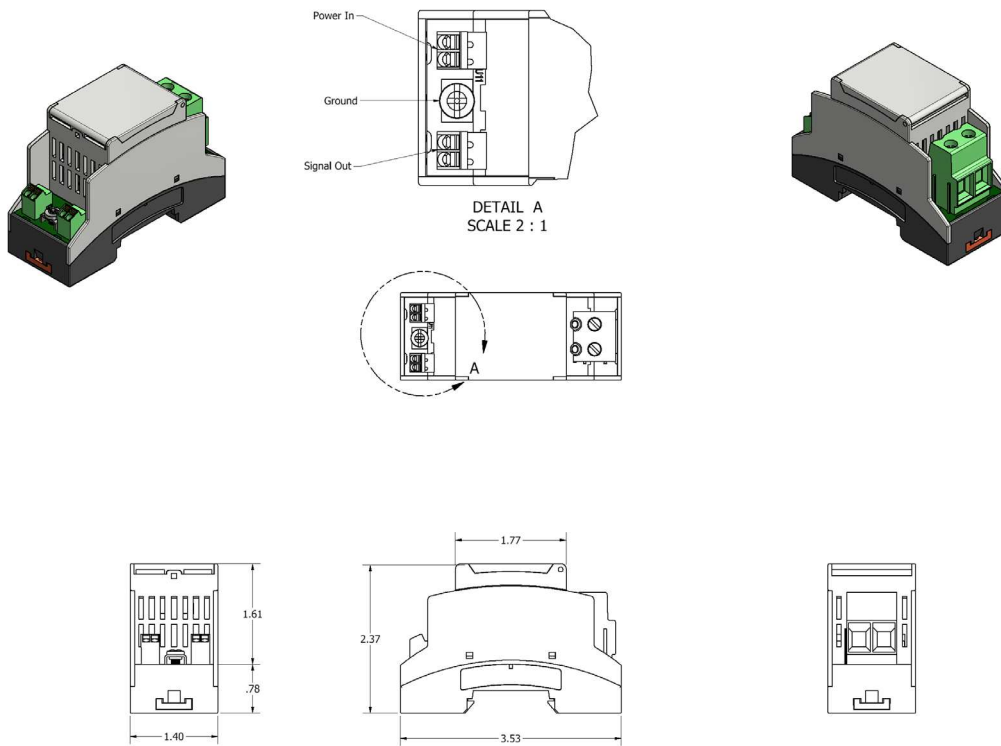
Electrical	
Accuracy (percentage of reading)	$\pm 0.2\%$ , 0.1% option
Max total phase shift at 60Hz	< 0.05°
Max Input delay	< 5 $\mu s$
Isolation voltage from primary side to secondary side	> $\pm 2000V$
Withstanding common mode surge voltage	$\pm 5000V$
Thermal drift gain	< $\pm 0.01\% / ^\circ C$
Mechanical	
Mounting Type	DIN Rail
Outer Dimensions	3.5" x 2.5" x 1.5"
Weight	205 g (7.2 oz)

Performance	
Input-Output non-linearity	< 280 ppm/A
Output voltage	$\pm 10V$ , $\pm 5V$ Custom
Gain temperature drift	$\pm 50$ ppm/ $^\circ C$
Power Supply Voltage	8V to 28V
Output type	Differential signal
Output Offset Voltage	< $\pm 500\mu V$
Output impedance	100 $\Omega$
Common mode impedance	> 2 G $\Omega$    4pF
Differential Input impedance	> 1 M $\Omega$
Environmental	
Operating temperature	- 25 to 65 $^\circ C$
Storage temperature	- 40 to 70 $^\circ C$



IsoBlock I-ST block diagram.

# MERCHANCIAL DIMENSIONS



# HARDWARE CONFIGURATION

A. Connect external power source to power the unit. For proper functioning the power supply should provide a voltage as specified with at least 0.2A of continuous current and 0.4A surge during module start-up.

B. Securely connect one end of a twisted pair to the output terminals, and the other end to the inputs of your data acquisition unit

C. Pass conductor through aperture and observe orientation for proper signal polarity.

**A**

**B**

**C**

## Standards and Certifications

- CE



Warning

THIS SENSOR IS NOT A SAFETY DEVICE AND IS NOT INTENDED TO BE USED AS A SAFETY DEVICE. This sensor is designed only to detect and read certain data in an electronic manner and perform no use apart from that, specifically no safety-related use. This sensor product does not include self-checking redundant circuitry, and the failure of this sensor product could cause either an energized or de-energized output condition, which could result in death, serious bodily injury, or property damage.