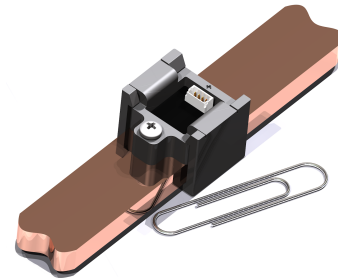


## ISB Current Sense Transducers (-601)

For the electronic measurement of AC and DC Signals



Part Number Table	$I_P$	Output Slope*
ISB-100-A-601	+/- 100	20.000 mV/A
ISB-175-A-601	+/- 175	11.429 mV/A
ISB-300-A-601	+/- 300	6.667 mV/A
ISB-425-A-601	+/- 425	4.706 mV/A
Extended Range	$I_{PE}$	
ISB-550-A-601	+/- 550	3.636 mV/A
ISB-670-A-601	+/- 670	2.985 mV/A

$I_P$ & $I_{PE}$	See table above
Measurable Current Range	$I_P$ or $I_{PE}$
Supply Voltage ( $V_{dd}$ )	5V(+/- 0.5 V)@12mA
Secondary Output Voltage	Ratiometric to Input
Output at + $I_P$	90% of $V_{dd}$
Output at - $I_P$	10% of $V_{dd}$
Output at 0A	50% of $V_{dd}$
Reference Output	50% of $V_{dd}$
Max. Clamped Output, High	95% of $V_{dd}$
Max. Clamped Output, Low	10% of $V_{dd}$
Output Current	+/- 2 mA
Response Time	8 $\mu$ S

### Accuracy

Accuracy ( $I_P$ )**	$\leq$ 0.6 %
Accuracy ( $I_{PE}$ )	$\leq$ 2.5 %
Linearity Error	$\leq$ 0.1 %
Linearity Error ( $I_{PE}$ )	$\leq$ 1.0%
DC Offset Accuracy	$\leq$ 10 mV; $\leq$ 0.25 %
DC Offset Hysteresis	$\leq$ 10 mV; $\leq$ 0.25 %
DC Offset Thermal Drift	$\leq$ 0.1 mV/°C

### Notes

- \* All specifications at 25°C assumes 5V<sub>DD</sub>.
- \* Specifications dependent on mechanical attachment.
- \* Specifications are % full scale.
- \* Output slope is dependent on V<sub>DD</sub>.
- \*\* We recommend mounting the sensors with non-magnetic screws (e.g. stainless steel, brass, bronze, copper and aluminum) for maximum accuracy.

### Features

- ◆ Fast Response Time
- ◆ Small Size
- ◆ Easy Busbar Mounting

### IS Family Features

- ◆ Factory Programmable
- ◆ Customizable Current Range
- ◆ Wideband DC to 90 kHz
- ◆ Analog Output

### Applications

- ◆ DC/AC Converters
- ◆ DC/DC Converters
- ◆ Battery Management
- ◆ AC and DC Motor Drives
- ◆ Welding Applications
- ◆ Solar Applications

### Connection Information

- Pin 1 - V<sub>DD</sub> (Supply)
- Pin 2 - Output
- Pin 3 - Reference Output
- Pin 4 - V<sub>SS</sub> (Ground)

### Analog Output Notes

1. For pull down resistor is between pin 2 and pin 4
2. For pull up resistor is between pin 2 and pin 1

### Required Mating Connector

- JST #SHR-04V-S-B
- JST #SSH-003T-P0.2 (Contact) x4

### General Data

Ambient Operating Temperature	-40 to +85 °C
Ambient Storage Temperature	-40 to +90 °C
RMS Voltage for AC Insulation	4.3 kV
Creepage Distance	8.5 mm
Clearance Distance	8.5 mm
Safety Standard	EN50178
EMC Standard	EN61000
CTI	600 V

### Absolute Maximums

Overvoltage $V_{DD}$ Protection.	+20 V
Reverse $V_{DD}$ Protection	-10 V
Output Voltage Max.	+10 V
Output Current Max.	+/- 300 mA
Reverse Output Voltage Max.	-0.3 V
Reverse Output Current Max.	-50 mA

### Dimensions: ISB Series (in mm, 1mm = 0.0394 inch)

