

**Closed Loop Hall AC/DC Current Sensor**

BSTBC-LTHA series of high-precision current sensors, using the hall closed loop (magnetic balance) principle. The former side of the sensor is insulated and has no position error. It is used for precise measurement of DC, AC and pulse currents.

**Product Features:**

- Excellent accuracy
- Very good linearity
- Optimized response time
- No insertion losses
- High immunity to external interference
- Low temperature drift

**Application:**

- Photovoltaic equipment
- General Purpose Inverters
- AC/DC Variable Speed Drivers
- Battery Supplied Applications
- Uninterruptible Power Supplies
- Switched Mode Power Supplies

**Electric Specifications**

P/N Items	BSTBC100LTHA	BSTBC200LTHA	BSTBC300LTHA	Unit
Rated input (I <sub>pn</sub> )	100	200	300	A
Measuring range (I <sub>p</sub> )	300 (±18V, 80 Ω)	600 (±18V, 20 Ω)	750 (±18V, 10 Ω)	A
Turns ratio (N <sub>p</sub> /N <sub>s</sub> )	1:2000	1:2000	1:2000	T
Measure resistor with ±12V	@±100Amax 190(max)	@±200Amax 68(max)	@±300Amax 39(max)	Ω
	@±200Amax 80(max)	@±500Amax 7.5(max)	@±500Amax 12(max)	
Measure resistor with ±15V	@±100Amax 250(max)	@±200Amax 100(max)	@±300Amax 62(max)	Ω
	@±200Amax 110(max)	@±500Amax 20(max)	@±500Amax 15(max)	
Secondary DCR	25	35	30	Ω
Rated output I <sub>sn</sub>	50±0.2%	100±0.2%	150±0.2%	mA
Supply voltage	±12~±18			V
Power consumption current	≤20+I <sub>p</sub> X(N <sub>p</sub> /N <sub>s</sub> )			mA
Zero offset current	≤±0.2 @I <sub>p</sub> =0			mA
Offset Current Temperature Drift	≤±0.5 @-40°C~+80°C			mA
Linearity	≤0.1 @I <sub>p</sub> =0-±I <sub>pn</sub>			%FS
Di/dt following precision	>100			A/us
Response time	<1.0 @100A/μ S,10%-90%			us
Band width	DC-150 @-3dB			KHz
Dielectric strength	AC6KV 50Hz 60s			KV

**Instructions**

1. Incorrect wiring may cause the damage of sensor.
2. When the measured current through the center hole of the sensor, the current will be measured at the output end.
3. The dynamic performance (di/dt and the response time) is the best when the primary hole is fully filled with the bus bar.
4. User can adjust the output extent of sensor if necessary.
5. Rated input current and output voltage of sensor can be customized.

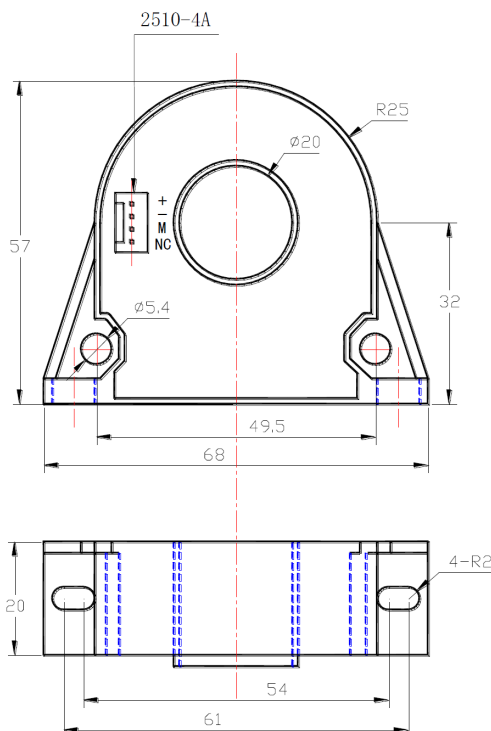
**Standards**

- IEC61010-1
- EN50178
- IEC61800-5-1
- UL94V-0
- RoHS Reach

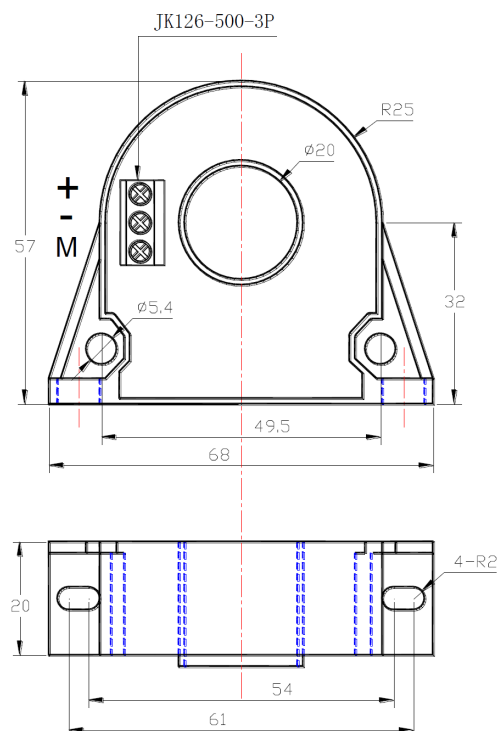
Operating Conditions			
	Value	Unit	Symbol
Operating temperature	-40°C~+80°C	°C	TA
Storage temperature	40°C~+100°C	°C	TA
Weight(Appro)	79	g	M

**Dimensions:**

**BSTBC-LTHA1**

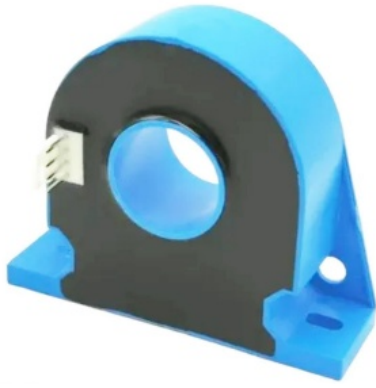


**BSTBC-LTHA2**



**Remarks:**

- 1. All dimensions are in mm.
- 2. General tolerance  $\pm 1$ mm.

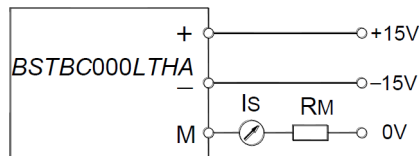


**BSTBC-LTHA1**

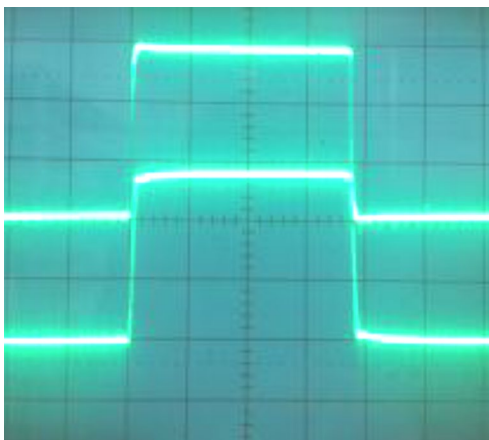


**BSTBC-LTHA2**

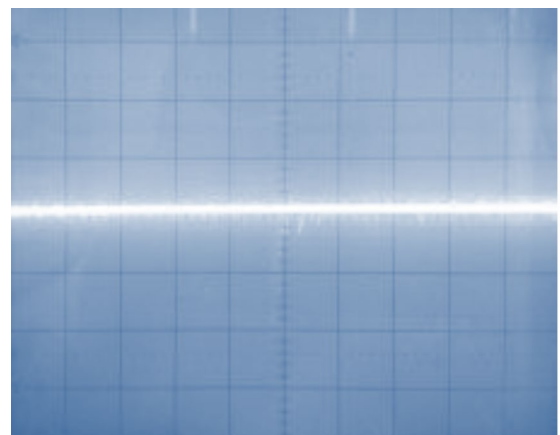
**Connection Schematic:**



**Output signal performance:**



Pulse current signal response performance



Immunity to impulse voltage interference