

H023.1 AHBC-LTA Series Closed Loop Hall Current Sensor V1.1

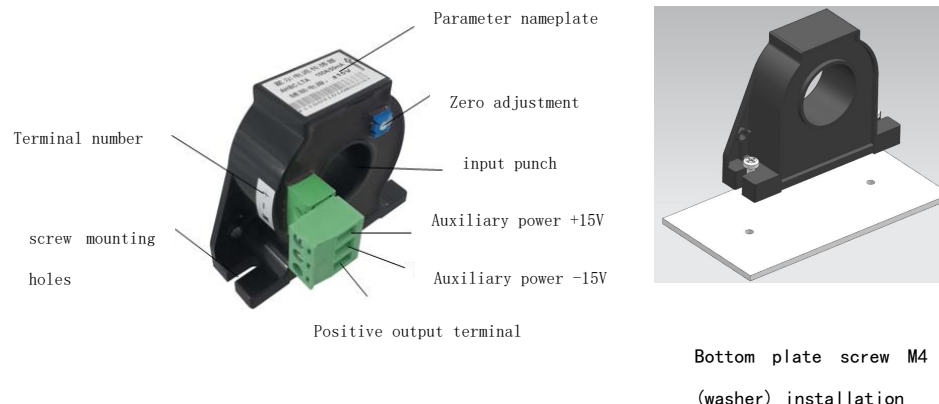
1.Product Description

AHBC-LTA series current sensors are insulated between the primary and secondary, and can be used to measure DC, AC and pulse currents. The product conforms to the industry standard: JB/T7490-2007 《Hall Current Sensor》.

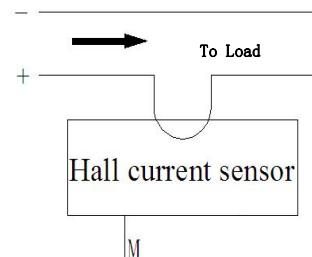
2.Technical parameters and dimensions

Rated input RMS current	100	200	300	A
Measuring current range	300 (±18V, 20Ω)	600 (±18V, 30Ω)	900 (±18V, 20Ω)	A
Turns Ratio	1:1000	1:2000	1:3000	
Measuring resistance ±12V	@±100Amax 80(max)	@±200Amax 80(max)	@±300Amax 76(max)	Ω
	@±200Amax 25(max)	@±500Amax 20(max)	@±600Amax 22(max)	Ω
±15V	@±100Amax 110(max)	@±200Amax 120(max)	@±300Amax 100(max)	Ω
	@±200Amax 40(max)	@±500Amax 30(max)	@±600Amax 36(max)	Ω
Rated output RMS current	50±0.5%	100±0.5%	100±0.5%	mA
precision	0.5			Class
voltage	±15			V
Power consumption current	20+Is			mA
Zero current offset	±0.2			mA
Response time	<1			μs
Linearity	≤0.05			%FS
insulation voltage	3.5kV/50Hz/1min			kV
bandwidth	100			kHz
Secondary coil resistance	26	26	56	Ω
Operating temperature	-40~85			°C
Storage temperature	-40~85			°C

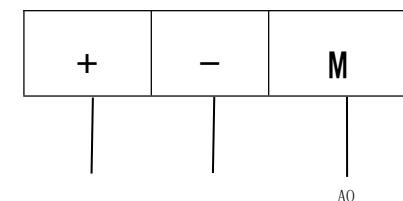
3.Installation method



4.Mode of Connection



instrument input positive	Connect the negative pole of the instrument input to the power ground
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Auxiliary power Signal output

- +15V — power supply+15V
- 15V — power supply-15V (Note that power positive and negative poles cannot be inversely connected.)
- M — signal output end positive pole
- G — power ground and signal output end negative pole

Note: The specific wiring is subject to the terminal no. of object shell.

5. Precautions

1. When the Hall sensor is used, attention must be paid to the coupling between the primary side coil and assistant side coil in order to get better dynamic characteristics and sensitivity, single conductor that should cram the thread hole of Hall sensor module completely is proposed to use.

2. When the Hall sensor is used, the best measuring accuracy can be got under rated input current value. When the measured current is much less than the rated value, the primary side can use multi-turns if want to obtain the best accuracy, that is $I_p N_p = \text{rated ampere-turns}$. In addition, the temperature of the primary side feeder line cannot be more than 80°C.

3. When the Hall current sensor is working normally, the auxiliary power supply cannot be more than $\pm 20\%$ of calibration value.

4. The Hall Current sensor is strictly prohibited to be fallen from high place ($\geq 1\text{m}$) during installation and use.

5. Zero and full scale regulator potentiometer can not be adjusted.

6. Auxiliary power supply is required to be deployed voluntarily.

7. It is recommended to use shielded wire for the output signal wire.

6. Order Sample

Sample 1 AHBC-LTA Hall current sensor

Auxiliary power: DC \pm 15V

Input: 100A

Output: 50mA

Accuracy: 0.5 class

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