

H024. 1 AHBC-LTA Series Close loop Hall Current Sensor V1.1

1. Product Introduction

AHBC-LTA high-precision Hall current sensor is insulated between the primary and secondary, without position error, can truly measure and resolve 1000:1, used for precise measurement of DC, AC and pulse current.

The product conforms to the industry standard: JB/T7490-2007 "Hall Current Sensor".

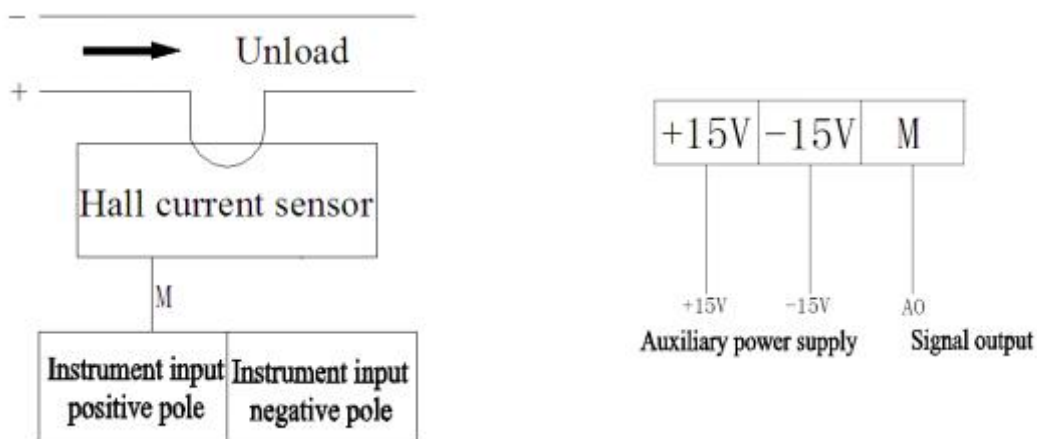
2. Technical Parameters and Overall Dimensions

Parameters	Index	
Rated Input Current	0~300A	
Measuring resistance	$\pm 15V$ @ $\pm 300A_{max}$	0(min) 100(max)
	@ $\pm 600A_{max}$	0(min) 36(max)
Rated Output Current	50mA,100mA	
Turns Ratio	1:3000	
Accuracy Class	0.5	
Power Voltage	DC $\pm 12V$ ~24V	
Zero Offset Current	$\pm 0.2mA$	
Linearity	$\leq 0.05\%FS$	
Response Time	$\leq 1\mu s$	
Insulation voltage	3.5kv/50Hz/1min	
Bandwidth	0~100kHz	
Secondary coil resistance	56 Ω	
Isolation Voltage	3.5kV/50Hz/1min	
Operating Temperature	-40 $^{\circ}C$ ~85 $^{\circ}C$	
Storage Temperature	-40 $^{\circ}C$ ~85 $^{\circ}C$	
Power consumption current	20mA+1s	



3.Mode of Connection

-1-



+15V — power supply +15V

-15V — power supply -15V (Note that power positive and negative poles cannot be inversely connected.)

M — signal output

Note: The output signal "-" is connected to the power ground G, and the specific wiring is based on the terminal number on the physical shell.

4. 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. Power positive and negative poles cannot be inversely connected.

5. Order Sample

Sample 1 AHBC-LTA Hall current sensor

Auxiliary power supply: DC \pm 15V

Input: 100A

Output: 50mA

Accuracy: Grade 0.5

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