

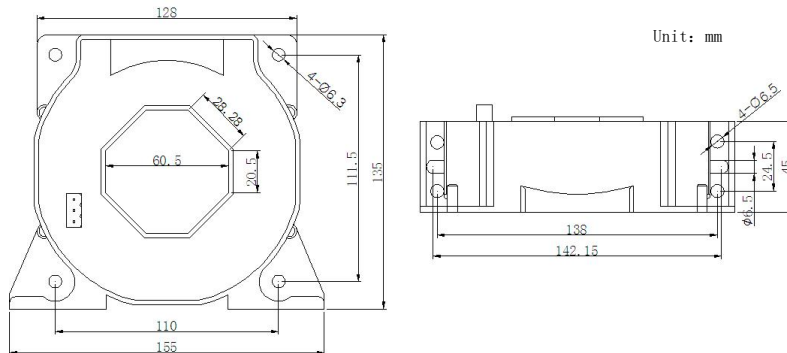
H025.1 AHBC-LF Series High Precision Hall Current Sensor V1.1

1.Product Description

The primary and secondary current sensors of AHBC-LF series are insulated, without position error, and can truly measure and distinguish 1000:1, and are used for precise measurement of DC, AC and pulse currents.

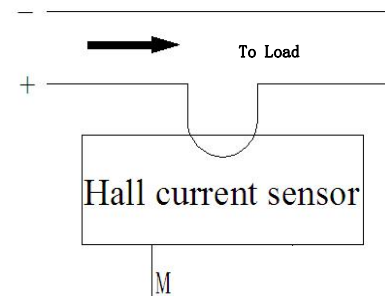
The product conforms to the industry standard: JB/T7490-2007 《Hall Current Sensor》.

2.Technical parameters and dimensions

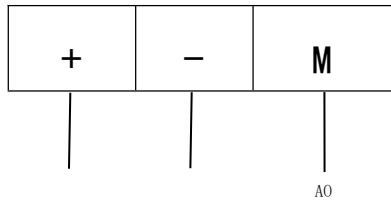


Rated input current	2000A	
Measuring current range	3000A	
Measuring resistance	$\pm 15V @ \pm 2000A_{max}$	0(min) 5.0(max)
	@ $\pm 2500A_{max}$	0(min) 2.0(max)
	$\pm 24V @ \pm 2000A_{max}$	0(min) 25(max)
	@ $\pm 3000A_{max}$	0(min) 5.0(max)
Turns Ratio	1:5000	
Precision	0.5	
Rated output current	400mA	
power supply voltage	$\pm 15V \sim \pm 24V$	
Power consumption current	20mA+Is	
Zero current offset	$\pm 0.2mA$	
Response time	<1 μs	
Linearity	$\leq 0.05\%FS$	
insulation voltage	3.5kV/50Hz/1min	
Frequency bandwidth (-3dB)	0-150KHz	
Secondary coil resistance	26 Ω	
Operating temperature	-40~85 $^{\circ}C$	
Storage temperature	-40~85 $^{\circ}C$	

3.Mode of Connection



instrument input positive pole	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.

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

5. Order Sample

Sample 1 : AHBC-LF Hall current sensor

Auxiliary power: DC $\pm 15\text{V}$

Input: 2000A

Output: 400mA

Accuracy: 0.5 class

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