Fluxgate Current Sensor

YCFC1000LF

A current sensor developed based on the magnetic flux gate principle, capable of measuring AC current, DC current, and pulse current. It features primary and secondary insulation and zero insertion loss.

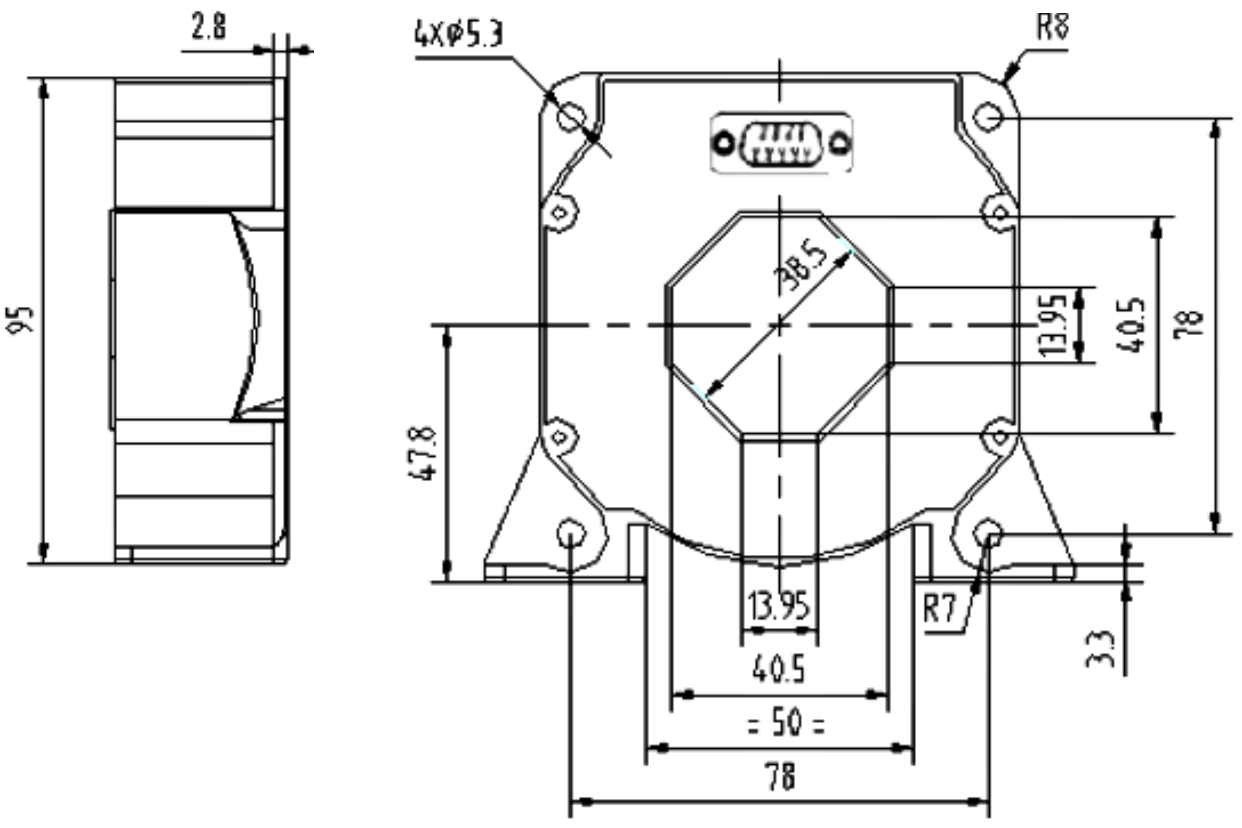
Product Model	Rated Current IPN(A)	Max Measurement Range IPM(A)	Rated Output IOUT(mA)
YFC1000IF	±1000A	±1200A	±400

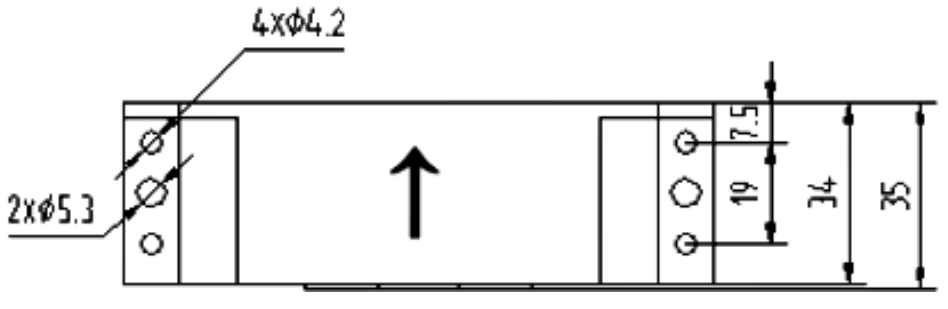
Application AreaApplication Fields
• Medical Equipment
• MRI Units
• BMS

Executive Standards

- JB/T 7490-2007 Hall Effect Current Sensors
- SJ20790-2000 General Specification for Current and Voltage Sensors

Outline Dimensions and Pin Definition (Unit: mm)

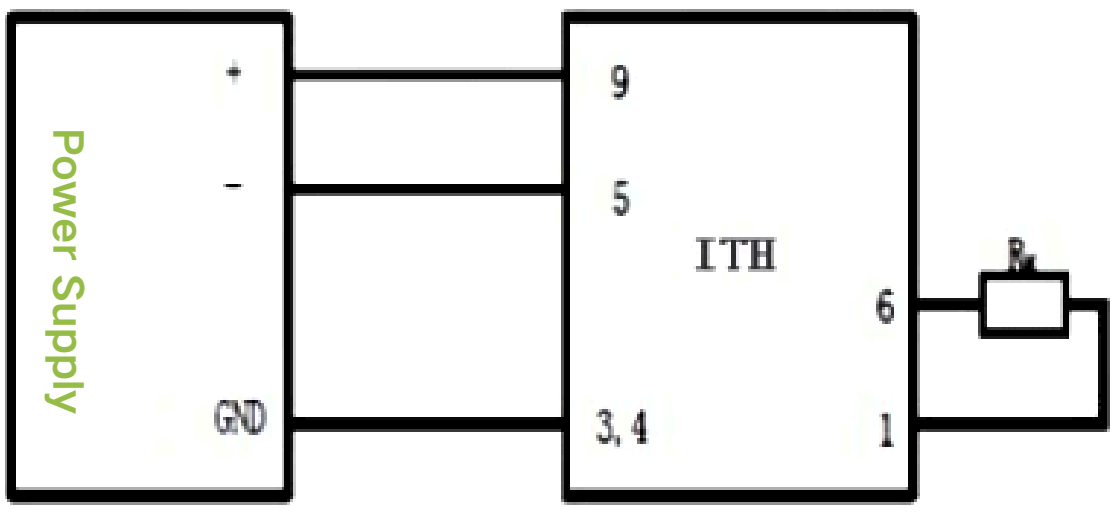


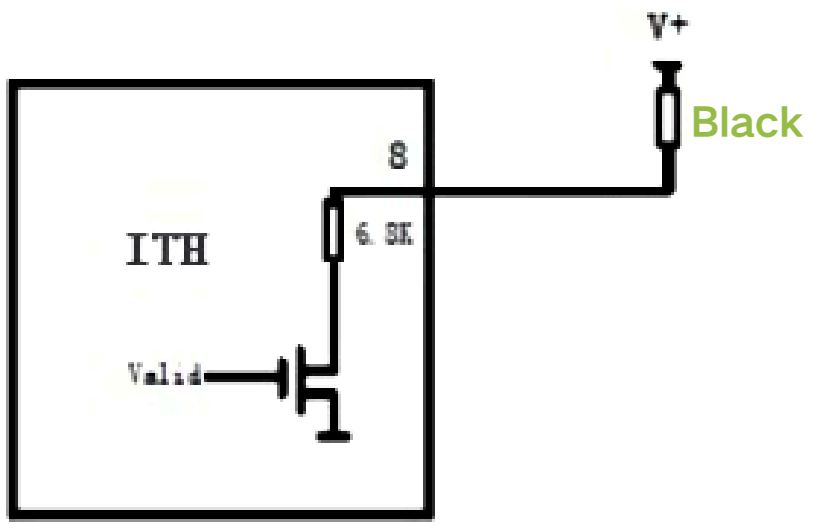


Pin No.	Pin Connection
1	GND
2	NC
3	GND
4	GND
5	-VCC
6	IOUT Output
7	NC
8	Validity Indicator
9	+VCC

General Tolerance	±1 mm
Other Tolerances Standard	GB/T 1804-2000-M
Original Hole Diameter	40.5mm
Connector Model	DB9

Operation Instructions





Test Instructions:

By measuring the test current I_s flowing through R_M , or the voltage U_R across R_M , the primary current I_P can be obtained:

$$I_P = K_N \times I_s = K_N \times (U_R / R_M)$$

Under normal operating conditions, the valid indicator light remains steadily on. If the indicator light turns off, it indicates that the current sensor is in a non-zero flux state, such as when the bus current exceeds the measurement range. At this time, the sensor enters a scanning state, and the output current is no longer proportional to the input current signal. Once the bus current returns within the measurement range, the sensor immediately resumes normal operation. The valid indicator signal is driven by the same signal as the indicator light; it is an open-drain (OD) output configuration, corresponding to a low logic level when valid.

Note:

- IS is positive when IP flows in the direction of the arrow.
- The temperature of the primary conductor must not exceed 100 ° C.
- This module is a standard sensor; please contact us for special applications.
- We reserve the right to modify the sensor without prior notice.

Usage Instructions and Precautions

- When wiring, pay attention to the exposed conductive parts of the wiring terminals and try to prevent ESD (Electrostatic Discharge) shocks. Only engineers with professional construction experience are allowed to perform wiring operations on this product. The power supply, input, and output connection wires must be connected correctly; they cannot be misaligned or reversed, otherwise, it may cause damage to the product.

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- The product installation and usage environment should be free of conductive dust and corrosive substances.
- Severe vibration or high temperatures may also cause product damage; please pay attention to the application scenario.
- Please note the danger of electric shock. After installation, operators must not touch any exposed conductive parts. If necessary, protective measures can be taken for the sensor, such as adding a protective cover, etc.

Electrical Parameter Characteristics @ Ta = 25°C

Parameter Description	Symbol	Unit	Test Conditions	Min	Std	Max
Supply Voltage	Vcc	V	@DC	±15	-	±24
Current Consumption	Ic	mA	@IpN	±35	±435	±515
Turns Ratio	KN	T	-	-	2500 : 1	-
Static Zero Output	Ioe	uA	@Ip=0A, T=25 ° C	-4	-	4
			@Ip=0A, T=-40~75 ° C	-10	-	10
Measuring Resistance	RM	Ω	@Vc=±15V, Ip=DC1000A	-	-	6
			@Vc=±24V, Ip=DC1000A	-	-	10
Accuracy	XG	ppm	@IpN, T=25 ° C	-	-	100
Linearity	ε L	ppm	@IpN, T=25 ° C	-	-	50
Bandwidth	BW	KHz	@DC	-	300	-
Operating Temp. Range	TA	° C	-	-40 ° C	-	+85 ° C
Storage Temp. Range	Ts	° C	-	-45 ° C	-	+100 ° C
Weight	m	g	-	-	602	-
Standard	-	-	-	-	EN50178:1997	-

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