

Fluxgate Closed Loop Current Sensor CYFGCS50LRSH

CYFGCS50LRSH is a current sensor based on the fluxgate closed-loop principle, and can be used for measuring DC, AC, pulse and various irregular waveform currents under galvanic isolation conditions. It has ultra-high accuracy and linearity, ultra-high sensitivity and resolution, very low out-of-phase current and temperature drift. It is widely used in instrumentation, medical equipment, metrology and calibration, laboratories, high-precision power supplies, new energy vehicles and so on.

Features

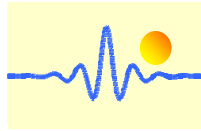
- High electrical isolation
- High linearity, high accuracy
- High reliability
- Good overload capability
- Small sizes
- Insulated plastic case recognized according to UL94-V0
- Very good property-price ratio

Applications

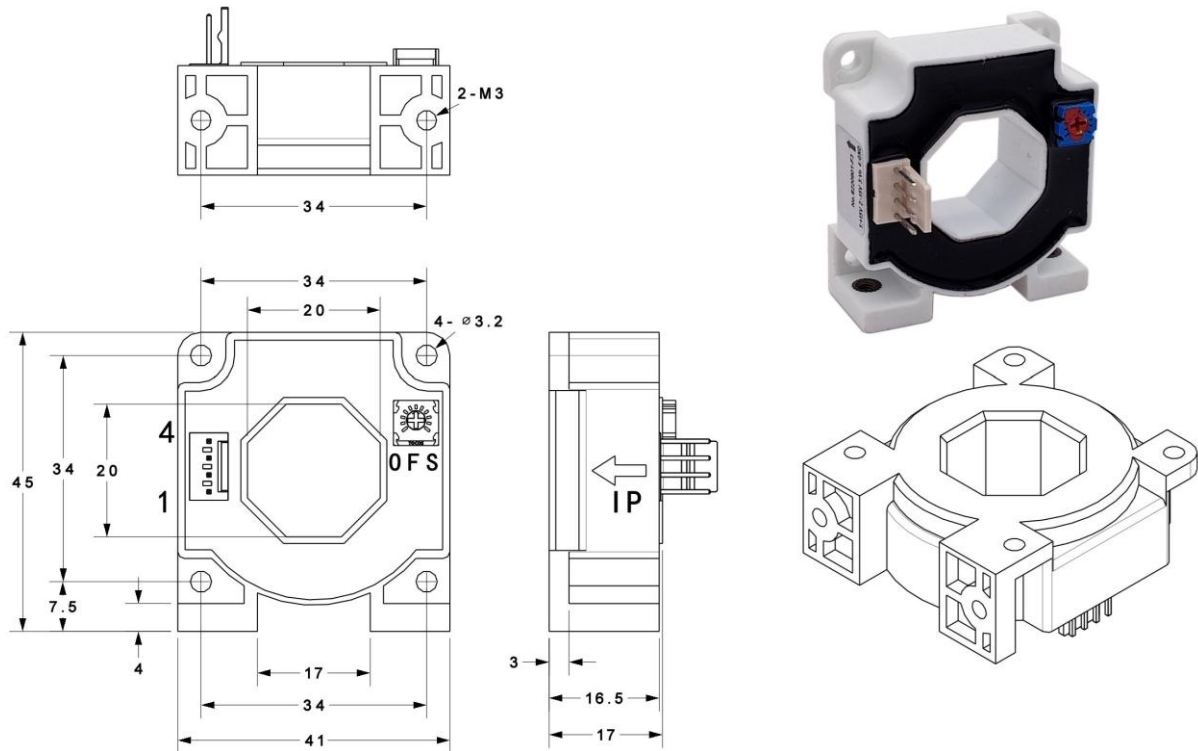
- Battery supplied applications
- Uninterruptible power supplies (UPS)
- Variable speed drives
- Welding machine
- Electric power network monitoring
- AC frequency conversion servo-motors
- Electrochemical applications

Technical Data

Parameters	Values						Unit
	CYFGCS 0.5LRSH	CYFGCS 1LRSH	CYFGCS 5LRSH	CYFGCS 10LRSH	CYFGCS 20LRSH	CYFGCS 50LRSH	
Part number							
Rated input current I_{PN}	0.5	1	5	10	20	50	A
Current measuring range I_P	0~±1	0~±2	0~±10	0~±20	0~±40	0~±75	A
Rated output voltage	5±0.2%	5±0.2%	5±0.1%	5±0.1%	5±0.1%	5±0.1%	V
Turns ratio K_N	1:200	1:200	1:500	1:500	1:1000	1:1000	
Supply voltage	±15(±5%)						V
Current consumption	At $V_c=±15V$ $20 + I_P/K_N$						mA
Isolation voltage	2.5kV rms/50Hz/1min between primary and secondary circuits						
Linearity	<0.01						%FS
Zero offset voltage	$T_A=25°C$ <±5						mV
Thermal Drift of Offset Voltage	$V_P=0, T_A=-25~+85°C$ <±0.01 ($≤1A±0.03$)						mV/°C
Response time	<1						µs
Bandwidth(-3dB)	DC~100						kHz
Following accuracy di/dt	>100						A/µs
Operating Temperature	-25~+85						°C
Storage Temperature	-40~+100						°C
Load Resistance	≥10k						Ω
Mass (approx.)	46						g
Used standard	Q/320115QHKJ01-2016						

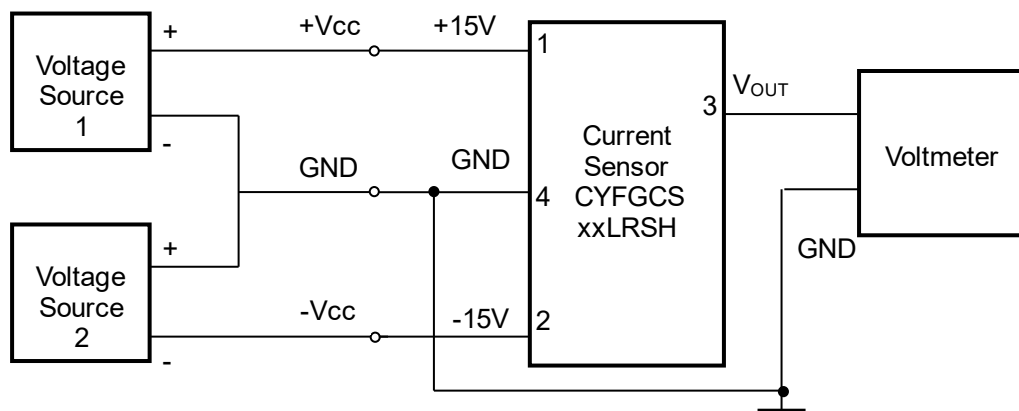


Case Style and Connection

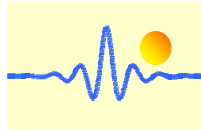


Pin arrangement: 1: +15V 2: -15V 3: V_{OUT} 4: 0V (ground)
OFS: Zero Adjustment

Sensor Connection



The ground of the power supply should be connected to the ground of voltage measuring instrument.



Application Note

1. Incorrect wiring may cause damage to the sensor. After the sensor is powered on, the same-phase voltage value can be measured at the output when the measured current passes through the sensor in the direction of the arrow.
2. The dynamic characteristics (di/dt and response time) are optimal when the input current drain completely fills the primary current input perforation.
3. The temperature of the primary busbar or cable should not exceed 100°C .
4. The installation and use environment of the sensor should be free of conductive dust and corrosive gases.
5. The sensor is a precision device; it should be lightly handled and put away when using and avoid violent vibration or high temperature.