

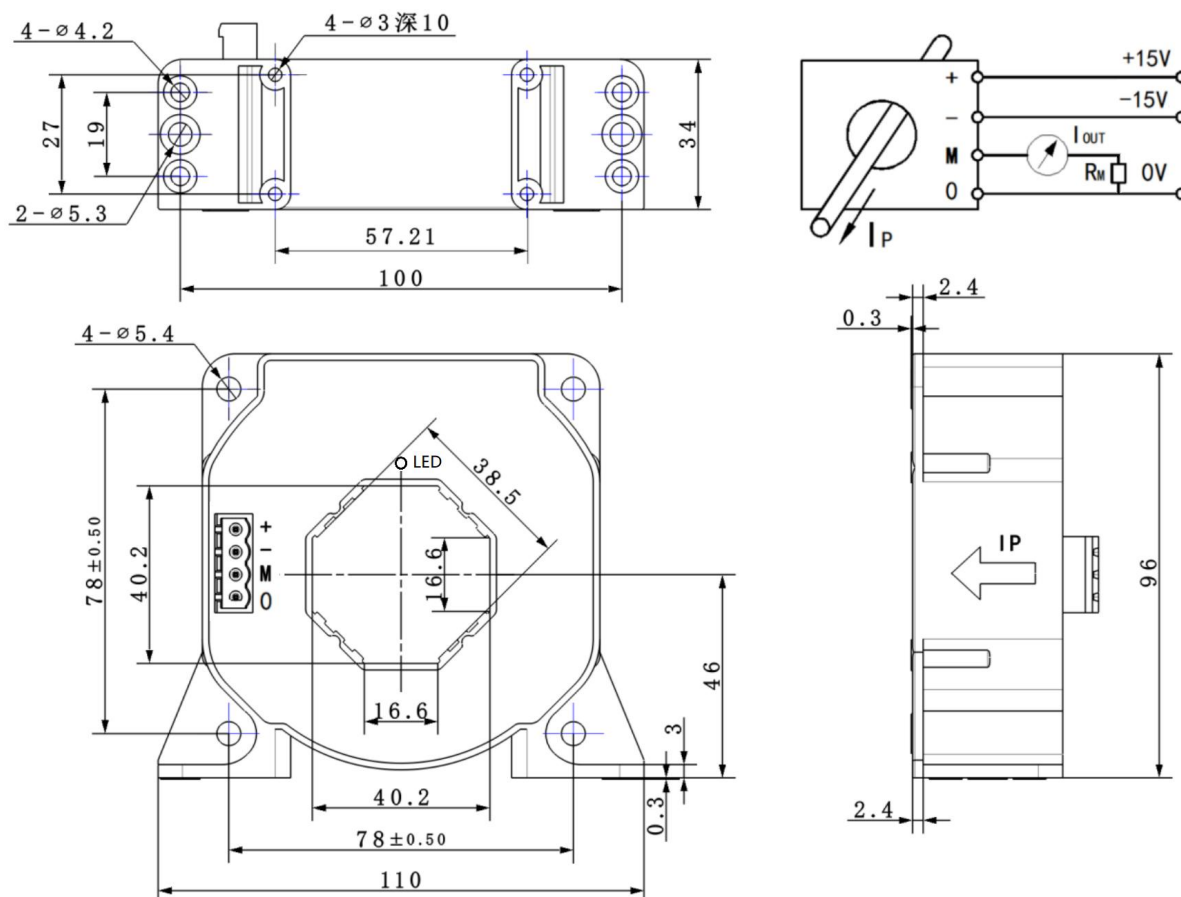
DCSM1000LFAH High-Precision Current Transducer



DCSM1000LFAH Current Transducer using the principle of fluxgate. It can measure DC, AC, pulse, and various irregular wave form currents under electrical isolation conditions. It has ultra-high accuracy and linearity features, ultra-high sensitivity and resolution, as well as extremely low offset current and temperature drift. It is widely used in instruments and meters, medical equipment, measurement and calibration, laboratories, high-precision power supplies, new energy vehicles.

Electrical characteristics				
	Type	DCSM1000LFAH		
I_{PN}	Primary nominal input current	± 1000		A
I_P	Measuring range of primary current	$0 \sim \pm 1500$		A
I_{OUT}	Secondary nominal output current	± 200		mA
K_N	Conversion ratio	1:5000		
R_M	Measuring resistance	@ $\pm 15V$ $\pm 1000A$	0-21	Ω
		@ $\pm 15V$ $\pm 1500A$	0-5	Ω
V_C	Supply voltage	$\pm 15(\pm 5\%)$		V
I_C	Current consumption	$15 + I_P/K_N$		mA
V_D	Insulation voltage	AC/50Hz/1min	5	kV
X	Linearity	< 0.005		%
ϵ_L	Accuracy	< 0.02		%FS
I_O	Zero offset current	@ $T_A = 25^\circ C$	3	μA
T_C	Offset temperature coefficient	@ $I_{PN} = 0$ $T_A = -40 \sim +85^\circ C$	5	μA
di/dt	di/dt accurately followed	> 100		A/ μs
T_R	Response time	@ $100A/\mu s$, 10%-90%	≤ 1	μs
f	Frequency bandwidth(-3dB)	@-3dB	DC \sim 100	kHz
T_A	Ambient operating temperature	$-40 \sim +85$		$^\circ C$
T_S	Ambient storage temperature	$-40 \sim +125$		
R_S	Secondary coil resistance	@ $T_A = 25^\circ C$	27	Ω
m	Mass	618		g

Dimensions of drawing (mm)



Remarks

- Incorrect connection may lead to the damage of the sensor.
- I_{OUT} is positive when the I_P flows in the direction of the arrow.

- Operating Status Instructions

1, Normal Status: The green indicator is “on” under the normal working conditions.

2, Fault Status: The green light is "off" that indicates the sensor is in fault mode.

Trouble-shooting:

a) When the green light is off, the power supply should be checked as the first step;

b) If the power supply is normal, then the primary current is over the specified measurement range and the sensors will be in overload mode. In this mode, the sensors will be working in non-zero flux status, the secondary and primary currents are not in proportional. Once the primary current return to the specified measurement range, the sensors well be running normally.

- The measuring resistance refers to the situation when measuring direct current. If measuring alternating current, the measuring resistance is reduced to 70%.
- The temperature of the original measuring cable or busbars should not exceed 100°C.