# DCSM100LRCH High-Precision Current Transducer

DCSM100LRCH 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.

Electrical characteristics

	Type	DCSM100LRCH	
I_{PN}	Primary nominal input current	±100	A(DC)
I_{PNAC}	Primary nominal RMS current	70.7	A(AC)
I_P	Measuring range of primary current	0～±240（±15V, R_M=0-32Ω）	A
I_{OUT}	Secondary nominal output current	±100	mA
K_N	Conversion ratio	1:1000	
R_M	Measuring resistance	with±12V @±100Amax 0(min) 79(max)	Ω
		with±15V @±100Amax 0(min) 109(max)	Ω
V_C	Supply voltage	±12~±15(±5%)	V
I_C	Current consumption	15+I_P(mA)/K_N	mA
V_D	Insulation voltage	AC/50Hz/1min 3	kV
X	Accuracy	@T_A=25℃ <0.05	%FS
ε_L	Linearity	@I_P=0-±I_{PN} ±0.02	%
I_O	Zero offset current	@T_A=25℃ <±10	uA
I_{OT}	Thermal drift of I_O	@I_{PN}=0 T_A=-40~+85℃ <±10	uA
T_R	Response time	@100A/μS, 10%-90% ≤1	μs
f	Frequency bandwidth	@-3dB DC～100	kHz
di/dt	di/dt accurately followed	＞100	A/μs
T_A	Ambient operating temperature	-40~+85	℃
T_S	Ambient storage temperature	-40~+125	℃
R_S	Secondary coil resistance	@T_A=25℃ 15	Ω
m	Mass	38	g

Dimensions of drawing (mm)
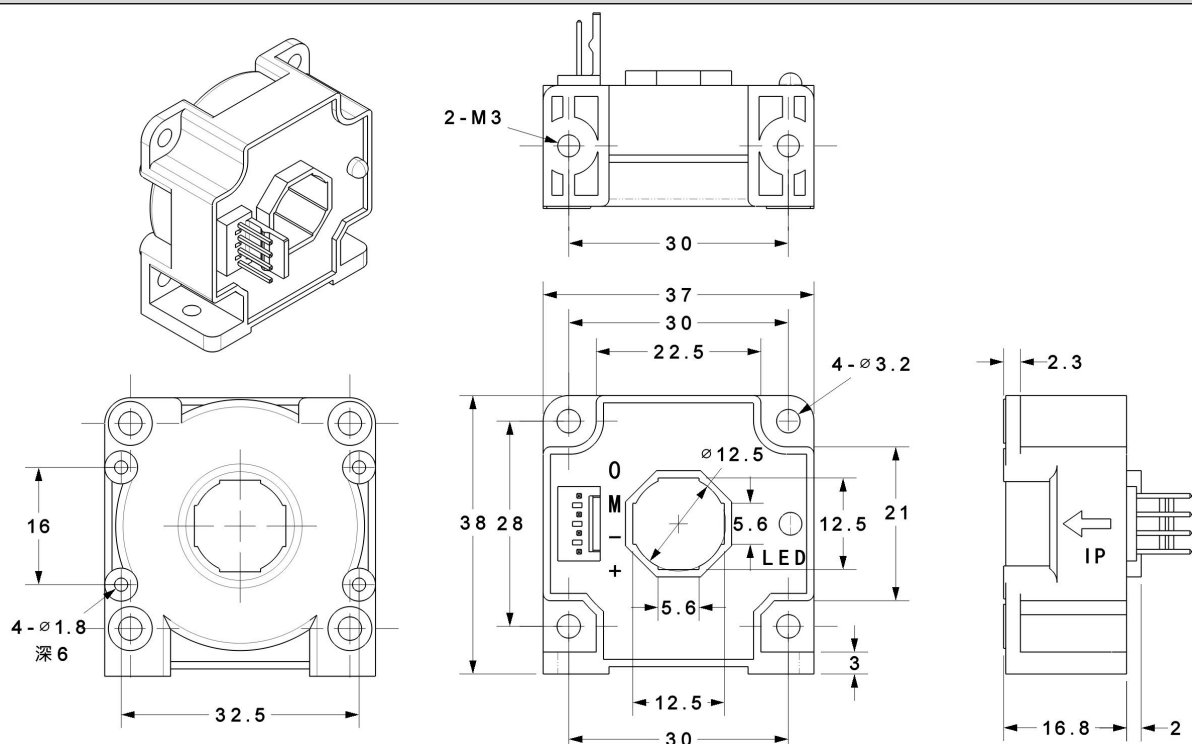
Connection

Pin	+	-	M	0
Definition	+15V Supply	-15V Supply	I Output	GND
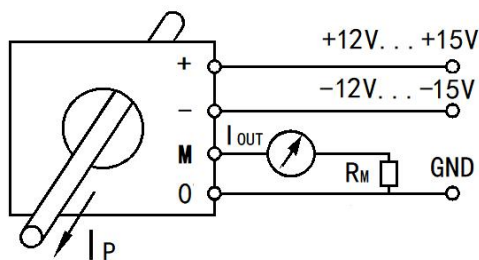
Remarks

● 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 temperature of the original measuring cable or busbars should not exceed 100℃.