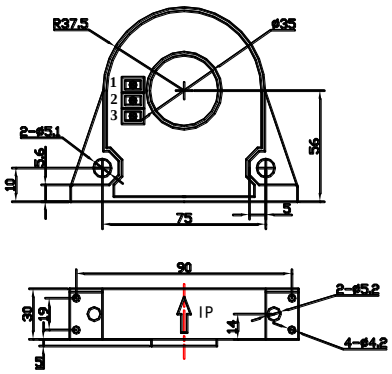
麦可一科技
Mycoiltech

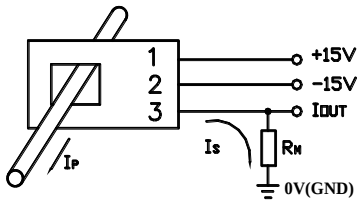
MCSM500LTB Hall-effect Current Sensor Series

Closed loop current sensor based on the principle of Hall-effect. It can be used for measuring AC,DC,pulsed and mixed current.

Electrical characteristics				
	Type	MCSM300LTB	MCSM500LTB	
I_{PN}	Primary nominal input current	300	500	A
I_P	Measuring range of primary current	0 ~ ± 500	0 ~ ± 800	A
I_{SN}	Secondary nominal output current	100±0.5%	100±0.5%	mA
K_N	Conversion ratio	1:3000	1:5000	
R_M	Measuring resistance (V_C=±15V)	I_{PN}=±300 0~95	I_{PN}=±500 0~62	Ω
	(V_C=±15V)	I_P=±500 0~40	I_P=±800 0~11	Ω
	(V_C=±18V)	I_{PN}=±300 0~122	I_{PN}=±500 0~88	Ω
	(V_C=±18V)	I_P=±500 0~58	I_P=±800 0~30	Ω
V_C	Supply voltage	±15~±18(±5%)		V
I_C	Current consumption	V_C=±15V 28+Is		mA
V_D	Insulation voltage	AC/50Hz/1min 6		kV
εL	Linearity	<0.1		%FS
X	Accuracy	T_A=25℃ <±0.7		%
I_O	Zero offset current	T_A=25℃ <±0.25		mA
I_{OM}	Residual current	I_P → 0 <±0.2		mA
I_{OT}	Thermal drift of I_0	I_P = 0 T_A= -25~+85℃ <±0.5		mA
T_R	Response time	<1		us
di/dt	di/dt accurately followed	>100		A/μs
f	Frequency bandwidth(-3dB)	DC~100		kHz
T_A	Ambient operating temperature	-25~+85		℃
T_S	Ambient storage temperature	-40~+100		℃
R_S	Secondary coil resistance(T_A=25℃)	36	64	Ω
	Standard	Q/3201CHGL02-2007		

Dimensions of drawing (mm) **Connection**





Elucidation: 1:+15V 2:–15V 3:I_{0UT}

Remarks

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

·Dynamic performance (di/dt and response time) are best with a primary bar in the center of the through-hole.