

MCSM600FA Hall-effect Current Sensor Series

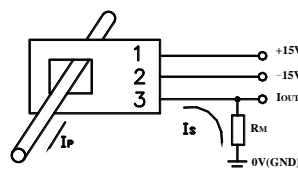
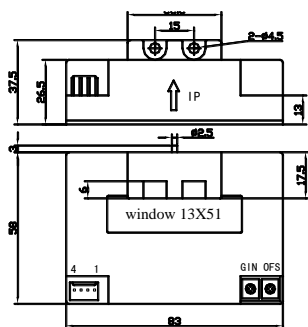
Closed loop current sensor based on the principle of Hall-effect. It can be used for measuring AC,DC,pulsed and mixed current.



Electrical characteristics							
	Type	MCSM200FA	MCSM300FA	MCSM400FA	MCSM500FA	MCSM600FA	
I_{PN}	Primary nominal input current	200	300	400	500	600	A
I_P	Measuring range of primary current	0 ~±300	0 ~±450	0 ~±600	0 ~±750	0 ~±800	A
I_{SN}	Secondary nominal output current	100±0.5%					mA
K_N	Conversion ratio	1:2000	1:3000	1:4000	1:5000	1:6000	
R_M	Measuring resistance ($V_C=±15V/I_{PN}$)	0-88	0-76	0-63	0-46	0-32	Ω
	($V_C=±15V/I_P$)	0-50	0-38	0-25	0-8	0-4	Ω
	($V_C=±18V/I_{PN}$)	0-117	0-105	0-92	0-75	0-61	Ω
	($V_C=±18V/I_P$)	0-69	0-57	0-44	0-27	0-24	Ω
V_C	Supply voltage	±15~±18(±5%)					V
I_C	Current consumption	$V_C=±15V$	20+ I_S			mA	
V_D	Insulation voltage	AC/50Hz/1min	5			kV	
ϵ_L	Linearity	<0.1					%FS
X	Accuracy	$T_A=25^\circ C$ $V_C=±15V$	<±0.7			%	
I_0	Zero offset current	$T_A=25^\circ C$	<±0.3			mA	
I_{OM}	Residual current	$I_P \rightarrow 0$	<±0.2			mA	
I_{OT}	Thermal drift of I_0	$I_P = 0$ $T_A = -25 \sim +85^\circ C$	<±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					$^\circ C$
T_S	Ambient storage temperature	-40~+100					$^\circ C$
R_S	Secondary coil resistance($T_A=25^\circ C$)	19	31	44	61	75	Ω
	Standard	Q/3201CHGL02-2007					

Dimensions of drawing (mm)

Connection



Elucidation: 1:+15V 2:-15V 3: I_{OUT} 4:No connection OFS:Zero adjustment

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.