

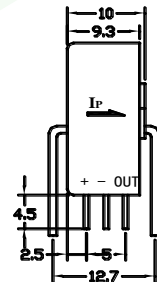
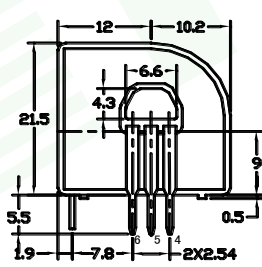
MCSM050NPT Hall-effect Current Sensor Series

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

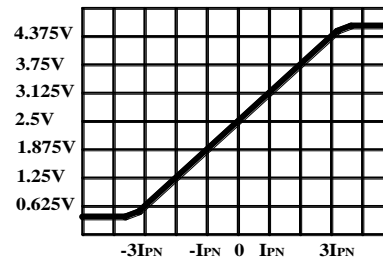


Electrical characteristics						
	Type	MCSM006NPT	MCSM0015NPT	MCSM0025NPT	MCSM0050NPT	
I_{PN}	Primary nominal input current	6	15	25	50	A
I_P	Measuring range of primary current	$0 \sim \pm 19.2$	$0 \sim \pm 48$	$0 \sim \pm 80$	$0 \sim \pm 150$	A
C_S	Circle quantity of secondary coil	960 ± 1	1200 ± 1	2000 ± 2	2000 ± 2	
R_{IM}	Internal measuring resistance	$100 \pm 0.5\%$	$50 \pm 0.5\%$	$50 \pm 0.5\%$	$25 \pm 0.5\%$	Ω
V_{OUT}	Nominal output voltage	$0.625 \pm 0.5\%$	$0.625 \pm 0.5\%$	$0.625 \pm 0.5\%$	$0.625 \pm 0.5\%$	V
V_C	Supply voltage	$\pm 5 (\pm 5\%)$				V
I_C	Current consumption	$I_P=0$	<20			mA
V_D	Insulation voltage	AC/50Hz/1min			2.5	kV
ϵ_L	Linearity	<0.1				%FS
X	Accuracy	$T_A=25^\circ C$			< ± 0.7	%
V_O	Offset voltage	$I_P=0 \quad T_A=25^\circ C$			< $2.5 \pm 1\%$	V
V_{OT}	Thermal drift of V_O	$I_P=0 \quad T_A = -40 \sim +85^\circ C$			± 0.5	mV/ $^\circ C$
di/dt	di/dt accurately followed	>50				A/ μs
T_R	Response time	<500				ms
f	Frequency bandwidth(-1dB)	DC~200				kHz
T_A	Ambient operating temperature	$-40 \sim +85$				$^\circ C$
T_S	Ambient storage temperature	$-40 \sim +100$				$^\circ C$
	Standard	Q/3201CHGL02-2007				

Dimensions of drawing (mm)

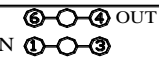
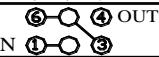



Input current--Output voltage +5V



Elucidation: ++: +5V - : 0V(GND) OUT: V_{OUT}

Primary connection

Primary coil	Primary nominal input current $I_{PN}(A)$	Secondary nominal voltage $V_{OUT}(V)$	Primary resistance (m Ω)	Primary inductance (uH)	Connection
1	$\pm 6 (\pm 15; \pm 25; \pm 50)$	2.5 ± 0.625	0.18	0.013	
2	$\pm 3 (\pm 7.5; \pm 12.5; \pm 25)$	2.5 ± 0.625	0.81	0.05	
3	$\pm 2 (\pm 5; \pm 8.3; \pm 16.6)$	2.5 ± 0.625	1.62	0.12	

Remarks

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