

MCSM300B Hall-effect Current Sensor Series

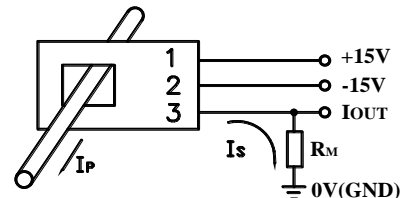
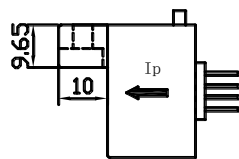
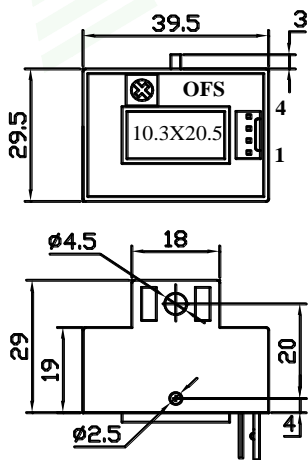
Closed loop current sensor based on the principle of Hall-effect. It can be used for measuring AC,DC,pulsed and mixed current.



Electrical characteristics												
Type	MCSM025B	MCSM050B	MCSM0100B	MCSM0200B	MCSM0300B							
I_{PN}	Primary nominal input current						25	50	100	200	300	A
I_P	Measuring range of primary current						$0 \sim \pm 50$	$0 \sim \pm 100$	$0 \sim \pm 200$	$0 \sim \pm 3000$	$0 \sim \pm 400$	A
I_{SN}	Secondary nominal output current						25	50	50	100	100	mA
K_N	Conversion ratio						1:1000	1:1000	1:2000	1:2000	1:3000	
R_M	Measuring resistance ($V_C = \pm 15V / I_{PN}$)						0-500	0-245	0-203	0-75	0-52	Ω
							$(V_C = \pm 15V / I_P)$					
V_C	Supply voltage						$\pm 12 \sim \pm 15 (\pm 5\%)$					V
I_C	Current consumption						$V_C = \pm 15V$		10+ I_S		mA	
V_D	Insulation voltage						AC/50Hz/1min		2.5		KV	
ϵ_L	Linearity						<0.2					%FS
X	Accuracy						$T_A = 25^\circ C$		< ± 0.7		%	
I_0	Zero offset current						$T_A = 25^\circ C$		< ± 0.3		mA	
I_{OM}	Residual current						$I_P \rightarrow 0$		< ± 0.3		mA	
I_{OT}	Thermal drift of I_0						$I_P = 0 \quad T_A = -25 \sim +85^\circ C$		< ± 0.5		mA	
T_R	Response time						<1					us
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($T_A = 25^\circ C$)						10	10	42	42	Ω	
	Standard						Q/3201CHGL02-2007					

Dimensions of drawing (mm)

Connection



Elucidation: 1:+15V 2:-15V 3:Iout 4:No connection OFS:Zero adjustment

Remarks

- Incorrect connection may lead to the damage of the sensor. ISN is positive when the IP 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.