

## MCSM300LT Hall-effect Current Sensor Series

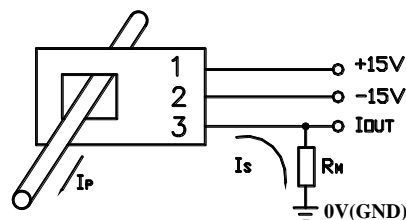
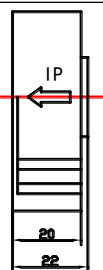
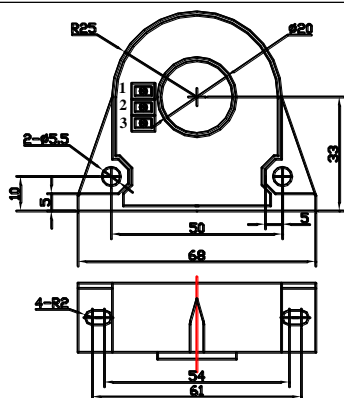
Closed loop current sensor based on the principle of Hall-effect. It can be used for measuring AC,DC,pulsed and mixed current.



Electrical characteristics						
Type	MCSM050LT	MCSM0100LT	MCSM0200LT	MCSM0300LT		
$I_{PN}$	Primary nominal input current	50	100	200	300	
$I_P$	Measuring range of primary current	$0 \sim \pm 75$	$0 \sim \pm 150$	$0 \sim \pm 300$	$0 \sim \pm 500$	A
$I_{SN}$	Secondary nominal output current	25	50	100	150	A
$K_N$	Conversion ratio	1:2000				mA
$R_M$	Measuring resistance ( $V_C = \pm 15V / I_{PN}$ )	504(max)	237(max)	100(max)	56(max)	
	( $V_C = \pm 15V / I_P$ )	327(max)	147(max)	56(max)	21(max)	$\Omega$
	( $V_C = \pm 18V / I_{PN}$ )	619(max)	293(max)	130(max)	75(max)	$\Omega$
	( $V_C = \pm 18V / I_P$ )	397(max)	148(max)	75(max)	31(max)	$\Omega$
$V_C$	Supply voltage	$\pm 12 \sim \pm 18 (\pm 5\%)$				$\Omega$
$I_C$	Current consumption	$V_C = \pm 15V$	20+ $I_S$			V
$V_D$	Insulation voltage	AC/50Hz/1min	6			mA
$\epsilon_L$	Linearity	<0.1				KV
X	Accuracy	$T_A = 25^\circ C$	< $\pm 0.7$			%FS
$I_O$	Zero offset current	$T_A = 25^\circ C$	< $\pm 0.25$			%
$I_{OM}$	Residual current	$I_P \rightarrow 0$	< $\pm 0.2$			mA
$I_{OT}$	Thermal drift of $I_O$	$I_P = 0 \quad T_A = -25 \sim +85^\circ C$	< $\pm 0.65$			mA
$T_R$	Response time	<1				mA
di/dt	di/dt accurately followed	>100				us
f	Frequency bandwidth(-3dB)	DC~100				KHZ
$T_A$	Ambient operating temperature	$-25 \sim +85$				$^\circ C$
$T_S$	Ambient storage temperature	$-40 \sim +100$				$^\circ C$
$R_S$	Secondary coil resistance( $T_A = 25^\circ C$ )	$T_A = 25^\circ C$	22			$\Omega$
	Standard	Q/3201CHGL02-2007				g

### Dimensions of drawing (mm)

### Connection



Elucidation: 1:+15V 2:-15V 3:I<sub>OUT</sub>

### 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.