

## HKC300LTA Hall-effect Current Sensor Series

HKC300LTA series is a new generation of current sensor based on the principle of Hall-effect. It can be used for detecting DC、 pulse and various irregular waveform current under electrical isolation between output and input.

### Electrical characteristics

Type	HBC050LTA	HBC100LTA	HBC200LTA	HBC300LTA		
$I_{PN}$	Primary nominal input current	50	100	200	300	A
$I_P$	Measuring primary current range	$0 \sim \pm 150$	$0 \sim \pm 300$	$0 \sim \pm 600$	$0 \sim \pm 900$	A
$I_{SN}$	Nominal output current	25	50	100	100	mA
$K_N$	Turns ratio	1: 2000			1:3000	
$R_M$	Measurement resistance( $V_C = \pm 15V / I_{PN}$ )	100(max)	110(max)	120(max)	100(max)	$\Omega$
		( $V_C = \pm 15V / I_P$ )	50(max)	40(max)	30(max)	36(max)
$V_C$	Supply voltage	$\pm 12 \sim \pm 18$ ( $\pm 5\%$ )				V
$I_C$	Current loss	$V_C = \pm 15V$			$20 + I_s$	mA
$V_d$	Insulation voltage	6KV AC/50Hz/1min				

### Dynamic characteristics

$\epsilon_L$	Linearity		<0.1	%FS
X	Precision	$T_A = 25^\circ C$ $V_C = \pm 15V$	$\pm 0.7$	%
$I_0$	Offset current	$T_A = 25^\circ C$	$< \pm 0.20$	mA
$I_{OM}$	Residual current	$I_P \rightarrow 0$	$< \pm 0.20$	mA
$I_{OT}$	Offset current temperature drift	$I_P = 0$ $T_A = -25 \sim +85^\circ C$	$\pm 0.10 \sim \pm 0.65$	mA/ $^\circ C$
$T_R$	Response time		<1	$\mu s$
f	Band width (-3dB)		DC~100	KHz

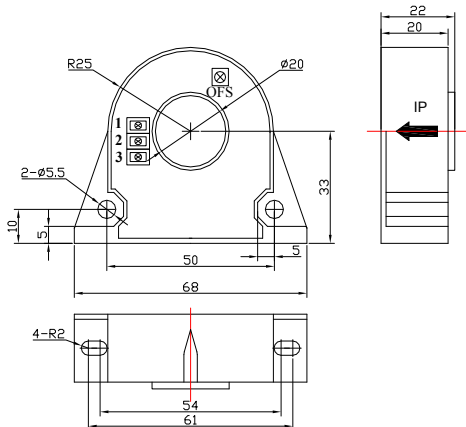
### Generic characteristics

$T_A$	Operation temperature	$-40 \sim +85$				$^\circ C$
$T_S$	Storage temperature	$-40 \sim +125$				$^\circ C$
$R_S$	Secondary internal resistance $T_A = 25^\circ C$	29	25	21	32	$\Omega$
	Standard					

### Advantages

- ◆ excellent precision ,good linearity
- ◆ better anti-jamming capability
- ◆ low temperature drift, quick response time
- ◆ broad frequency band width
- ◆ good over-current capability

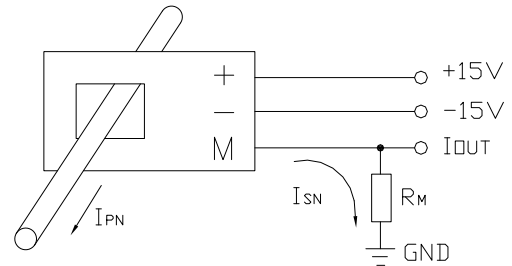
### package outline (mm)



### Typical applications

- ◆ alternating current variable-speed generator tracking
- ◆ welding equipment source
- ◆ DC generator static electricity commutation
- ◆ communication source , battery source
- ◆ UPS, switching power supplies

### circuit connection diagram



### Elucidation:

- 1: +15V      2: -15V  
 3: Iout      OFS: zero adjustment