



Speciality Magnetic Components  
Qualified to ISO 9001:2008

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## Open Loop Hall Effect Current Transformer Type HOB

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The HOB series are Open Loop Hall Effect Current Transformers covering the range of 25A to 400A. The product provides a voltage output which is galvanically isolated from the primary circuit. All contacts, including the primary are designed to be PCB mounted.

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### Features

- ◆ Compact and light weight
- ◆ Fast response time
- ◆ Excellent linearity of the output voltage over a wide input range
- ◆ Excellent frequency response (> 50 kHz)
- ◆ Low power consumption (12 mA nominal)
- ◆ Capable of measuring both DC and AC, both pulsed and mixed
- ◆ High isolation voltage between the measuring circuit and the current-carrying conductor (AC2.5KV)
- ◆ Flame-Retardant plastic case and silicone encapsulate, using UL classified materials, ensures protection against environmental contaminants and vibration over a wide temperature and humidity range

### Applications

- ◆ UPS systems
- ◆ Industrial robots
- ◆ NC tooling machines
- ◆ Elevator controllers
- ◆ Process control devices
- ◆ AC and DC servo systems
- ◆ Motor speed controller
- ◆ Electrical vehicle controllers
- ◆ Inverter-controlled welding machines
- ◆ General and special purpose inverters
- ◆ Power supply for laser processing machines
- ◆ Controller for traction equipment e.g. electric trains
- ◆ Other automatic control systems

# Specifications

Parameter	Symbol	Unit	HOB 25	HOB 50	HOB 75	HOB 100	HOB 125	HOB 150	HOB 175	HOB 200	HOB 250	HOB 300	HOB 350	HOB 400
Nominal Input Current	$I_{in}$	A DC	25	50	75	100	125	150	175	200	250	300	350	400
Linear Range	$I_{fs}$	A DC	±75	±150	±225	±300	±375	±450	±525	±525	±550	±550	±550	±600
Nominal Output Voltage	$V_{hn}$	V	4 V±1% at $I_f=I_{in}$ ( $R_L=10k\Omega$ )											
Offset Voltage	$V_{os}$	mV	Within ±35 mV @ $I_f=0$ , $T_a=25^\circ C$											
Output Resistance	$R_{OUT}$	$\Omega$	< 100 $\Omega$ (50 $\Omega$ nominal)											
Hysteresis Error	$V_{oh}$	mV	Within ±35 mV @ $I_f=I_{in}\rightarrow 0$											
Supply Voltage	$V_{CC}/V_{EE}$	V	±15V ±5%											
Linearity ( Within ± $I_{in}$ )	$\rho$	%	Within ±1% of $I_{in}$											
Consumption Current	$I_{CC}$	mA	±12 mA nominal, ±15 mA max											
Response Time (90% $V_{hn}$ )	$T_r$	$\mu$ sec	7 $\mu$ sec max. @ $d I_f / dt = I_{in} / \mu$ sec											
Frequency Bandwidth (-3dB)	$f_{BW}$	Hz	DC to 50kHz											
Thermal Drift of Output	-	%	Within ±0.05 %/ $^\circ C$ @ $I_{in}$											
Thermal Drift of Zero Current Offset	-	mV/ $^\circ C$	Within ±1.5 mV/ $^\circ C$ @ $I_{in}$											
Dielectric Strength	-	V	AC2.5KV X 60 sec											
Isolation Resistance @ 1000 VDC	$R_{IS}$	M $\Omega$	>1000 M $\Omega$											
Operating Temperature	$T_a$	$^\circ C$	-15 $^\circ C$ to 80 $^\circ C$											
Storage Temperature	$T_s$	$^\circ C$	-20 $^\circ C$ to 85 $^\circ C$											
Mass	W	g	28g											

