

# DATA SHEET

## Hall Effect Current Sensor



**PN: CHK\_HB15D4**

**IPN=2000-10000A**

### Feature

- Open-loop
- Capable measurement of currents: DC, AC, pulse with galvanic isolation between primary circuit and secondary circuit.
- Supply voltage: DC  $\pm 12 \sim 15V$

### Advantages

- High accuracy
- Easy installation
- No insertion losses
- Low power consumption
- Wide current measuring range
- High immunity to external interference

### Applications

- Inverter applications
- AC/DC variable-speed drive
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Frequency drive control home appliances



RoHS



### Electrical data: ( $T_a=25^\circ C$ , $V_c=\pm 15VDC$ , $R_L=10K\Omega$ )

Parameter \ Ref	CHK2000 HB15D4	CHK3000 HB15D4	CHK4000 HB15D4	CHK6000 HB15D4	CHK8000 HB15D4	CHK10000 HB15D4
Rated input $I_{pn}(A)$	2000	3000	4000	6000	8000	10000
Measuring range $I_p(A)$	0 $\sim$ $\pm 4000$	0 $\sim$ $\pm 6000$	0 $\sim$ $\pm 8000$	0 $\sim$ $\pm 12000$	0 $\sim$ $\pm 12000$	0 $\sim$ $\pm 12000$
Output voltage $V_o(V)$	$\pm 4.0 * (IP/IPN)$					
Load resistance $R_L(K\Omega)$	$> 10$					
Supply voltage $V_C(V)$	$(\pm 12 \sim \pm 15) \pm 5\%$					
Accuracy $X_G(\%)$	@IPN, $T=25^\circ C$		$< \pm 1.0$			
Offset voltage $VOE(mV)$	@IP=0, $T=25^\circ C$		$< \pm 25$			
Temperature variation of VOE $VOT(mV/^\circ C)$	@IP=0, $-40 \sim +85^\circ C$		$< \pm 1.0$			
Hysteresis offset voltage VOH(mV)	@IP=0, after 1*IPN		$< \pm 25$			
Linearity error $\epsilon_r(\%FS)$			$< 1.0$			
Di/dt accurately followed (A/ $\mu s$ )			$> 100$			
Response time $\tau_{ra}(\mu s)$	@90% of IPN		$< 7.0$			
Power consumption $I_C(mA)$			15			

Bandwidth Bw(KHZ)	@-3dB, IPN	DC-20
Insulation voltage Vd(KV)	@50/60Hz, 1min,AC	6.0

### General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55 ~ +125
Mass M(g)	1150
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

### Dimensions(mm):

	<p style="text-align: center;">Connection</p> <p style="text-align: center;">General tolerance</p> <p>General tolerance: &lt;math&gt;\pm 0.5\text{mm}&lt;/math&gt;  Primary through-hole: <math>50 \times 140 \pm 0.3</math>  Connection of Secondary :  DG303-5.0-04P</p>
--	--

### Remarks:

- When the current goes through the primary pin of a sensor, the voltage will be measured at the output end.
- Custom design is available for the different rated input current and the output voltage.
- The dynamic performance is the best when the primary hole is fully filled with.
- The primary conductor should be <math>< 100^\circ\text{C}</math>.

**WARNING : Incorrect wiring may cause damage to the sensor.**