



DATA SHEET

Hall Effect Current Sensor

PN: WHK-YBS5S2L

IPN=100-1000A

Feature

- Open- loop
- Capable measurement of currents: DC, AC,pulse with galvanic isolation between primary circuit and secondary circuit.
- Supply voltage: DC +5.0V

Advantages

- High accuracy
- Very good linearity
- Low temperature drift
- Optimized response time, no insertion losses
- High immunity to external interference



Applications

- Photovoltaic (pv) current applications
- AC/DC variable-speed drive
- Switched Mode Power Supplies (SMPS)
- Uninterruptible Power Supplies (UPS)
- Inverter applications



RoHS



Electrical data: (Ta=25°C, Vc=+5.0VDC,RL=10.0KΩ)

Parameter Ref	CHK100 YBS5S2L	CHK200 YBS5S2L	CHK400 YBS5S2L	CHK600 YBS5S2L	CHK800 YBS5S2L	CHK1000 YBS5S2L
Rated input I _{pn} (A)	100	200	400	600	800	1000
Measuring range I _p (A)	±100	±200	±400	±600	±800	±1000
Output offset voltage V _o (V)	@I _p =0, T _A =25°C V _C /2±0.020					
Output voltage V _o (V)	@I _p , T _A =25°C V _C /2±2.000*(I _p /I _{PN})					
Supply voltage V _c (V)	+5.0 ±5%					
Max Voltage V _{CMax} (V)	+6.5 ±5%					
Output internal resistance R _{OUT} (Ω)	100					
Load resistance R _L (kΩ)	>4.7					
Accuracy X _G (%)	@±I _{PN} , T _A =25°C < ±1.0					
Hysteresis offset voltage V _{OH} (mV)	@I _p =0, after 1*I _{PN} < +20					



Cheemi Technology Co., Ltd

Tel: 025-85996365

E-mail: info@cheemi-tech.com

www.cheemi-tech.com

Add: N22, Xianlongwan, Xianyin South Road, Qixia District, Nanjing - China.

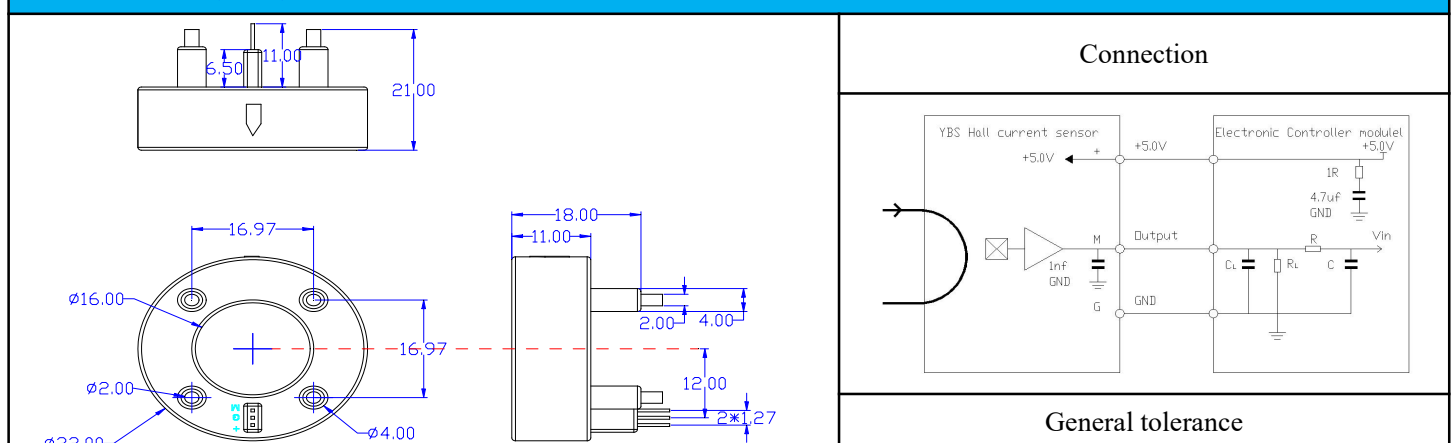
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Temperature variation of V_{OE} $V_{OT}(mV/^{\circ}C)$	@ $I_P=0, T_A=-40 \sim +125^{\circ} C$	$< \pm 0.15$
Tempe variation of V_O $V_{OS}(\%)$	@ $I_P=\pm I_{PN}, T_A=-10 \sim +60^{\circ} C$	$< \pm 1.5$
Tempe variation of V_O $V_{OS}(\%)$	@ $I_P=\pm I_{PN}, T_A=-40 \sim +125^{\circ} C$	$< \pm 2.0$
Linearity error $\epsilon_r(\%FS)$	@ $I_P=\pm I_{PN}, T_A=25^{\circ} C$	< 1.0
Di/dt accurately followed (A/ μs)		> 100
Response time $t_{ra}(\mu s)$	@90% of I_{pn}	< 5.0
Power consumption $I_c(mA)$		< 20
Bandwidth $Bw(KHZ)$	@-3dB, I_{PN}	DC-30
Insulation voltage $V_d(KV)$	@50/60Hz, 1min, AC	2.5
Insulation Resistance R_{is} ($M\Omega$)	@500VDC	> 1000

General data:

Parameter	Value
Operating temperature $T_A(^{\circ}C)$	-40 ~ +125
Storage temperature $T_S(^{\circ}C)$	-55 ~ +150
Mass $M(g)$	
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000, JB/T7490-2007

Dimensions(mm):



General tolerance



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	General tolerance:< $\pm 0.2\text{mm}$ Primary through-hole: $D 16.0\pm 0.2\text{mm}$ Fixed pin: $D2.0\pm 0.15\text{mm}$ Secondary pin: 3pin 0.5*0.5mm
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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 $<100^{\circ}\text{C}$.

WARNING : Incorrect wiring may cause damage to the sensor.

