



# DATA SHEET

## Hall Effect Current Sensor

PN: PTCHK\_DHAB5S2L

IPN=75/1500A

### Feature

- Open- loop
- Capable measurement of currents: DC, AC,pulse with galvanic isolation between primary circuit and secondary circuit.
- Having different current measuring range in the same housing :from  $\pm 75A$  to  $\pm 1500A$ ;
- Internal circuit adopts ASIC packaging technology
- Supply voltage: DC +5V

### Advantages

- Good accuracy for high and low current range ;
- Easy installation
- Low thermal offset drift
- Low thermal sensitivity drift
- Good linearity
- Can be customized

### Applications

- EV and utility vehicle
- Battery pack monitoring
- Hybird Vehicles
- Uninterruptible Power Supplies (UPS)
- Inverter applications



Electrical data: ( $T_a=25^{\circ}C$ ,  $V_c=+5.0VDC$ ,  $R_L=10K\Omega$ )

Parmeter	Ref	PTCHK75/1500DHAB5S2L		Conditions
		Channel 1	Channel 2	
Rated input $I_{pn}(A)$		$\pm 75$	$\pm 1500$	@ $T=25^{\circ}C$
Measuring range $I_p(A)$		$\pm 75$	$\pm 1500$	@ $T=25^{\circ}C$
Output voltage $V_o(V)$		$V_c/5*(2.50\pm 2.000*IP/IPN)$	$V_c/5*(2.50\pm 2.000*IP/IPN)$	@ $T=25^{\circ}C$
Output voltage $V_o(V)$		$2.500(V_c/2)$	$2.500(V_c/2)$	@ $I_p=0$ , $T=25^{\circ}C$ , +5V
Offset current $V_{OE}(mV)$		$\pm 10.0$	$\pm 10.0$	@ $T=25^{\circ}C$
Magnetic offset current $I_{OM}(mA)$		$\pm 5.0$	$\pm 5.0$	@ $T=25^{\circ}C$
Temperature variation of $V_{OE}$ $V_{OT}(mV/^{\circ}C)$		$<0.05$	$<0.05$	@ $I_p=0$ , $-40 \sim +125^{\circ}C$
Sensitive error $X_G(\%)$		$\pm 0.5$		@ $T=25^{\circ}C$
		$\pm 1.0$		@ $-10^{\circ}C < T < 65^{\circ}C$
		$\pm 1.5$		@ $-40^{\circ}C < T < 125^{\circ}C$
Linearity error $\epsilon_r(\%FS)$		$\pm 0.5$		
Supply voltage $V(V_c)$		$+5.0 \pm 5\%$		



## Cheemi Technology Co., Ltd

Current consumption $I_C$ (mA)	<20	
Load resistance $R_L$ (K $\Omega$ )	>4.7	
Capacitive loading $C_L$ (nF)	1~10	
Output clamping voltage min $V_{SZ}$ (V)	<0.3	@ $V_C=5.0V$
Output clamping voltage max $V_{SZ}$ (V)	>4.7	@ $V_C=5.0V$
Output internal resistance $R_{out}$ ( $\Omega$ )	1~10	
Bandwidth BW(KHZ)	0-30	@-3DB
Response time $t_{ra}$ ( $\mu$ s)	<7.0	

### Absolute maximum ratings:

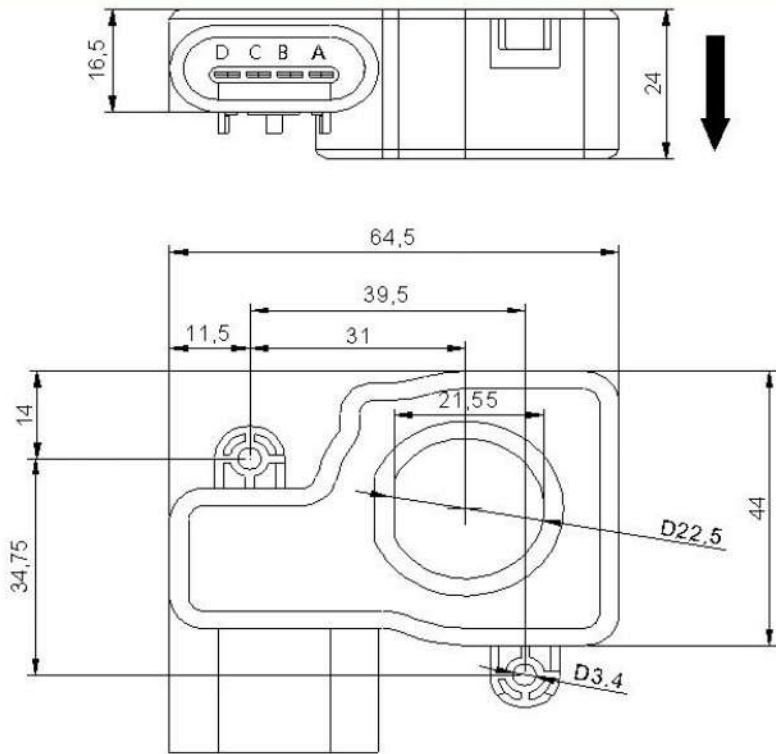
Parameter	Value	Conditions
Supply voltage $V_C$ (V)	<6.0	
	15.0	@<1H, T=25°C
	-15.0	@<1H, T=25°C

### General data:

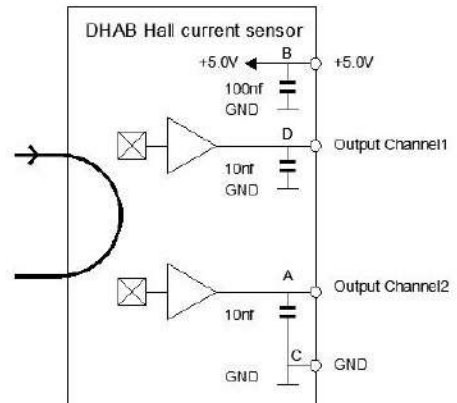
Parameter	Value
Operating temperature $T_A$ (°C)	-40 ~ +125
Storage temperature $T_S$ (°C)	-55~ +125
Mass $M$ (g)	70
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000



**Dimensions(mm):**



**Connection**



**General tolerance**

General tolerance: <math>< \pm 0.5\text{mm}</math>  
 Primary through-hole:  $21.55 \pm 0.3$

**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.**

