



DATA SHEET

Hall Effect Current Sensor

PN : PTCHK_DHAB5S2L

IPN=30/600A

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 ±30A to ±600A;
- 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: (Ta=25°C, Vc=+5.0VDC,RL=10KΩ)

Parmeter	Ref	PTCHK30/600DHAB5S2L		Conditions
		Channel 1	Channel 2	
Rated input I _{pn} (A)		±30	±600	@T=25°C
Measuring range I _p (A)		±30	±600	@T=25°C
Output voltage V _o (V)		V _c /5*(2.50±2.000*IP/IPN)	V _c /5*(2.50±2.000*IP/IPN)	@T=25°C
Output voltage V _o (V)		2.500(V _c /2)	2.500(V _c /2)	@I _p =0, T=25°C, +5V
Offset current V _{OE} (mV)		±10.0	±10.0	@T=25°C
Magnetic offset current I _{OM} (mA)		±5.0	±5.0	@T=25°C
Temperature variation of V _{OE} V _{OT} (mV/°C)		<0.05	<0.05	@I _p =0, -40 ~ +125°C
Sensitive error X _G (%)		±0.5		@T=25°C
		±1.0		@-10°C<T<65°C
		±1.5		@-40°C<T<125°C
Linearity error ε _r (%FS)		±0.5		
Supply voltage V(V _c)		+5.0 ±5%		



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Current consumption I_C (mA)	<20	
Load resistance R_L (K Ω)	>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} (Ω)	1~10	
Bandwidth BW(KHZ)	0-30	@-3DB
Response time t_{ra} (μ s)	<7.0	

Absolute maximum ratings:

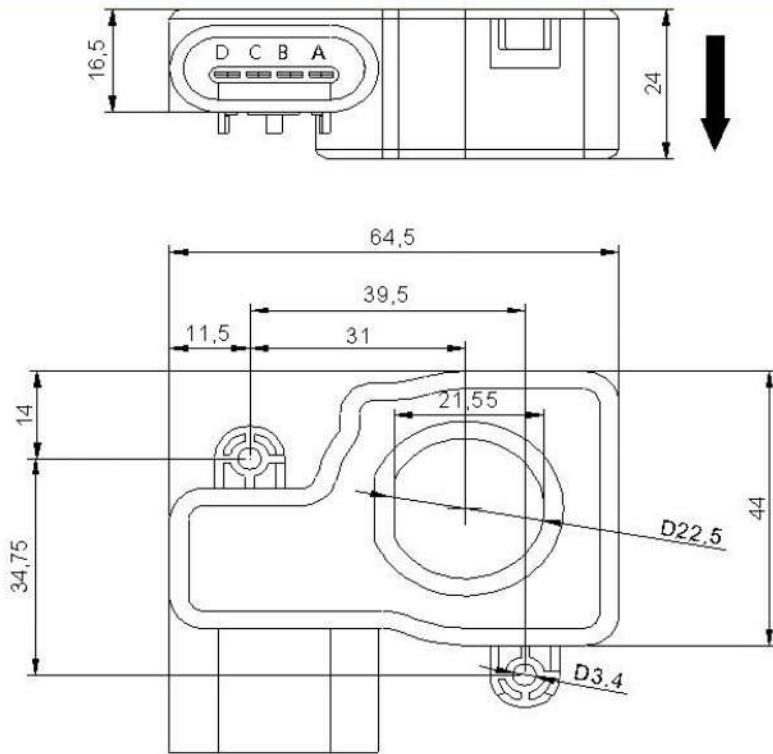
Parameter	Value	Conditions
Supply voltage V_C (V)	<6.0	
	15.0	@<1H, T=25°C
	-15.0	@<1H, T=25°C

General data:

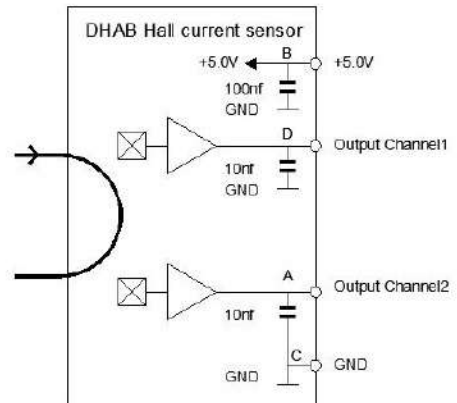
Parameter	Value
Operating temperature T_A (°C)	-40 ~ +125
Storage temperature T_S (°C)	-55~ +125
Mass M (g)	70
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000



Dimensions(mm):



Connection



General tolerance

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

