

# DATA SHEET Hall Effect Current Sensor



# **PN : BJHCS-LSP**

### Features

Closed loop

• Supply voltage : +5 V DC

Voltage output

• Small PCB mounting

IPN = 20A - 25A

• Can be customized

- High accuracy
- Very good linearity
- Low power consumption
- Good over-current capability



### **Applications**

- Frequency drive control home appliances
- Solar power management system
- Inverter applications
- Uninterruptible power supplies (UPS)
- Current monitoring

ELECTRICAL DATA				
BJHVS-LSP	20	25		
Maximum current I <sub>P</sub> (A)	20	25		
Measuring range I <sub>PM</sub> (A)	±20	±25		
Sampling resistor (Ω)	50	100		
Secondary coil turns (T <sub>S</sub> )	1000	1250		
Rated output voltage V <sub>O</sub> (V)	$V_{OE} \pm (I_P/I_{PN})^*2$			
Supply voltage V <sub>C</sub> (Vdc)	+5	± 5%		

ACCURACY DYNAMIC PERFORMANCE			GENERAL & ISOLATION CHARACTERISTICS		
Zero offset voltage V <sub>OE</sub> @ IP=0, T=25℃	2,5 <sup>±0.015</sup>	V	Operating temperature	-40 to +85	C
Offset voltage drift @ - 40℃ to 85℃	≤ ± 0,5	mV/℃	Storage temperature	-40 to +126	ĉ
Accuracy	± 0,7	%	Weight	10	g
Linearity error $\epsilon_L$	≤ 0,1	% FS	Insulation voltage (50 Hz, 1min)	3	K٧
di/dt accurately followed	> 50	A/µs	Impulse withstand voltage (1,2/50µs)	>8	K۷
Response time tr	≤ 1	μs	Creepage distance (shell)	15,4	mm
Bandwith (- 1db)	DC to 200	kHz			



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## DIMENSIONS



MECHANICAL CARACTERISTICS		
General tolerance	± 0,5 mm	
Through hole dimension	Ø 8,5 mm	
Fixed tube feet	0,8 mm x 0,9 mm	
Terminal connection	3 pins 0,25 mm x 0,5 mm	

#### Cautions :

- I<sub>S</sub> is positive when I<sub>P</sub> flows in accordance whith the arrow direction (see the side of the sensor);
- Primary conductor temperature should not exceed 100 °C;
- Best dynamic performances (di/dt and response time) are achieved with a single electrical conductor completely filling the through hole;
- For the required connection circuit, see the drawing above.

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



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