DATA SHEET
Hall Effect Current Sensor

PN : BJHCS-LTS3 | **IPN = 6A - 15A- 25A - 50A**

Features

- **Closed loop**
- **High accuracy**
- **Supply voltage : +3,3V DC**
- **Voltage output**
- **Through hole primary**
- **Can be customized**
- Small PCB mounting
- 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

BJHCS-LTS3-…	6A	15A	25A	50A
Nominal rms current I_{PN} (A)	6	15	25	50
Sensed current range I_{PM} (A)	±12	±30	±50	±84
Measuring resistance R_M (Ω)	100	50	50	25
Number of secondary turns	960 ± 1	1200 ± 1	2000 ± 2	2000 ± 2
Rated output voltage V_O (V)	V_{OE} ± 0,625 $^{\pm 0,05\%}$			
Supply voltage V_C(Vdc)	+3,3 $^{\pm 5\%}$			
Static current consumption I_{C0} (mA)	10			

ACCURACY DYNAMIC PERFORMANCE

Overall accuracy X_G @ I_{PN}, T=25℃	± 0,7	%
Zero offset voltage V_{OE} @ I_P=0, T=25℃	$2,5^{\pm 0.02}$	V
Offset voltage drift	≤ ± 0,5	mV/℃
Linearity error ε_L	≤ 0,1	% FS
di/dt accurately followed	>50	A/µs
Response time tr	< 1	µs
Bandwidth (-1db)	DC to 200	Khz

GENERAL & ISOLATION CHARACTERISTICS

Operating temperature	-40 to +85	℃
Storage temperature	-40 to +125	℃
Weight	10	g
Insulation voltage (50Hz, 1mn)	3	KV
Creepage distance (shell)	15,4	mm
Impulse withstand voltage (1,2/50µs)	> 8	KV

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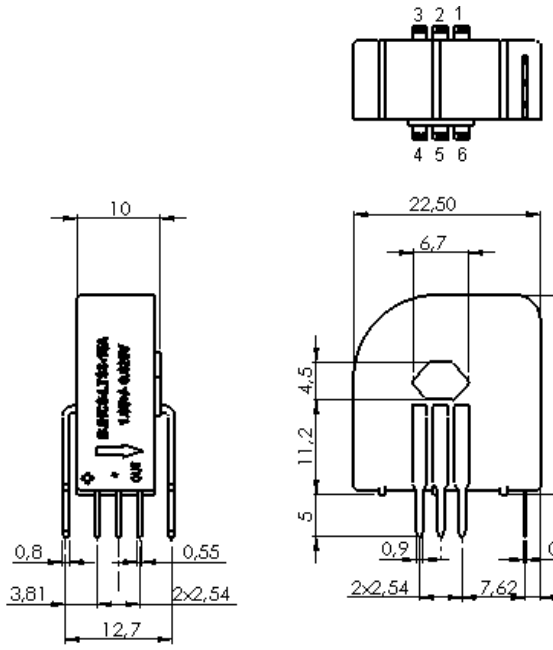
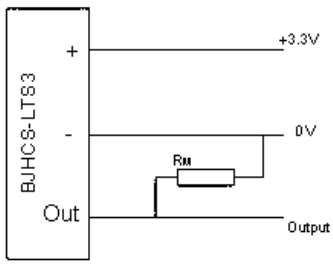
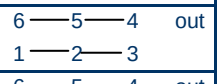
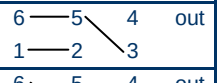
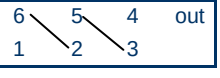
DIMENSIONS





For the required connection circuit, see nearby drawing .

WIRING DIAGRAM

Cable hole current	Nominal current LTS3-…				Output rated	Primary	Primary	PCB current input
(N^{ber} primary turns)	6A	15A	25A	50A	(V)	(mΩ)	(µH)	(Input Pin Connection)
1	±6	±15	±25	±50	1,65 ± 0,625	0,18	0,013	
2	±3	±7,5	±12,5	±25	1,65 ± 0,625	0,81	0,05	
3	±2	±5	±8,3	±16,6	1,65 ± 0,625	1,62	0,12	

Cautions :

- I_S is positive when I_P flows in accordance whith the arrow direction (see the side of the sensor);
- Primary conductor temperature should not exceed 100 ℃;
- Best dynamic performances (di/dt and response time) are achieved with a single electrical conductor completely filling the through hole;
- To achieve the best magnetic coupling, the primary winding must be wound around the top edge of the sensor.

WARNING : Incorrect wiring may cause damage to the sensor.

BJHCS-LTS3-25A : Relation between Input Current and Output voltage :

Input current (A)	- 50	- 25	0	25	50
Output voltage (V)	0,4	1,025	1,65	2,275	2,9