

DATA SHEET Hall Effect Current Sensor



PN: BJHCS-LSP3 IPN = 6A - 10A - 15A- 25A **Features** Supply voltage : +3,3V DC **Closed loop** Through hole primary Voltage output Can be customized **High accuracy** Small PCB mounting Very good linearity Low power consumption Good over-current capability Tech Power electronic 1.65 +1-0.625 CE **Applications** Frequency drive control home appliances Solar power management system RoHS Inverter applications COMPLIANT Uninterruptible power supplies (UPS) Current monitoring REACh

| ELECTRICAL DATA | | | | | | |
|---------------------------------------------|------------------------------------------------------------|------|------|------|--|--|
| BJHCS-LSP3 | 6A | 10A | 15A | 25A | | |
| Nominal rms current I _{PN} (A) | 6 | 10 | 15 | 25 | | |
| Sensed current range I _{PM} (A) | ±12 | ±20 | ±30 | ±50 | | |
| Measuring resistance $R_M(\Omega)$ | 100 | 62,5 | 42 | 25 | | |
| Number of secondary turns (T _S) | 960 | 1000 | 1000 | 1000 | | |
| Rated output voltage V _O (V) | V _{OE} ± (I _P /I _{PN})*0,625 | | | | | |
| Supply voltage V _C (Vdc) | +3,3 ^{± 5%} | | | | | |
| Static current consumption I_{C0} (mA) | 10 | | | | | |

| ACCURACY DYNAMIC PERFORMANCE | | | GENERAL & ISOLATION CHARACTERISTICS | | |
|-----------------------------------------------------------------|-----------------------|-------|------------------------------------------------|-------------|----|
| Overall accuracy X _G @ I _{PN} , T=25°C | ± 0,7 | | Operating temperature | -40 to +85 | °C |
| Zero offset voltage V _{OE} @ I _P =0, T=25°C | 1,65 ^{±15mV} | V | Storage temperature | -40 to +125 | °C |
| Offset voltage drift | ≤ ± 0,5 | mV/°C | Weight | 10 | g |
| Linearity error ϵ_L | ≤ 0,1 | % FS | Insulation voltage (50Hz, 1mn) | 3 | KV |
| di/dt accurately followed | > 50 | A/µs | Creepage distance (shell) | 15,4 | mm |
| Response time tr | ≤ 1 | μs | Impulse withstand voltage (1,2/50µs) | > 8 | KV |
| Bandwidth (-1db) | DC to 200 | Khz | | | |



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| 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_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°C;

• Best dynamic performances (di/dt and response time) are achieved with a single electrical conductor completely filling the through hole.

WARNING : Do not use cable hole input and PCB input together



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