DATA SHEET
Hall Effect Current Sensor

PN : BJHCS-AP | **IPN = 50A - 100A - 125A - 200A**

Features

- **Closed loop**
- **High accuracy**
- **Supply voltage : ±12 to ±18V DC**
- **Current output**
- **Through hole primary**
- **Can be customized**
- Good linearity
- Fast response time
- Low temperature drift
- High anti-jamming capability
- Strong current overload

Applications

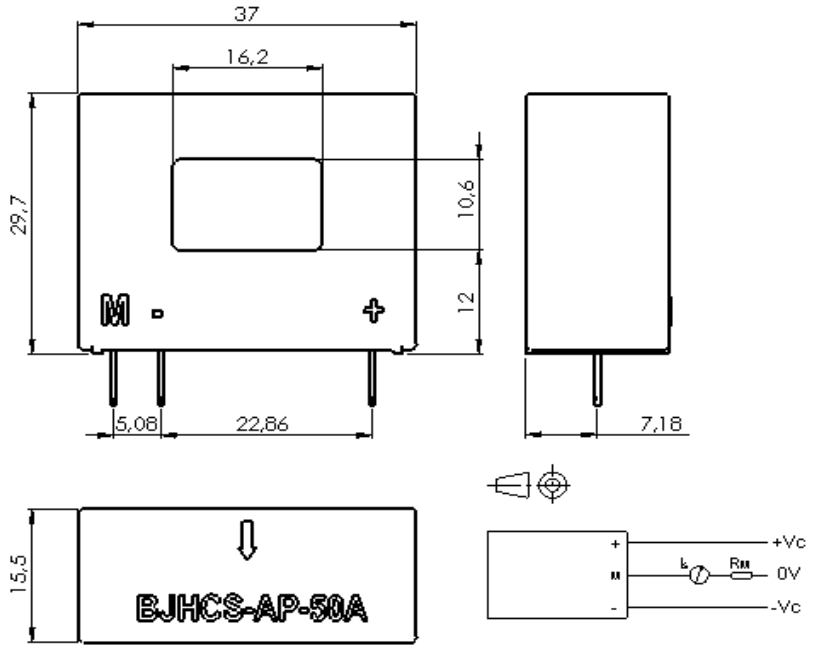
- AC/DC variable speed motor driver
- Battery applications
- Uninterruptible power supplies (UPS)
- Power supplies for welding applications
- Switching power supplies (SMPS)

ELECTRICAL DATA

BJHCS-AP-…		50A	100A	125A	200A
Nominal rms current I_{PN} (A)		50	100	125	200
Sensed current range I_{PM} (A)		±150	±300	±375	±600
Measuring Resistance with *VC* = ***±15V***, @ T_A = +75℃	*and @ I_P (A)*	*± 50*	*± 100*	*± 125*	*± 200*
	R_M max(Ω) =	169	155	58	64
	and @ I_P max (A)	*± 150*	*± 300*	*± 375*	*± 500*
	R_M max(Ω) =	56	42	22	9
Measuring Resistance with *VC* = ***±18V***, @ T_A = +75℃	*and @ I_P (A)*	*± 50*	*± 100*	*± 125*	*± 200*
	R_M max(Ω) =	219	205	80	91
	and @ I_P max (A)	*± 150*	*± 300*	*± 375*	*± 600*
	R_M max(Ω) =	75	61	13	10
Coil turns ratio K (P^{ry}:S^{ry})		1:1000	1:2000	1:1000	1:2000
Secondary resistance R_S (Ω) @T_A = 75℃		31	45	31	45
Rated output current I_{SN} (mA)		50	50	125	100
Supply voltage V_C (Vdc)		±12 $^{±0,5\%}$ to ±18 $^{±0,5\%}$			
Current consumption I_C (mA)		10+I_S			

ACCURACY DYNAMIC PERFORMANCE			GENERAL & ISOLATION CHARACTERISTICS		
Accuracy X_G @ I_{PN}, T=25℃	± 0,5	%	Operating temperature range	-40 to +85	℃
Offset current I_0 @ I_P=0, T=25 ℃	≤ ± 0,2	mA	Storage temperature	-40 to +125	℃
Drift of I_0	≤ ± 0,005	mA/℃	Weight	19	g
Linearity error ε_L	< 0,1	% FS	Insulation voltage (50Hz, 1mn)	2,5	KV
di/dt accurately followed	>100	A/µs	Impulse withstand voltage (1,2/50µs)	4,5	KV
Response time tr	≤ 1	µs			
Bandwidth	DC to 200	Khz			

DIMENSIONS (mm)



MECHANICAL CHARACTERISTICS

General tolerance	± 0,2 mm
Primary square through hole size	12,7 x 7 mm
Terminal connection	3 pins 0,63 X 0,56 mm

Cautions :

- I_S is positive when I_P flows in accordance whith the arrow direction (see the top 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.