

PN : BJHCS-LA

IPN = 25A - 50A - 75A - 100A

Features

- Closed loop
- High accuracy
- Good linearity
- Fast response time
- Low temperature drift
- High anti-jamming capability
- Strong current overload
- Supply voltage : ± 12 to ± 15 V DC
- Current output
- Through hole primary
- Can be customized

Applications

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



ELECTRICAL DATA

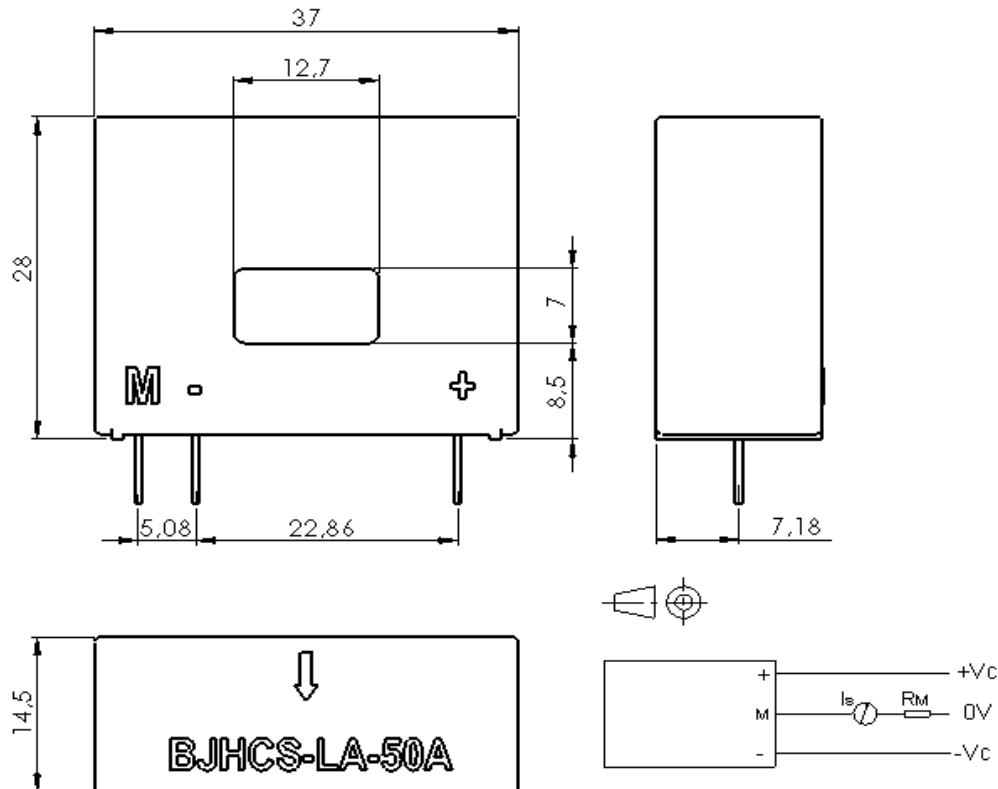
BJHCS-LA-...	25A	50A	75A	100A
Nominal rms current I_{PN} (A)	25	50	75	100
Sensed current range I_{PM} (A)	± 55	± 70	± 105	± 150
Measuring Resistance with $V_C = \pm 15$ V @ $T_A = +75^\circ\text{C}$				
and @ I_P (A)	± 25	± 50	± 75	± 100
$R_M \max(\Omega) =$	312	169	80	80
and @ $I_P \max$ (A)	± 55	± 70	± 105	± 150
$R_M \max(\Omega) =$	205	154	65	53
Coil turns ratio K (Pry:Sry)	1:1000	1:1000	1:1500	1:2000
Secondary resistance R_S (Ω) @ $T_A = 75^\circ\text{C}$	31	31	120	120
Rated output current I_{SN} (mA)	25	50	50	50
Supply voltage V_C (Vdc)	$\pm 12^{\pm 0,5\%}$ to $\pm 15^{\pm 0,5\%}$			
Current consumption I_C (mA)	$10 + I_S$			

ACCURACY DYNAMIC PERFORMANCE

GENERAL & ISOLATION CHARACTERISTICS

Accuracy X_G @ I_{PN} , $T=25^\circ\text{C}$	$\pm 0,5$	%	Operating temperature range	-40 to +85	$^\circ\text{C}$
Offset current I_0 @ $I_P=0$, $T=25^\circ\text{C}$	@ $I_{PN}=25\text{A}, 50\text{A}$ $\leq \pm 0,2$ @ $I_{PN}=75\text{A}, 100\text{A}$ $\leq \pm 0,15$	mA	Storage temperature	-40 to +125	$^\circ\text{C}$
Hysteresis offset Current I_0 @ $I_P=0$	$\pm 0,3$	mA	Weight	19	g
Drift of I_0	@ $I_{PN}=25\text{A}, 50\text{A}$ $\leq \pm 0,5$ @ $I_{PN}=75\text{A}, 100\text{A}$ $\leq \pm 0,25$	mA	Insulation voltage (50Hz, 1mn)	2,5	KV
Linearity error ϵ_L	$\leq 0,15$	% FS	Impulse withstand voltage (1,2/50 μs)	4,5	KV
Response time t_r	< 1	μs			
di/dt accurately followed	> 200	A/ μs			
Bandwidth (-1db)	DC to 200	Khz			

DIMENSIONS (mm)



MECHANICAL CHARACTERISTICS

General tolerance	$\pm 0,2 \text{ mm}$
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 with the arrow direction (see the top 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;
- To achieve the best magnetic coupling, the primary winding must be wound around the top edge of the sensor.

Required connection circuit :

- See the drawing above.

WARNING : Incorrect wiring may cause damage to the sensor.